A.	PERSONAL PARTICULARS

Professor ChM Dr. Mohd Basyaruddin Abdul Rahman, FASc, FRSC, FIAAM

Professor of Chemistry

Department of Chemistry, Faculty of Science
Universiti Putra Malaysia

Name	**Haji Mohd Basyaruddin Haji Abdul Rahman**
Present Position	Dean, Faculty of Science, Universiti Putra Malaysia Senior Professor of Chemistry (VK5)
Office Address (permanent)	Department of Chemistry Faculty of Science, Universiti Putra Malaysia 43400 UPM Serdang, Selangor Darul Ehsan, Malaysia
Office Address (alternative)	Dean Faculty of Science, Universiti Putra Malaysia 43400 UPM Serdang, Selangor Darul Ehsan, Malaysia
Tel. No. (office)	++ 603 9769 6798 / 6601
Mobile No.	++ 6017 419 1209
Fax No.	++ 603 9769 3237
E-mail	basya@upm.edu.my / basya1209@yahoo.com
Field of Specialization	Catalysis Chemistry : (*Biocatalysis; Chemical Biology; Computational Chemistry*)
Home Address	No. 19, Jalan Suria Tropika 5, Taman Suria Tropika, 43300 Seri Kembangan, Selangor Darul Ehsan, Malaysia
Date of Birth	12 September 1972
Nationality	Malaysia
Sex	Male
Staff No.	A01920
I.C No.	720912-07-5837
Affliations	Universiti Putra Malaysia (UPM) Chemist, Institut Kimia Malaysia (ChM) Fellow, Academy of Sciences Malaysia (FASc) Fellow, Royal Society of Chemistry, UK (FRSC) Fellow, International Assoc. of Advanced Materials, Swe (FIAAM)

Education and Academic Qualifications

Primary School

Duration : 1979 - 1984
Place : Methodist Primary School, Parit Buntar, Perak.

Secondary School

Duration : 1985 - 1989
Place : Raja Tun Azlan Shah (Science School), Taiping, Perak.

Undergraduate

Duration : 1990 - 1995
Place : Universiti Teknologi Malaysia, Johor.

Degree Awarded
Bachelor of Science – Double Major in Chemistry and Computer Science with Education
Second Class Upper (Hons)

Postgraduate

Duration : 1995 -1999
Place : University of Southampton, England

Degree Awarded
Doctor of Philosophy in Catalysis Chemistry (25th June 1999)
Ph.D. Title – 'Energy Dispersive EXAFS studies of homogeneous metal catalysts'

Other Related Qualifications

Competence Level Assessment Course (Competence Level 6/PTK6)
2-17th April 2004 Passed – 29 December 2004

Competence Level Assessment Course (Competence Level 3/PTK3)
27th Oct - 7th November 2003 Passed – 25th May 2004

ISO 9001:2000 QMS Assessor / Lead Auditor
Passed – 21st May 2004

Previous Academic and Other Relevant Appointments

Period	Appointment	Place
1October 2017 – 30 September 2022	Dean	Faculty of Science, Universiti Putra Malaysia
1 November 2020 – now	Senior Professor (JUSA A)	Department of Chemistry, Faculty of Science Universiti Putra Malaysia
July – August 2017	Distinguished Visiting Scholar	Department of Chemistry, University of California, Berkeley, USA
1 March 2016 – 30 September 2020	Senior Professor (JUSA B)	Department of Chemistry, Faculty of Science Universiti Putra Malaysia
16 December 2014 – 15 December 2017	Deputy Dean (Research and Graduate Studies)	Faculty of Science, Universiti Putra Malaysia
1 April 2013 – 30 April 2016	Principal Research Associate	Structural and Synthetic Biology Research Centre Malaysia Genome Institute
1 January 2009 – 28 February 2016	Professor of Catalysis Chemistry	Department of Chemistry, Faculty of Science Universiti Putra Malaysia
1 October 2008 – 13 March 2013	Director	Structural and Synthetic Biology Research Centre Malaysia Genome Institute
September 2007 – September 2008	Head of Department	Department of Chemistry, Faculty of Science Universiti Putra Malaysia
December 2003 – December 2008	Associate Professor	Department of Chemistry, Faculty of Science Universiti Putra Malaysia
September 2006 – March 2007	Post-Doctoral in Genetic Engineering	Institute of Structural and Molecular Biology School of Biological Sciences, King's Buildings The University of Edinburgh, Scotland
2004 – 2006	Part-time Tutor	Faculty of Foundation Sciences Open Universiti Malaysia
1999 – 2003	Lecturer	Department of Chemistry, Faculty of Science Universiti Putra Malaysia
2000 – 2003	Residential Fellow	Kolej Pendeta Za'ba Universiti Putra Malaysia
1997 – 1999	Tutor	Department of Chemistry, Faculty of Science Universiti Putra Malaysia
1997 – 1998	Part Time Researcher	European Synchrotron Radiation Facilities, Grenoble, France
1996 – 1999	Part Time Researcher	Synchrotron Radiation Station, Daresbury Laboratory, Warrington, England
1995	Quality Assurance Engineer	SONY Electronics, Penang

B. RESEARCH ACTIVITIES

Research interest encompasses a broad area from chemistry to structural biology involving biocatalysis, protein engineering and molecular simulation. Deep interests include designing novel semisynthetic metalloenzymes and nanobiomaterials as industrial biocatalysts for various chemical reactions, emphasising in pharmaceuticals, oleochemicals and petrochemicals industries. In addition, alternative biosolvent engineering for green and environmental benign processes also investigated.

Major focus of discovery in fundamental research is the structural prediction and modification of protein and peptide structure and its function. These involve rational design and synthetic biology approaches. Furthermore, behavioural study on molecular dynamics and biomolecular interaction at the atomic level by molecular modeling and simulation are also under great interests.

Nanomolecular technology, in particular nanodelivery of drugs and biomolecules using nanoemulsion and metal organic frameworks (MOF) also being developed. Aerosolised nanoemulsions for hydrophilic and hydrophobic drugs are formulated for the lung and oral cancers. New and modified MOFs also used as support for controlled release nanodelivery and as catalysis for organic reactions.

Current research and development in the laboratory;

- Aerosolised Nanoemulsion for Pulmonary Drug Delivery
- MOFs as Platform of Nanodelivery and Encapsulation of Biomolecules
- Designer Biocatalysts – Enzyme and Peptide Catalysts
- Antifreeze Peptides for Cryopreservation
- Immobilisation of Enzyme on Advanced Nanomaterials
- Chiral Esterification of Oleochemicals and Pharmaceuticals
- Structural Biology and Dynamics of Proteins and Peptides
- Metalloenzymes and Metallomics
- Ionic Liquid and Biosolvent Engineering
- Self-assembly and Nanodelivery Simulation

Research Funding / Grants

No	Title	Grant	Amount (RM)	Year / Status
	Programme Head of Projects			
1.	Biocompatible Reticular Materials for Improving Food Storage and Transport	iCOOP-CSIC, Spain	100,00.00	2021 (on-going)
2.	The trilateral collaboration project for anti-infectious disease drug development: from lead optimization to preclinical testing	SATREPS, Japan	2,095,000.00 3,300,000.00	2021 (on-going)
3.	Biocompatible Metal Organic Frameworks (MOFs) as Potential Pulmonary Nano-carriers for Targeted Therapeutic Against Non Small Cell Lung Cancer (NSCLC)	FRGS/1/2020/STG04 /UPM/01/2	181,200.00	2020 (on-going)
4.	Sustainable Metal-Organic Frameworks (MOFS) as Nanohubs for Controlled	International Collaboration Fund,	317,500.00 (on-going)	2019 (on-going)

	Release of Fungicide Formulations for Combating Fungal Diseases in Agricultural Commodities	MESTECC (IF0918O1033)		
5.	Xenobiotics degradation of pharmaceutically active phenolic waste using mimic peptides derived from laccase	Putra-IPS Research University Grant Scheme	25,000.00 (on-going)	2018 (completedi n 2020)
6.	Reticular Synthesis of New Metal Organic Frameworks (MOFs) As Nanocatalysts for Asymmetric Reactions	Putra-IPB Research University Grant Scheme	600,000.00	2017 (completedi n 2021)
7.	Encapsulation of Lipase into Zeolitic Imidazolate Framework (ZIF-8) as Nanobiocatalyst for Fine Chemicals Esterification	Putra Berimpak Research University Grant Scheme	120,000.00	2017 (completedi n 2020)
8.	Exotic Ice Structuring Peptiddes	InnoHub Research University Grant Scheme	80,000.00	2017 (completedi n 2019)
9.	Metallopeptides Mimicked Laccased Enzyme for Oxidation Reactions via Green Organic Route	Fundamental Research Grant Scheme, MOHE 01-01-15-1702FR	106,000.00	2015 (completed in 2018)
10.	Development Of Palm-Based Nanoaerosol For Pulmonary Drug Delivery	LRGS-NanoMITE	1,763,000.00	2015 (completedi n 2020)
11.	Design and Synthesis of α-Helix Antifreeze Peptides from Antarctic Inhabitants (*Glaciozyma antarctica* Yeast and Shorthorn Sculpin Fish)	Sultan Mizan Antarctica Research Foundation	150,000.00	2013 (completed in 2017)
12.	Rational Design of Peptide Chiral Catalyst Based on Aldo-Ketoreductase for Asymmetric Aldol Reaction	Fundamental Research Grant Scheme, MOHE 01-01-13-1211FR	135,000.00	2013 (completed in 2015)
13.	Biocompatible Calcined Layered Double Hydroxides As Support For Efficient Immobilization Of Biocatalysts	Research Acculturation Collaborative Effort (RACE) , MOE	20,000.00	2013 (completed in 2015)
14.	Rational Design of Room Temperature Ionic Liquids for DNA Molecular Solvation	Research University Grant Scheme 05-02-12-1849RU	104,000.00	2012 (completed in 2015)
15.	Novel Peptide Inhibitor for Supression of Rheumatoid Arthritis	Exploratory Research Grant Scheme,MOHE ERGS/1-2012/5527108	136,000.00	2012 (completed in 2015)
16.	Design and Synthesis of Novel Peptide-based Biocatalyst for Enantiomer Separation of (R,S)-Ibuprofen Drug	Science Fund, MOSTI 02-01-04-SF1392 5450618	240,000.00	2012 (completed in 2014)
17.	Peptides Design and Synthesis Based on Enzyme Mimic for Industrial Needs	Science Fund Special Allocation, MOSTI	500,000.00	2011 (completed in 2014)
18.	Postgenomic Discovery of Small Hypothetical Proteins from *Bacillus*	Science Fund Special Allocation, MOSTI	499,800.00	2011 (completed

	lehensis G1 Alkaliphile			in 2014)
19.	Metallomics Analysis of Glaciozyma antarcticum	Genetics and Molecular Biology Iniatives, BIOTEK, MOSTI	150,000.00	2010 (completed in 2013)
20.	Designer Biocatalyts for Sustainable Processes in the Conversion of Renewable Raw Materials to Platform Chemicals	Genetics and Molecular Biology Initiatives, BIOTEK, MOSTI	4,853,400.00	2009 (completed in 2013)
21.	Structural Prediction of Anti-Freeze Protein from *Leucosporidium antarctica*	Genetics and Molecular Biology Iniatives, BIOTEK, MOSTI	254,120.00	2007 (completed in 2010)
22.	Catalytic Promiscuity in Biosynthesis of Chiral Drugs and Chemical Synthesis	Science Fund, MOSTI 02-01-04-SF0766	237,640.00	2007 (completed in 2010)
23.	Green Technology : Development of Biocoating Materials of Wax Esters for Wood Based Industries	Science Fund, MOSTI 06-01-04-SF0108	170,800.00	2007 (completed in 2009)
24.	Chiral Ionic Liquid Coated Enzyme for High Value-added Enantiomer	Research University Grant Scheme 05-0107-0183RU	150,000.00	2007 (completed in 2009)
25.	Green Route for Top-based Coating from Wax Adipate Ester	Research University Grant Scheme 05-01-07-0235RU	71,000.00	2007 (completed in 2009)
26.	Facile Synthesis and Optimisation of New Functionalised Chiral Ionic Liquids	Fundamental Research Grant Scheme (FRGS), MOE (05-10-07-377FR)	140,000.00	2007 (completed in 2009)
27.	Elucidating Protein Flexibility and Dynamics Using Distance Constraint Model for *in silico* Protein Design	Fundamental Research Grant Scheme (FRGS), MOE (01-01-077-136FR)	71,000.00	2006 (completed in 2008)
28.	Fundamental Biomolecular Interaction Study and Design of Protein with Chemical Ligands and Metals	Scientific Advancement Grant Allocation Fund, Academy of Sciences Malaysia	150,000.00	2005 (completed in 2007)
29.	Studies and Characterisation of Immobilization Enzyme onto Layered Double Hydroxides	IRPA – RM 8 (7th cycle) MOSTI (09-02-04-0816-EA001)	95,000.00	2003 (completed in 2006)
30.	Preparation of A Semisynthetic Metalloenzymes : A Novel Catalyst for Petrochemicals and Oleochemicals Products	Third World Academy of Sciences	28,000.00	2003 (completed in 2004)
31.	A Semisynthetic Metalloenzyme Novel Catalyst for Petrochemicals and Esterification	IRPA – RM 8 (7th cycle) MOSTI (09-02-04-0320-EA001)	230,000.00	2002 (completed in 2006)

32.	Synthesis and Characterisation of Homogeneous Catalyst for α–Olefins Oligomerisation"	Universiti Putra Malaysia Short Term Research Grant	10,000.00	2000 (completed in 2001)
		TOTAL	**14,888,460.00**	
	Co-researcher of Projects			
33.	New combination therapies to combat drug resistance in cancer	Swansea University – Strategic Partner Acceleration Award, Wales	80,000.00	2020 (on-going)
34.	Acidic ionic liquid coupled with non-noble metal/carbon catalyst for the conversion of oil palm biomass to gamma-Valerolactone for sustainable fuel supply	FRGS/1/2020/STG04 /UNIM/02/1	98,923.00	2020 (on-going)
35.	Modelling and Synthesis of Stimuli-Responsive Delivery System for Pesticides using Cyclodextrin Metal-Organic Framework	FRGS/1/2020/STG04 /UPM/02/9	163,200.00	2020 (on-going)
36.	Investigation on the effect of caboxymethyl sago pulp content on properties of self-healable caboxymethyl sago pulp/natural rubber film prepared via reversible non-covalent or covalent interactions	Fundamental Research Grant Scheme, MOHE FRGS/1/2019/STG01 /UPM/02/7	170,800.00	2019 (on-going)
37.	Fundamental studies and development of oil palm biomass-derived carbon cryogel catalyst for the conversion of oil palm biomass to levulinic acid in gamma-valerolactone solvent for biofuel production	Fundamental Research Grant Scheme, MOHE FRGS/1/2019/STG01 /UNIM/02/4	117,600.00	2019 (on-going)
38.	Fabrication of Calcium Based Metal-Organic Frameworks (MOFs) Incorporated with Titanium and Iron for the Removal of Contaminants of Emerging Concern from Aqueous Solution	Fundamental Research Grant Scheme, MOHE FRGS/1/2018/STG07 /UPM/01/3	144,200.00	2018 (on-going)
39.	ZIF8 Supported Homing Peptide for Targeted Drug Delivery of Anticancer Drug	Putra IPB	148,200.00	2017 (on-going)
40.	Novel Peptide-based Protein Arginine Deiminase IV Inhibitor for Suppression of Autoimmune Disease	MSTF Toray Foundation	20,000.00	2017 (on-going)
41.	Molecular Insights on the Structure and Dynamics Properties of Enzymes Encapsulated by Metal-Organic Framework	Fundamental Research Grant Scheme, MOHE FRGS/1/2017/STG04 /UPM/02/5	63,000.00	2017 (on-going)
42.	Theoretical study on the effect of pH and temperature on the stability of insulin-	Fundamental Research Grant	43,000.00	2016 (completed

	cyclodextrin complex	Scheme, MOHE FRGS/1/2016/STG01 /USM/02/4		in 2019)
43.	Insight on the Role of the Cation and the Anion from Molecular Dynamic Simulations and Experimental Studies of Ionic Liquid Extraction of Naphthenic Acid in Model Oil	Fundamental Research Grant Scheme, MOHE FRGS/1/2016/TK07/ UPM/02/1	79,000.00	2016 (completed in 2019)
44.	Investigation into the Relationship between DNA binding and Antitumor Activity of Novel Ruthenium Complexes	Fundamental Research Grant Scheme, MOHE FRGS/1/2014/ST01/ UPM/02/3	73,000.00	2014 (completed in 2018)
45.	Engineering Synthetic Biological Platforms For Bacterial Surrogates	Science Fund, MOSTI 02-01-04-SF1608	340,000.00	2013 (completed in 2016)
46.	Elucidation Of Thermoalkalophilic Enzyme Unfolding Mechanism Using Pressure-Induced Computational Simulation Techniques	Fundamental Research Grant Scheme (FRGS), MOE	83,000.00	2013 (completed in 2015)
47.	Biocompatible Calcined Layered Double Hydroxides As Support For Efficient Immobilization Of Biocatalysts	Research Acculturation Collaborative Effort (RACE) , MOE USIM/RACE/FST/STH /35/50512	50,000.00	2012 (completed in 2014)
48.	Unravelling Structure of Riboflavin Synthase For Designing of Potential Anti-Bacterial Drug	Science Fund, MOSTI 02-01-04-SF1321	340,000.00	2011 (completed in 2015)
49.	Evolutionary Reinforcement Learning for Flexible Protein Docking	Science Fund, MOSTI 02-01-04-SF1361	136,000.00	2011 (completed in 2014)
50.	Enzyme Mimicking : A Novel Peptide That Mimics Diamine Oxidase	Exploratory Research Grant Scheme (ERGS), MOE	175,000.00	2011 (completed in 2013)
51.	Development and Theoretical Elucidation of Nanodelivery Systems for Antineurodegenarative Drugs	National Nanotech Division, MOSTI	135,000.00	2011 (completed in 2013)
52.	Investigation Into Enantioselectivity of Chemo-Enzymatic Epoxidation of Aleknes and Amino Acids and Peptides as Alternative Asymmetric Catalyst	Fundamental Research Grant Scheme (FRGS), MOE	43,200.00	2011 (completed in 2013)
53.	Molecular Simulation of Palm Oil – Based Nanoemulsions Drug Carriers with Lipid Bilayer for Drug Nano-delivery Applications	Research University Grant Scheme	42,000.00	2011 (completed in 2013)
54.	Synthesis of Fatty Acid Sugar Ester via Enzymatic Catalysis	Fundamental Research Grant Scheme (FRGS), MOE	201,000.00	2011 (completed in 2013)
55.	Luminescence Liquid Crystals Based on	Research University	30,000.00	2011

	Ruthenium(II) – Containing Metallomesogens	Grant Scheme		(completed in 2013)
56.	Coarse-Grained Molecular Dynamics of Palm Kernel Oil – Based Nanoemulsions Drug Carriers with Lipid Bilayer for Drug Nano-delivery Applications	Research University Grant Scheme	10,000.00	2010 (completed in 2012)
57.	Metal-Mediated Peptide Assembly: Use of Metal Coordination for Formation of Peptide Nanostructures	Science Fund, MOSTI 03-01-04-SF1618	141,700. 00	2011 (completed in 2013)
58.	Enzymatic Synthesis of Fatty Acid Sugar Ester in Ionic Liquids	Research University Grant Scheme	30,000.00	2009 (completed in 2012)
59.	Systems Biology of a Psychrophilic Yeast for Novel Biotechnology	Genetics and Molecular Biology Iniatives, BIOTEK, MOSTI	4,890,000.00	2009 (completed in 2014)
60.	*In silico* Molecular Construction and Interaction of Nanodelivery System	Fundamental Research Grant Scheme (FRGS), MOHE	34,000.00	2009 (completed in 2011)
61.	New Feldspar-Immobilized Biocatalysts for Organic Synthesis	Fundamental Research Grant Scheme (FRGS), MOHE FST-06-50308 (USIM)	99,000.00	2008 (completed in 2010)
62.	Towards a Generic Methodology for the Purification and Molecular Characterization of Multi-Protein Complexes	PMI 2 Connect – Research Co-operation Award – British Council	270,000.00	2008 (completed in 2010)
63.	Immobilization of Lipase onto Natural Feldspar for Use in the Synthesis of Useful Organic Compounds	University Grant Scheme (USIM	95,000.00	2007 (completed in 2010)
64.	Enzymatic Synthesis of Palm-based Wax Ester as Raw Material for Cosmetic	University Grant Scheme (USIM)	60,000.00	2007 (completed in 2009)
65.	Development of Selected Industrial Enzymes and Protein from Psychrophiles	Genetics and Molecular Biology Iniatives, BIOTEK, MOSTI	1,125,840.00	2006 (completed in 2010)
66.	Molecular Interaction Study of Palm-Based Nanodelivery System for Cosmetic and Pharmaceutical	Scientific Advancement Grant Allocation Fund, ASM	228,000.00	2005 (completed in 2007)
67.	Developing Palm-Based Transdermal Nanodelivery System for Non Steroidal Anti-Inflammatory Drugs (NSAIDs)	BIOTEK, MOSTI	787,000.00	2006 (completed in 2010)
68.	Structural Studies of Chemically Modified *Geobacillus* sp. Strain T1 Thermostable Lipase	Fundamental Research Grant Scheme (FRGS), MOHE	74,000.00	2006 (completed in 2008)
69.	Structure and Function of Extremophilic	IRPA – RM 8, MOSTI	534,320.00	2004

	Proteins	09-02-05-006-BTK/ER/34		(completed in 2007)
70.	The Effect of Modification on Protein Function	IRPA – RM 8, MOSTI 09-02-04-001-BTK/TD/004	949,760.00	2002 (completed in 2008
71.	Scale Up Production : Enzymatic Synthesis of Palm-Based Esters	IRPA – RM 8, MOSTI 01-02-04-0000PR0013/01	518,000.00	2002 (completed in 2006)
72.	Enhancement of Enzyme Activity and Thermostability of Lipase	IRPA – RM 8, MOSTI 09-02-04-0336-EA001	265,800.00	2002 (completed in 2006
73.	Enzyme-Catalysed Synthesis of Palm-Based Wax Esters	IRPA – RM 8, MOSTI 09-02-04-0306-EA001	211,000.00	2002 (completed in 2006)
74.	Catalyst and Process Development for Production of Petrochemicals from Natural Gas	IRPA – RM 8, MOSTI 01-02-04-0000PR	4,018,550.00	2002 (completed in 2006)
		TOTAL	**16,976,393.00**	
		OVERALL TOTAL	**RM 31,864,853.00**	

Colloborating Scientists

	International	*Expertise*
1.	Professor Dr. Omar Yaghi University of California, Berkeley, USA	Metal Organic Frameworks
2.	Professor Dr. Nagarjun Konduru Harvard University, USA	Nanotoxicity
3.	Professor Dr. Romas Kazlauskas University of Minnesota, USA	Enzyme Engineering
4.	Professor Dr. Rajni Hatti-Kaul Lund University, Sweden	Biocatalysis
5.	Professor Dr. Donald Jacobs University of North Carolina, Charlotte, USA	Biophysics
6.	Professor Dr. Kenneth Seddon Queen's University Ionic Liquid Laboratory, Belfast, Northern Ireland	Ionic Liquids
7.	Professor Dr. Malcolm D. Walkinshaw University of Edinburgh, Scotland	Structural Biochemistry
8.	Professor Dr. Allen D. Headley Texas A&M University at Commerce, Texas, USA	Organic Synthesis
9.	Dr. Felipe Gandara Materials Science Institute of Madrid, Spain	Metal Organic Frameworks
10.	Dr. Nuno Micaelo Universidade de Minho, Braga, Portugal	Molecular Simulation
11.	Mr. Kyle Ellis Cordova Royal Scientific Society, Jordan	Metal Organic Frameworks
	National	
12.	Professor Dr. Abu Bakar Salleh Universiti Putra Malaysia	Enzyme Technology
13.	Professor Dr. Mahiran Basri Universiti Putra Malaysia	Bioorganic Syntheses
14.	Professor Dr. Raja Noor Zaliha Raja Abdul Rahman Universiti Putra Malaysia	Microbiology
15.	Professor Dr. Noorsaadah Abd Rahman Universiti Malaya	Peptide Chemistry
16.	Professor Dr. NoorHayaty Kassim Universiti Malaya	Nanomedicine
17.	Professor Dr. Habibah Abdul Wahab Universiti Sains Malaysia	Protein Modelling
18.	Associate Professor Dr. Abdul Munir Abdul Murad Universiti Kebangsaan Malaysia	Microbiology
19.	Associate Professor Dr. Siti Salhah Othman Universiti Sains Islam Malaysia	Enzyme Technology
20.	Associate Professor Dr. Salina Md. Radzi Universiti Sains Islam Malaysia	Biocatalysis
21.	Dr. Nik Ghazali Nik Salleh Malaysia Nuclear Agency	Radiation Technology

C. SUPERVISION OF RESEARCHERS

Postgraduate Level

Doctor of Philosophy (PhD)

Head of Committee Member

1. Aina Hazimah Bahaman. Machine Learning and Structure Activity Relationship (SAR) Study of Curcuminoids as Dengue Virus (DENV) Inhibitors. 2021
2. Afiq Azil. Structure Activity Relationship (SAR) Study of Transition Metal Complexes as Dengue Virus (DENV) Inhibitors. 2019
3. Nian Nazhad Noori. Modified Carbonate Apatite Nano Carrier And MOFs As Afatinib Holder For Treatment A549 Cell Line (Lung Cancer). 2018
4. Nurul Farhana Binti Ahmad Aljafree. Development Of Biodegradable Metal Organic Frameworks (MOFs) As Potential Carrier Agents For Fungicide Formulations. 2018.
   ** collaboration with University of California, Berkeley USA*
5. Fatimah `Afifah Binti Alias. Nanoscale Metal Organic Frameworks For Pulmonary Administration Of Personalized Pharmacotherapy In Non-Small Cell Lung Cancer. 2018.
6. Nurul Akmarina Mohd Abdul Kamal, "Development of Inhalable RGD-Modified Nanometal-Organic Framework Containing Gemcitabine for Lung Cancer Therapy", 2017
   ** collaboration with University of California, Berkeley USA*
7. Husam Ahmed Mahmood, "Early detection of lung cancer cells thorough the usage of homing peptides conjucated to Iron Oxide Nano Particles", 2017
8. Noor Fazrieyana Binti Hamidon. Zeolitic Imidazolate Framework-8 (ZIF-8) As A New Platform For Lipase Immobilization In Nanobiocatalyst. 2017
   ** collaboration with University of California, Berkeley USA*
9. Auni Hamimi Binti Idris. Development Of Magnetic Nanocapsules For Pulmonary Drug Delivery Targeting Lung Cancer. 2017
10. Aymen Suleiman Jaber Abu Hatab. Metallopeptides Mimicking The Cataltic Activity Of Laccase In Oxidation Reactions Via Green Chemistry. 2016
    ** collaboration with Qatar University*
11. Sharifa Zhaitun Begum. Metallopeptides Mimicked Laccased Enzyme for Oxidation Reactions via Green Organic Route. Graduated 2020
12. Azren Aida Asmawi. Development of Nanomagnetosol for Pulmonary Drug Delivery. Graduated 2020
    ** collaboration with Harvard University, USA*
13. Devandran Krishnan, "Lipase-catalysed Bioconversion of Glucose Amino Ester in Ionic Liquid", National Science Foundation Scholar, 2015.
    ** collaboration with University of Minnesota, USA*
14. Noor Hafizah Arbain. Development of Aerosolized Nanoemulsion Based Palm Oil for Pulmonary Drug Delivery. Graduated 2018.
15. Zalikha Ibrahim. Molecular Dynamics Study Of Peptidylarginine Deiminase-4 (Pad-4), A Drug Target For Rheumatoid Arthritis. Graduated 2017.
16. Rizana Yusof. Rational Design of Deep Eutectic Solvents for Biocatalysis. Graduated 2016.
17. Khairulazhar Jumbri. Design and Synthesis of New 1-Alkyl-3-Buylimidazolium Bromide Ionic Liquids As Media For DNA Solvation. Graduated 2015.
    ** collaboration with Minho University, Braga, Portugal*
18. Teo Chian Ying. Synthesis, Bioactivity and Structural Studies Of Inhibitors Against PAD-4. Graduated 2015.
    ** collaboration with Edinburgh University, UK*

19. Muhammad Alif Mohamad Latif. Insight and Mechanism Studies of Enzymes in Ionic Liquids. Graduated 2014.
    ** collaboration with Minho University, Braga, Portugal*
20. Saadi Bayat. Development of Peptide Mimic Enzyme Chiral Catalysts Based On Aldo-Ketoreductase for Reduction of Carbonyl Groups. Graduated 2014.
21. Emmy Maryati Omar. Microwave Irradiated Synthesis and Optimisation of New Functionalised Chiral Ionic Liquids. National Science Foundation Scholar, Graduated 2014.
    ** collaboration with Texas A & M University, USA*
22. Noraini Abdul Ghani. Development of Biocoating Materials of Wax Esters for Wood Based Industries. UPM-RU Fellowship, Graduated 2013.
    ** collaboration with Lund University, Sweden*
23. Uswatun Hasanah Zaidan. Adsorption Immobilization of *Candida rugosa* Lipase onto Aluminosilicate Supports as Biocatalysts for Fatty Acid Sugar Ester Synthesis. UPM-RU Fellowship, Graduated 2011.
    ** collaboration with Universiti Sains Islam Malaysia*
    ** Winner of Best Project (Doctor of Philosophy) in Faculty of Science, 2011*
24. Naz Chaibakhsh Langroodi. Modeling and Optimization of Lipase-catalyzed Synthesis of Adipate Esters Using Response Surface Methodology and Artificial Neural Network. UPM-RU Fellowship. Graduated 2010.
    ** collaboration with Amirkabir University of Technology, Tehran, Iran*
25. Roghayeh Abedi Karjiban. Molecular Dynamics of Thermoalkalophilic Lipases Unfolding at High Temperatures. UPM-RU Fellowship, Graduated 2008.
    ** collaboration with University of North Carolina at Charlotte, USA*

Advisory Committee Member

26. Velan Raman, Structural Studies And Application Of Covalent Organic Frameworks, 2019
27. Nadiah Syafiqah Mohd Azlan, Oil palm biomass derived carbon cryogel catalyst for levulinic acid production in γ-valerolactone, Nottingham Malaysia University, 2019.
28. Abubakar Adamu. Zeolitic Imidazolate Framework (Zif-90) Supported Homing Peptide For Targeted Delivery Of Anti-Cancer Therapeutics. 2018.
29. Eskandari Azadeh Hassan. Molecular Cloning And Expression Of Newly Multihelices Antifreeze Peptide From *Glaciozyma antarctica* In Yeast Systems. 2018.
30. Fazila Zakaria. Formulation Of Liquid Crystal Emulsion Containing Mitragyna Speciosa Leaf Extract For Wound Healing. 2018.
31. Bala Suleiman. Synthesis, Characterization, Structural Studies And Application Of Covalent Organic Frameworks (COFs). 2018
32. Idris Idris Muhammad. Synthesis and Catalytic Study of Chiral Metal Organic Framewoks, 2017.
33. Mostafa Yousefzadeh Borzehandani, Development of Irmof-74 Metal-Organic Framework as Solubility Enhancer for Poor-Aqueous Drugs, 2017.
34. Haswani Maisarah Binti Mustafa. Phytocompounds-Based Nanoemulsion Of Artocarpus Heterophyllus Lam. Leaves Extract. 2016.
35. Megala Muniandy. Mechanism Of Modeling The Production Of Flavor Ester Synthesis Catalyzed By Immobilized *Mucor miehei* In Ionic Liquids / Solvent Free Media. 2015
36. Norsyafiqah Rizalman. Synthesis Of New 2-Phenylbenzothiazole Derivatives For Luminescent Thin Films. 2014.
37. Elmi Shahizam Zakaria. Modes Of Inhibition Of Inhibition Of Alpha Amylase And Alpha Glucosidase By New Antidiabetic Agents With (2h)-1,4-Benzothiazin-3-One Scaffolds., 2014.
38. Nur Syazwani Binti Mohtar, Enzymatic Acidolysis Using Immobilized Lipase In Sago To Produce Cocoa Butter Substitute. 2014.

39. Nur Izzah Md Fadilah, Development of Peptide-Based Hydrogel for Wound Healing, Graduated 2020.
40. Ng Rou Chian, Isolations And Characterizations Of Antioxidative And Cytotoxic Phytoconstituents From *Aegle marmelos* And *Murraya koenigii* And Their In Silico Docking Study Against P38A MAPK and HER-A, Graduated 2019.
41. Ali Ahmed Qaid Al-Shaheri. Synthesis, Characterization And Application Of Dithiocarbazate Schiff Base Complexes For Oxidation Of Cyclohexane. Graduated 2019.
42. Sahar Mohamad Ibrahim. Clinical, Mechanical and Histological Evaluation of AFP Cryopreserved Skin Used in Tissue Transplantation. Graduated 2018.
43. Hiba Ali, Preparation of 5-Amino Salicylic Glyco-conjugates via Enzymatic Reaction. Graduated 2018.
44. Erzam Marlisah, "Evolutionary Neural Network and Reinforcement Learning", Graduated 2017.
45. Muhammad Shuaib Khan, "Skin Graft CryopreservatioUn sing Antarctic Yeast lsolated Anti-Freeze Peptides (AFP): Microscopic Cryo-Preserved Tissue Evaluation in Vitro and in Vivo Study", Graduated 2016.
46. Samira Yousefi, "Preparation of 5-Amino Salicylic Glyco-conjugates via Enzymatic Reaction", Graduated 2016.
47. Azira Muhamad, "Interaction of Hepatitis B Virus Core and Surface Antigen", Graduated 2015.
48. Mohammad Abu Alrub, "Lipase-Catalysed Synthesis of *N*-Trans-Feruloyltyramine", Graduated 2014.
49. Norazlinaliza Salim, "Formation of Palm Kernel Oil Esters Nanoemulsion Systems Containing Ibuprofen for Topical Delivery", Graduated 2013.
50. Nursyamsyila Mat Hadzir, "Development of Palm-Based Transdermal Nanodelivery System for Non Steroidal Anti-Inflammatory Drugs", Graduated 2013.
51. Roswanira Abdul Wahab, "Enhancement of Enzymatic Properties of T1 Lipase by Saturation Mutagenesis at GLN-114", Graduated 2012
52. Ng Sook Han, "Design and Development of Palm Oil Ester-based Nanocosmeceutical", Graduated 2012.
53. Atena Adnani, "Protease-catalyzed Synthesis of Flavor Esters", UPM-RU Fellowship, Graduated 2011.
54. Siti Salwa Abdul Gani, "Enzymatic Synthesis of Engkabang Fats", Graduated 2010.
55. Lam Kok Wai, "Design, Synthesis and Biological Evaluation of Potential Heme-coordinating Nitric Oxide Synthase Inhibitors", Graduated 2010.
56. Mansour Ghaffari Moghaddam, "Enzymatic Synthesis of 3-O-Acylbetulinic Acid Derivatives and Prediction of Acylation Using Response Surface Methodology and Artificial Neural Network Analyses", Graduated 2010.
57. Keng Pei Sin, "Enzymatic Scale-up Production of Palm Wax Esters", Graduated 2008.
58. Noor Azlina Ibrahim, "Modification of *Bacillus stearothermophilus* F1 protease through introduction of ion pairs", Graduated 2007.
59. Salina Mat Radzi, "Enzymatic Synthesis of Oleyl Oleate, A Liquid Wax Ester, In A Stirred Tank Reactor", Graduated 2006.
60. Erin Ryantin Gunawan, "Enzyme Catalyzed Synthesis of Palm-Based Wax Ester", Graduated 2005.
61. Syarul Nataqain Baharum, "Production, purification and characterisation of organic-tolerant lipase from *Pseudomonas sp.* S5", Graduated 2005.
62. Siti Salhah Othman, "Immobilization of Lipase on Heat Reated Hydrotalcite for the Enantioselective Esterification of (+)-Menthyl Esters", Graduated 2004.
63. Bimo Ario Tejo, "Structural Analysis of Modified *Candida rugosa* Lipase", Graduated 2004.
    ** Degree awarded, PhD with Distinction*
64. Tan Kian Peng, "Redox Behaviour and the Effects of Dopants on the Nature of Oxidants in/on Vanadyl Pyrophosphate Catalysts", Graduated 2003.

Master of Science (MS)

Head of Committee Member

1. Umar Abdul Aziz, Development Of Biodegradable Metal Organic Frameworks (MOFs) As Potential Carrier Agents For Fungicide Formulations, 2020
2. Abdullah Shaho, "Computational study of Cadmium binding to peptides", Graduated 2017.
3. Sharifa Zaithun Begum, "Development of Metallopeptide Chiral Catalysts for Reduction of Carbonyl Groups", Graduated 2016.
4. Azren Aida Asmawi, "Novel Antifreeze Peptides Derived From Shorthorn Sculpin Antifreeze Protein", Graduated 2016.
5. Foong Pik Mun, "Bioinformatics Analysis of *Glaciozyma antarctica* Metallome", UPM-RU Fellowship, Graduated 2015.
6. Ahmad Omar Abdelazim Suliman Warrad, "Synthesis and Activity Evaluation of Short Antifreeze Peptides of Type I Shorthorn Sculpin Antifreeze Protein", Graduated 2014.
7. Izzuddin Bin Ahmad Nadzirin, "Design, Synthesis, and Biochemical Assay of Alpha-Enolase-Based Peptide Inhibitors Against PAD-4", Graduated 2013.
8. Nur Syazwani Mohtar, "Genome Mining of *Geobacillus sp* for Braching Enzyme", National Science Foundation Scholar, Graduated 2013.
9. Harmiza Harun, "Catalytic Promiscuity in Biosynthesis of Chiral Drugs and Chemical Synthesis", National Science Foundation Scholar, Graduated 2013.
10. Mohd Rizal Chumati, "Chiral Ionic Liquid Coated Enzyme for High Value-added Enantiomer", National Science Foundation Scholar, Graduated 2013.
11. Huan Qiu Yi, "*In silico* Micellization of Palm-based Wax Esters by Molecular Dynamics Simulation", Graduated 2012.
12. Zati Ismah Ishak, "Dissolution of Oil Palm Biomass by Alkyl-imidazolium Ionic Liquids for Efficient and Enzymatic Hydrolysis", National Science Foundation Scholar, Graduated 2012.
13. Muhammad Fairuz Zulkifli, "Structural Prediction of *Leucosporidium antarticum* Antifreeze Protein", National Science Foundation Scholar, Graduated 2011.
14. Naimah Haron, "Molecular Dynamics Simulation of New Tetraethylammonium-based Amino Acid Ionic Liquids", Graduated 2011.
    ** collaboration with Minho University, Braga, Portugal*
15. Khairulazhar Jumbri, "Synthesis and Optimisation of New Functionalised Chiral Ionic Liquids", National Science Foundation Scholar, Graduated 2010.
16. Muhammad Alif Mohamad Latif, "Molecular Dynamics Simulations of Oleyl Oleate Nano-emulsion Systems", National Science Foundation Scholar, Graduated 2009.
17. Ng Shie Ling, "Facile Synthesis, Characterization and Biocatalytic Application of Imidazolium-based Chiral Ionic Liquids", Graduated 2008.
    ** collaboration with Queen's University, Belfast, Northern Ireland*
    ** Winner of Best Project (Master in Science) in Faculty of Science, 2008*
18. Syarajatul Erma Khalid, "Synthesis and Characterization of Semisynthetic Metallothermolysin", Graduated 2008.
19. Uswatun Hasanah Zaidan, "Enhancement of Immobilization Enzyme onto Layered Double Hydroxides for Petrochemicals Value-Added Products", Graduated 2007.
20. Azizah Misran, "Screening and Docking of Chemical Ligands onto Pocket Cavities of Trypsin for Designing a Biocatalyst", National Science Foundation Scholar, Graduated 2007.
21. Ahmad Haniff Jaafar, "Modelling of Modified Protein from Serine Protease", National Science Foundation Scholar, Graduated 2007.
22. Mohd Izham Saiman, "Synthesis by Precipitation and Characterisation of Antimony Tetraoxide", Graduated 2006.

Advisory Committee Member

23. Iffah Syazana Binti Rusli. Development Of Nanoformulation Containing *Indigofera zollingeriana* Leaves Crude Extract For Cancer Treatment. 2018
24. Monica Namizie Anak Asey. Chitosan Coated Magnetic Nanoparticles Loaded With Phytic Acid For Lung Cancer Treatment. 2018
25. Norfatin Izzatie Binti Mohamad Saimi. Development Of Aerosolized Niosome Formulation Containing Gemcitabine And Cisplatin For Lung Cancer Treatment. 2016
26. Nur Khalida Rahayu Bt Zainon . Nanomaterials Mediated Sirna Delivery System For Gene Therapy In Lung Cancer. 2016
27. Ivy Jocelyn Joanes. Extraction Of Naphthenic Acid From Crude Oil Using Ionic Liquids. 2016
28. Nur Aininie Yusoh, Co-Delivery of Ruthenium Polypyridyl Complex and Cisplatin for Anticancer Therapy, Graduated 2020
29. Nadiatul Atiqah Binti Wahgiman. Formulation And Optimization Of Nanoemulsion Containing Gemcitabine For Lung Cancer Treatment. Graduated 2019
30. Nurul Syahira Binti Zaharudin. Functionalized Ionic-Liquid Templated Mesoporous Silica Nanoparticles For Anticancer Drug Delivery System. Graduated 2018.
31. Lee Xin Jie. Synthesis of nanoparticles for lung cancer. Graduated 2018.
32. Eleen Dayana Mohamed Isa. Synthesis of mesoporous silica for lung cancer, Graduated 2017.
33. Somayeh Golirand, "Enzymatic Esterification of Dyhydrocaffeic Acid in ionic Liquid Using Response Surface Methodology", 2014.
34. Tuan Zarith Farhana Tuan Zainuddin, "Enzymatic Butyl Levulinate Esters Hydrolysis in Deep Eutectic Solvents", 2013.
35. Najib Zainal Abidn, "QSAR and Computational Study of Anti Microbial Effect of Bioactive Peptide Derived from Food Sample", 2013.
36. Nur Fazrieyana Hamidon, "Enzymatic Esterification of Vanillyl Esters in Deep Eutectic Solvent", Graduated 2016**.**
37. Lim Wui Zhuan, "Pressure-induced Unfolding of L1 Lipase by Using Molecular Simulation Techniques", Graduated 2016.
38. Norfatiah Abd Razak, "Synthesis, Physico-chemical Properties and Electrochemical Behaviour of Metal-base Deep Eutectic Solvents", 2015.
39. Syarilaida Zulkefli, "Enzymatic Hydrolysis of Pretreated Oil Palm Biomass in Deep Eutectic Solvent", Graduated 2015.
40. Ruzanna Yahya, "CHARMM Approach of Formulation Studies", Graduated 2015.
41. Syed Hussaini Hilmie Shah Said Amin Shah, "Novel Antifreeze Peptides Derived From *Leucosporidium antarcticum* Antifreeze Protein: Structure-Function Approaches", Graduated 2013.
42. Shamsul Kamar, "Enzymatic Studies of Liquid Wax Esters", Graduated 2013 (external supervisor: USIM)
43. Mahashanon s/o Arumugam, "Chemoenzymatic Epoxidation of Alkene", Graduated 2013
44. Hamisu Abdu, "Glycosidation of Betulinic Acid Using Enzymes", Graduated 2012.
45. Lim Chaw Jiang, "Development of Palm-based Nanodelivery System in Herbicide" Graduated 2011.
46. Ummi Hani Abdullah, "Nanoemulsion Formulation of Palm Oil Esters for Topical Delivery of Ibuprofen", Graduated 2010.
47. Hasnidar Hamid, Detection of Triglyceride Based on Microwaves Dielectric Properties of Triglyceride Enzymatic Reaction, Graduated 2010.
48. Nur Fariza Abdul Rahman, Synthesis and Optimisation Study of Lipase-Catalysed Levulinate and Amino Levulinate Esters, Graduated 2010.

49. Chong Kok Whye, "Structural Studies of A Chemically Modified Thermostable Lipase from Geobacillus SP. Strain T1", Graduated 2007.
50. Azmahani Sulaiman, "Formulation of Cosmetics Using Palm-Based Liquid Wax Esters", Graduated 2007.
51. Azira Muhammad, "*Bacillus stearothermophilus* F1 protease : Computer-aided Molecular Modeling and Docking of Substrates", Graduated 2005.

Visiting Scholars

1. Assoc. Prof. Dr. Azizollah Habibi, Kharazmi University, Iran, Feb-Aug 2017.
2. Assoc. Prof. Dr. Rozana Othman, Universiti Malaya, June – Aug 2014.
3. Prof. Dr. Rohana Adnan, Universiti Sains Malaysia, July-Aug 2013.

Post-Doctorals

1. Dr. Emmy Maryati Omar. MOFs Catalysis for Chiral Reaction. 2018-2019.
2. Dr. Ngan Chen Loong. Development of Aerosol Drug Nanodelivery. 2015-2017.
3. Dr. Hamed Reza Fard Masoumi. Development of Aerosol Drug Nanodelivery. 2015-2016.
4. Dr. Saadi Bayat. Development of Peptide Mimic Enzyme Chiral Catalysts Based On Aldo-Ketoreductase for Reduction of Carbonyl Groups. 2014-2015.
5. Dr. Ashraful Islam. Design and Synthesis Peptide Catalysts and Inhibitors. 2013-2014.
6. Dr. Naz Chaibakhsh Langroodi. Lipase-catalyzed Synthesis of Functional Esters. 2010-2011.

Research Assistants / Officers

1. Umar Abdul Aziz. Metal organic frameworks for fungicides delivery. 2019.
2. Nurul Farhanah Aljafree. Metal organic frameworks for fungicides delivery. 2018.
3. Nurul Akmarina Mohd Abdul Kamal. Prognosis method for Lung Cancer. 2017**.**
4. Nur Fazrieyana Hamidon. Enzymatic Esterification of Fruit Oils. 2016**.**
5. Auni Hamimi Idris. Development of Iron Oxide for Pulmonary Drug Delivery. 2016.
6. Zarina Abdul Kadir, "Genome Sequnecing of *Geobacillus zalihae*", 2010.
7. Nur Syazwani Mohtar, "Genome Mining of *Geobacillus sp* for Braching Enzyme", 2010.
8. Syed Hussaini Hilmie Shah Said Amin Shah, "Peptides from Antifreeze Proteins", 2008.
9. Nor Izuan Jarmi, "Optimal Lipase-Catalyzed Synthesis of Dioleyl Succinate Ester by Using Response Surface Methodology (RSM)", 2009.
10. Mahashanon Arumugam, "Microwave Assisted Enzymatic Synthesis of Sugar Ester in Two Phase Solvent Systems Containing Ionic and Tert-Butanol", 2009.
11. Noraini Hassan "Crystallisation of Chiral Ionic Liquids", 2008.
12. Ang Yin Shan "Development of Biocoating Materials of Wax Esters for Wood Based Industries", 2008.
13. Fatrah-Aizan Abu Bakar "Synthesis and Optimisation of New Functionalised Chiral Ionic Liquids from Plant Acids", 2008.
14. Huan Qiu Yi, "*In silico* Molecular Construction and Interaction of Nanodelivery System", 2008.
15. Zati Ismah Ishak "Fiber Extrusion by Ionic Liquids", 2008.
16. Emmy Maryati "Synthesis and Optimisation of New Functionalised Chiral Ionic Liquids", 2007.
17. Uswatun Hasanah Zaidan "Immobilization of Enzyme onto Local Feldspar", 2007.
18. Asrul Farrish OKR Oduyappan, "Chemoenzymatic Epoxidation of Unsaturated Fatty Acid Esters and Plant Oils", 2007.
19. Mohd Rizal Chumati "Chiral Ionic Liquid Coated Enzyme for High Value-added Enantiomer", 2007.
20. Noraini Abdul Ghani, "Ionic Liquids Studies for the Production of High Added Value Esters from Palm Oils and Petrochemicals", 2005.
21. Noor Mona Mohd Yunus, "Studies and Characterisation of Immobilization Enzyme onto Layered Double Hydroxides", 2004.

22. Uswatun Hasanah Zaidan, "Studies and Characterisation of Immobilization Enzyme onto Layered Double Hydroxides", 2003.
23. Mad Uwaisulqarni, "Kinetics Studies of Immobilised Lipase Catalysed Reaction", 2003.
24. Ahmad Haniff Jaafar, "Preparation of A Semisynthetic Metalloprotease : A Novel Catalyst for Petrochemicals and Oleochemicals Products", 2003.
25. NurSharlina Shamsuddin, "Preparation of A Semisynthetic Metalloprotease : A Novel Catalyst for Petrochemicals and Oleochemicals Products", 2002.
26. Farezan Ibrahim, "Preparation of A Semisynthetic Metalloprotease : A Novel Catalyst for Petrochemicals and Oleochemicals Products" July 2002.

Bachelor of Science (BS)

1. Mohd Adil Idham. Machine Learning and Molecular Docking of Curcuminoids as Malaria Virus Inhibitors. 2021
2. Tan Ee Fei. Machine Learning and Molecular Docking of Curcuminoids as Dengue Virus (DENV) Inhibitors. 2021
3. Nur Syafifah Ahmad Saifudin. MOF-based formulation for agrichemicals. 2020
4. Azaria Iqma binti Jainal. Antifungal evaluation of Long Chain Undecylenic Esters 2020
5. Nur Izyan Badar. ZIF8 as potential catalysts for fatty esters production. 2019
6. Nurul Syuhada Binti Shaari. Synthesis of calcium acetate-malic acid framework as a potential carrier agent for pesticides. 2018
7. Siti Aishah Shis. Short peptides mimicking the catalytic activity of laccase in oxidation reaction. 2018
8. Muhamad Nor Nu'aim Zaini. Enzyme-Metal organic frameworks biocatalysts design. 2017.
9. Muhammad Anaz Syazreil Mohd Ghause. Development of Hybrid Palm based Nanoemulsion for Pulmonary Drug Delivery. 2017.
10. Madzna Jabalhati. Nanoemulsion system coated fish oil for lung cancer treatment. 2017.
11. Muhamad Nazrin Zahari. Immobilization of enzyme using metal organic frameworks. 2017.
12. Amir Faisal Zainal Abidin. Palm based nanoemulsion system containing curcumin for lung cancer treatment. 2016.
13. Luqman Hakim Mutaza. Palm based nanoemulsion system containing quercertin for lung cancer treatment. 2016.
14. Nurul Shairah Mohd Nizam. Metallopeptides Mimicked Laccased Enzyme for Oxidation Reactions via Green Organic Route. 2016
15. Adriana Izna Isaac. Development of Hybrid Palm based Nanoemulsion for Pulmonary Drug Delivery. 2016.
16. Nur Fatihah Mamat. Metallopeptides Mimicked Laccased Enzyme for Oxidation Reactions via Green Organic Route. 2016
17. Shahmie Aiman Bin Sabarudin. Spectroscopic Studies of Groove Binders Between Imidazole-Based Ionic Liquids And Deoxyribonucleic Acid (DNA), 2015.
18. Nurul Izzatie Binti Ag Lah. Optimisation of Long Chain Undecylenic Esters Using Response Surface Methodology (RSM), 2015.
19. Nur Alisa Binti Ahmad Sukal. Groove Binding Studies of Ionic Liquids and DNA by Spectroscopic Techniques, 2015.
20. Nor Aliyah Binti Abd Jalil. Enzymatic Reaction of Undecylenic Acid via Response Surface Methodology (RSM), 2015.
21. Mohamed Salim Mohamed Ismail, "Rational Design of Ice Structuring Peptides for Frozen Foods", 2015.
22. Nurul Syuhada Redzuan, "Simulation Of Oxidoreductase Behaviour In Deep Eutetic Solvents", 2015.

23. Nur Azlin Abu Bakar, "Enzyme Catalyzed Degradation of Organic Pollutants in Deep Eutectic Solvents", 2015.
24. Nor Arifah Mat Nor, "Enzymatic Synthesis of Undecylenic Acid with Fatty Alcohols for Skin Disorders Purposes", 2015.
25. Lee Lei Jing, "Synthesis and Characterization of Tripeptide Catalysts for Carbon-Fluorine Bond Formation", 2014.
26. Saw Yng Nee, "Synthesis and Characterization of Fatty Acid Conjugated Tetrapeptides", 2014.
27. Nur Aishah Md Yusoh, "Synthesis and Evaluation of Antifreeze Peptide from Antifreeze Protein of *Glaciozyma Antarctica*", 2014.
28. Syahrizan Mohamad, "Modelling Enzyme Structure and Dynamic Properties in Deep Eutectic Solvents (DES)", 2014.
29. Munira Mazlan, "Enzymatic Methyl Levulinate Esters Hydrolysis in Deep Eutectic Solvents", 2013.
30. Tuan Zarith Farhana Tuan Zainuddin, "Enzymatic Butyl Levulinate Esters Hydrolysis in Deep Eutectic Solvents", 2013.
31. Nur Fazrieyana Hamidon, "Enzymatic Esterification of Vanillyl Esters in Deep Eutectic Solvent", 2013.
32. Tasha Ezzati Busrah, "Enzymatic Esterification of Cinnamyl Esters in Deep Eutectic Solvent", 2013.
33. Ahmad Fakhri Hashim, "Amino Acids as an Effective Organocatalysts for Asymmetric Michael Addition Reactions in Microwave Irradiation", 2011.
34. Khairul Niswin "Enzymatic Synthesis of Chitosan Adipate by Response Surface Methodology", 2011.
35. Kilarence Jesunathan, "Statistical Design Approach for the Development of Bio-Marine Based Wax Esters", 2010.
36. *Devandran Krishnan, "Lipase-catalysed Bioconversion of Glucose Amino Ester in Ionic Liquid", 2010. **Winner of Best Thesis in Analytical Chemistry Malaysia– from Persatuan Sains Analisis Malaysia (ANALIS)*
37. Nik Sasha Khatrina Khairuddin, "Lipase-Catalyzed Glucosidation Reaction Using Two Phase Solvent System Containing Ionic and Tert-Butanol", 2009.
38. Khairunnisa Majidi, "New Biocatalyst From Imidazolium-Based Chiral Ionic Liquid Coated *Candida rugosa* Lipase", 2009.
39. Nor Izuan Jarmi, "Optimal Lipase-Catalyzed Synthesis of Dioleyl Succinate Ester by Using Response Surface Methodology (RSM)", 2009.
40. Mahashanon Arumugam, "Microwave Assisted Enzymatic Synthesis of Sugar Ester in Two Phase Solvent Systems Containing Ionic and Tert-Butanol", 2009.
41. Nurul 'Ain Mohd Ali Hanafiah, "Chiral Ionic Liquid coated Enzyme for Non-chiral and Chiral Esterification Reaction", 2009.
42. Norfarina, "Enzymatic Synthesis of Chitosan Adipate", 2008.
43. Ang Yin Shan, "Green Route Palm-based Esters for Surface Coating", 2008.
44. Fatrah-Aizan Abu Bakar, "Synthesis and Characterisation of Imidazolium Based Chiral Ionic Liquids Derived from L-Amino Acids", 2008.
45. Huan Qiu Yi, "*In silico* Micellization of Palm-based Wax Esters by Molecular Dynamics Simulation", 2008.
46. Zati Ismah Ishak, "Oil Palm Kernel Fiber Extrusion by Ionic Liquids", 2008.
47. Mohamad Yusoff Ismail, "Synthesis and Characterization of Chiral Ionic Liquids from Plant-based Acids", 2007.
48. Nur Azlin Mohd Ayob, "Synthesis and Characterization of Chiral Ionic Liquids from Amino Acids", 2007.
49. Senthamarai Padmanabhan, "Green Solvent Engineering Agrochemicals in Places of Petrochemicals", 2007.
50. Lai Chooi Peng, "Screening of Trypsin-ligand Complex for Designing a Biocatalyst", 2006.

51. Nik Diyana Nik Ab Majid, "Enzymatic Synthesis of Oleyl Oleate, Oleyl Palmitate and Dimethyl Adipate Using Various Biocatalysts Under Microwave Method", 2006.
52. Toon Mei Se, "Protein Inhibitor Design Through Molecular Modeling and Computional Chemistry for Biorational Pest Control", 2006.
53. Kiung Yee Lin, "Esterification Reaction of Methanol and Oleic Acid Using Various Lipases", 2006.
54. Muhammad Alif Mohammad Latif, "Enzymatic Reaction for the Production of Di-isobutyl Adipate Ester", 2006.
55. Loh Yoke Kuan, "Esterification Reaction of Adipic Acid and Octanol Using Biocatalyst", 2006.
56. Noor Hasni Abdul Rahim, "Intercalation studies of fatty acis into Layered Double Hydroxide (Zn/Al)", 2006.
57. Tengku Nor Azlini Tengku Muhammad, "Intercalation studies of fatty acis into Layered Double Hydroxide (Mg/Al)", 2006.
58. Farah Wahida Azizan, "Intercalation studies of fatty acis into Layered Double Hydroxide (Ni/Al)", 2006.
59. Zuzilawati Hassim, "Microwave Studies of Wax Esters using *Candida rugosa* Lipase", 2005.
60. Norshahida Mohd Shofian, "Synthesis of Methyl Salicylate using Biocatalysts", 2005.
61. Noraini Abdul Ghani, "Synthesis of Dimethyl Adipate using Novozyme", 2005.
62. *Ng Shie Ling, "Screening of Biocatalyst for the Production of Adipate Esters", 2005.
    **Winner of ICI Award for Best Project in Faculty of Science*
63. Hoo Kai Hong, "Molecular Docking of Chemical Ligands onto Pocket Cavities of Trypsin for Designing a Biocatalyst", 2005.
64. Si Tzy Liang, "Synthesis and Characterisation of Antimony-Niobium Oxide Catalyst", 2005.
65. Liew Siew Ching, "Synthesis and Characterisation of Antimony-Niobium Oxide Catalyst", 2005.
66. Mohd Izzuan Zakri, "Preparation and Characterization of Ni/Al and Co/Al Layered Double Hydroxides with Presence of Sodium Dodecyl Sulphate", 2004.
67. Ahmad Salehudin Muhamad Asarudin, "Preparation of New Advanced Nanomateriasl for Immobilisation of Enzymes", 2004.
68. Selina Teo Mei Chen, "Immobilization of Lipase on Ni/Al Layered Double Hydroxide for the Synthesis of Isopropyl Palmitate", 2004.
69. Phong Hoy Chuan, "Study of Enzymatic Esterification Using Immobilized Lipase", 2004.
70. Ardyanshah Mohamad Arifin, "Synthesis and Characterization of Layered Double Hydroxide (Zn/Al)", 2004.
71. Raihan Ramli, "Synthesis and Characterisation of Antimony-Niobium Oxide Catalyst", 2004.
72. Mohd Sarifudin Ismal, "Synthesis and Characterisation of Ferric Antimony Oxide Catalyst", 2004.
73. Diana Devung Ajeng, "Synthesis and Characterisation of Antimony Oxide Catalyst", 2004.
74. Shuhaida Mat Yasin, "Immobilisation of Lipase by Layered Double Hydroxides", 2003.
75. Mohd Ridhuan Ismail, "Immobilisation of Lipase by Nanocomposites", 2003.
76. Faizal Roslie, "Effect of Concentration on Immobilisation of Lipase by Layered Double Hydroxides", 2003.
77. Noralizah Mokhtar, "Effect of Surfactant Ion on Layered Double Hydroxides for Immobilisation of Lipase", 2003.
78. Noor Mohd Hatta Idris, "Lipase Immobilization on Layered Double Hydroxides (Mg/Al) for Esterification", 2003.
79. Mohd Tahkim Zulkipli, "Lipase Immobilization on Layered Double Hydroxides (Zn/Al) for Esterification", 2003.
80. Roswadi Mohamed, "Homogeneous Catalyst in Oligomerisation in Petrochemicals Chemistry", 2003.
81. Azmi Musa, "Modul Pengajaran Multimedia Jadual Berkala", 2003.
82. Tee Siau Yuan, "Modul Pengajaran Multimedia Spektroskopi Infra Merah", 2003.

83. Ruhil Naznin Azaman, "Immobilization of Enzyme on DEAE-Cellulose and Its Esterification Activity", 2002.
84. Mazidah Mad Saad, "Immobilization of Lipase from *Candida rugosa* on Hydrotalcite for Use in the Synthesis of Esters", 2002.
85. Azmahani Sulaiman, "Immobilization of Lipase from *Candida rugosa* on Hydrotalcite for Use in the Synthesis of Esters", 2002.
86. Safarini Md Tajudin, "Immobilization of Lipase on Kaolin and Their Esterification Activity", 2002.
87. Badrul Hisham Mohd Shuaib, "Nickel Homogeneous Catalyst in Oligomerisation of Alkenes in the Petrochemicals Industry", 2002.
88. Normawati Md Rayis, "Modul Pengajaran Multimedia Kimia Nukleus", 2002.
89. *Masila Alias, "Modul Pengajaran Multimedia Spektrofotometer Ultralemabayung-Nampak", 2002.
**Winner of Best Multimedia Project in Faculty of Science and Environmental Studies*
90. Jeffrey Gimpah, "Immobilization of Lipase from *Candida rugosa* on Hydrotalcite for Use in the Synthesis of Esters", 2002.
91. Saifudin Ahmad, "Nickel Homogeneous Catalyst in Oligomerisation of Alkenes in the Petrochemicals Industry", 2002.
92. Emmy Maryati Omar, "Homogeneous Catalytic System for Olefin Metathesis in Petrochemicals Industry", 2002.
93. Naresh a/l Pubalan, "Hydrotalcite as Support for Enzyme Immobilization", 2002.
94. Azrol Hisyam, "Sintesis dan Pencirian Mangkin Nikel Homogen untuk Proses Pengoligomeran Alkena", 2001.
95. Awaluddin Abdul Hamid, "Sintesis dan Pencirian Mangkin Nikel Homogen untuk Proses Pengoligomeran Alkena", 2001.
96. Salamiah Mohd Nawawi, "Modul Pengajaran Multimedia Spektroskopi Infra Merah" 2000.
97. Tung Chee Hong, "Nickel Homogeneous Catalyst in Oligomerisation of Alkenes in the Petrochemicals Industry", 2000.
98. Ng Chee Vui, "Nickel Homogeneous Catalyst in Oligomerisation of Alkenes in the Petrochemicals Industry", 2000.
99. Nujaimi Ahmad, "Penyediaan dan Pencirian Karbon Teraktif daripada Serepai Batang Kelapa Sawit", 2000.

D. PUBLICATIONS

Books

1. **Mohd Basyaruddin Abdul Rahman** (2010). "Haute Couture Molecules and Biocatalysts : Inaugural Lecture Series" UPM Press, ISBN 978-967-344-187-7.
2. Hishamuddin Zainudin and **Mohd Basyaruddin Abdul Rahman** (2009). "Lecture Series in Computational Biology" UPM Press, ISBN 978-967-960-252-4.
3. **Mohd Basyaruddin Abdul Rahman**, Adam Leow Thean Chor and Abd. Ghani Abd. Aziz (2007). "Structural Biology Research Report: The Effect of Conformation on Protein Function", UPM Press, ISBN 978-967-5026-33-1.
4. Abu Bakar Salleh, Mahiran Basri and **Mohd Basyaruddin Abdul Rahman** (2003). "The Effect of Conformation on Protein Conformation", UPM Press, ISBN 967-960-161-7.

Book Chapters / Modules

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International

1. **Mohd Basyaruddin Abdul Rahman*** (2021). Aerosolized Nanohubs for the Targeted Drugs Smart Delivery for Pulmonary Route. COMSTECH International Workshop on Nanomedicine – Development & Challenges. 15-17 March, 2021. Islamabad, Pakistan. Invited Speaker.
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13. **Mohd Basyaruddin Abdul Rahman***, Noor Hafizah Arbain, Azren Aida Asmawi, Norazlinaliza Salim and Emilia Abdmalek (2019). Lipid-based aerosolized nanocolloidal carrier system containing anticancer drugs in lung carcinoma treatment. The 8th Asian Conference on Colloid & Interface Science. 24-27th September 2019, Kathmandu, Nepal. Invited Speaker.

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24. **Mohd Basyaruddin Abdul Rahman,** Azren Aida Asmawi, Norazlinaliza Salim, Mas Jaffri Masarudin (2019). Physicochemical and aerodynamical analysis of inhalable nanoemulsion system loaded with docetaxel and curcumin for lung cancer treatment via pulmonary route. 2019 TechConnect World Innovation Conference, 17-19th June 2019, Boston, USA.
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35. **Mohd Basyaruddin Abdul Rahman**, Computational Chemistry in Systems Biology. *Asian Regional Conference on Systems Biology 2017*, 24-26th October 2017, Bangi, Selangor, Malaysia. Invited Speaker.
36. **Mohd Basyaruddin Abdul Rahman**, Noor Hafizah Arbain, Cheng Loong Ngan, Norazlinaliza Salim, Haslina Ahmad, Emilia Abdulmalek and Wong Tin Hui (2017). Aerosolized Palm-Based Nanoemulsion Containing Quercetin for Lung Cancer Treatment via Pulmonary Route. 2nd Asian Conference on Oleo Science (ACOS 2017) and the 56th Annual Meeting of the Japan Oil Chemists' Society, 11-13th September, 2017. Tokyo University of Science, Tokyo, Japan.
37. **Mohd Basyaruddin Abdul Rahman**, Eisuke Ueda, Siti Munirah Mohd Faudzi, Haslina Ahmad, Emilia Abdulmalek and Noor Armylisa's Abu Hassan (2017). Green Synthesis of Palm Oil-based Glycidyl Esters. 2nd Asian Conference on Oleo Science (ACOS 2017) and the 56th Annual Meeting of the Japan Oil Chemists' Society, 11-13th September, 2017. Tokyo University of Science, Tokyo, Japan.

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39. Sharifa Zhaitun Begum, Karen Ann Crouse, Mohamed Ibrahim Mohamad Tahir, Emilia Abdul Malek and **Mohd Basyaruddin Abdul Rahman** Mohd Basyaruddin (2017). Putative Design and Synthesis of Different Molar Ratio of Copper (II)-Peptides Based on Laccase. International Conference for Young Chemists. 16-19th August 2017, The Wembley Hotel, Penang
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41. Azren Aida Asmawi, Norazlinaliza Salim, Ngan Cheng Loong, Haslina Ahmad, Emilia Abdulmalek, Mas Jaffri Masarudin and **Mohd Basyaruddin Abdul Rahman** (2017). Selection of nanoemulsion components loaded with docetaxel for lung cancer treatment via pulmonary route7th Asian Conference on Colloid & Interface Science, 8-11th August 2017, Kuala Lumpur.
42. Noor Hafizah Arbain, Mahiran Basri, Norazlinaliza Salim, Wong Tin Hui and **Mohd Basyaruddin Abdul Rahman** (2017). Development and characterization of aerosol nanoemulsion system encapsulating low water soluble quercetin for lung cancer treatment. 7th Asian Conference on Colloid & Interface Science, 8-11th August 2017, Kuala Lumpur.
43. Eleen Diana Md Isa, **Mohd Basyaruddin Abdul Rahman** and Haslina Ahmad (2017). Silica coated ionic liquid templated mesoporous silica nanoparticles. International Conference 2017 Research in Applied Sciences & Knowledge Engineering (RASK2017), 8-9 May 2017, Tapah, Malaysia.
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45. **Mohd Basyaruddin Abdul Rahman** (2016). 'Trending' In Computational Catalysis and Colloids. *4th International Conference on Computation for Science and Technology*, 30th October – 5th November 2016, Langkawi Island, Malaysia.
46. Shaho M. Abdalla, Mohd Farid Ismail, Muhammad Alif Mohammad Latif and **Mohd Basyaruddin Abdul Rahman** (2016). Quantum Mechanics Study of Cadmium(II)-Tripeptide Complexes By Using Double Zeta and Triple Zeta Basis Sets. *4th International Conference on Computation for Science and Technology*, 30th October – 5th November 2016, Langkawi Island, Malaysia.
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48. Siti Nor Zulaikha Omar, Muhammad Alif Mohammad Latif, Mohd Farid Ismail, Norhaidah Daud and **Mohd Basyaruddin Abdul Rahman** (2016). Theoretical Evaluation of the Trivalent Arsenic Interaction to Tripeptides. *4th International Conference on Computation for Science and Technology*, 30th October – 5th November 2016, Langkawi Island, Malaysia.
49. Majid Foroughi, Normi Mohd Yahaya, Roghayeh Abedi Karjiban, Abu Bakar Salleh and **Mohd Basyaruddin Abdul Rahman** (2016). Effects of Zn2+ Metal Ions on the Flexibility of BLEG1_2437 B3 MBL Active Site and Its Interaction with Ampicillin. *4th International Conference on Computation for Science and Technology*, 30th October – 5th November 2016, Langkawi Island, Malaysia.
50. **Mohd Basyaruddin Abdul Rahman**, Foong Pik Mun, Normi Mohd Yahaya and Abu Bakar Salleh (2016). Metallomics of Psychrophilic Yeast *Glaciozyma Antarctica*. *XXXIV Scientific Committee on Antarctic Research (SCAR)*, 20-30th August 2016, Kuala Lumpur, Malaysia.

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54. **Mohd Basyaruddin Abdul Rahman** (2016). Mimetic Peptides Perspectives in Chemical and Biochemical Reactions. *2nd International Sciences, Technology and Engineering Conference Advanced Materials, Chemistry and Physics,* 20-23rd April, 2016, Penang, Malaysia.
55. Zalikha Ibrahim, Bimo Ario Tejo, Muhammad Alif Mohamad Latif and **Mohd Basyaruddin Abdul Rahman** (2015). Incorporating Protein Flexibility in the Identification of Small Molecules as Protein Arginine Deiminase IV (Pad4) Inhibitors. *CHEMTECH '15 / 3rd International Chemical Engineering and Chemical Technologies Conference*, 30th November-1st December 1 2015, Istanbul, Turkey.
56. Rizana Yusof, Khairulazhar Jumbri, Haslina Ahmad and **Mohd Basyaruddin Abdul Rahman** (2015). The Fluorescence Quenching of Dna-Ethidium Bromide by Tetrabutylammonium Bromide Based Deep Eutectic Solvent. *CHEMTECH '15 / 3rd International Chemical Engineering and Chemical Technologies Conference*, 30th November-1st December 1 2015, Istanbul, Turkey.
57. **Mohd Basyaruddin Abdul Rahman**, Saadi Bayat, Emilia Abdulmalek, Haslina Ahmad, Normi Mohd Yahaya and Abu Bakar Salleh (2015). Octapeptide Catalyst Based on Aldo-Ketoreductase for Asymmetric Aldol Reaction. *The 10th International Conference on Cutting-Edge Organic Chemistry in Asia (ICCEOCA-10)*, 2-5th November 2015, Kaohsiung, Taiwan.
**winner of Lectureship Award*
58. Azira Muhamad, Ho Kok Lian, **Mohd Basyaruddin Abdul Rahman,** Dusan Uhrin and Tan Wen Siang* (2015). Interactions of Hepatitis B Virus Peptide Inhibitors with the Viral Capsid by Saturation Transfer Difference NMR. *3rd Asian Regional Conference on Systems Biology 2015 and 5th Symposium on Systems and Synthetic Biology*, 8-9th September 2015, Bangi, Selangor.
59. Rizana Yusof, Emilia Abdulmalek and **Mohd Basyaruddin Abdul Rahman** (2015). Spectroscopic Analysis of DNA in Tetrabutylammonium Bromide- Ethylene Glycol Deep Eutectic Solvent. *28th Regional Symposium of Malaysia Analytical Sciences*, 17-20th August 2015, Ipoh, Perak.
60. Noor Fazrieyana Hamidon, **Mohd Basyaruddin Abdul Rahman** and Emilia Abdulmalek. Optimization of Lipase-Catalyzed Synthesis of Xylose Fatty Acid Esters. *28th Regional Symposium of Malaysia Analytical Sciences*, 17-20th August 2015, Ipoh, Perak.
61. Ruzanna Yahya, Roghayeh Abedikarjiban, Mahiran Basri and **Mohd Basyaruddin Abdul Rahman** (2015). Aggregation of Nonionicsurfactants in Water: A Monte Carlo Approach. *28th Regional Symposium of Malaysia Analytical Sciences*, 17-20th August 2015, Ipoh, Perak.
62. Sharifa Zaithun Begum, Emilia Abdulmalek, Mohamed Ibrahim Mohamad Tahir and **Mohd Basyaruddin Abdul Rahman** (2015). Spectroscopic Characterization of Copper(II) and Molybdenum(V) Based Peptides. *28th Regional Symposium of Malaysia Analytical Sciences*, 17-20th August 2015, Ipoh, Perak.
63. Nur Hana Faujan, Roghayeh Abedikarjiban, Mahiran Basri and **Mohd Basyaruddin Abdul Rahman** (2015). Computational Modelling of Palm Kernel Oil Based Esters Nano-Emulsion Self-Assembly Process. *28th Regional Symposium of Malaysia Analytical Sciences*, 17-20th August 2015, Ipoh, Perak.

64. **Mohd Basyaruddin Abdul Rahman**, Saadi Bayat, Emilia Abdulmalek, Haslina Ahmad, Normi Mohd Yahaya and Abu Bakar Salleh (2015). Aldo-Keto-Reductase-Based Peptide Catalysts for Asymmetric Aldol and Michael Reactions. *28th Regional Symposium of Malaysia Analytical Sciences*, 17-20th August 2015, Ipoh, Perak.
65. Emilia Abdulmalek, Syarilaida Zulkefli and **Mohd Basyaruddin Abdul Rahman** (2015). Deep Eutectic Solvent as a Media in Swelling and Dissolution of Oil Palm Trunk. *28th Regional Symposium of Malaysia Analytical Sciences*, 17-20th August 2015, Ipoh, Perak.
66. Azren Aida Asmawi, **Mohd Basyaruddin Abdul Rahman**, Abu Bakar Salleh and Abdul Munir Abdul Murad (2015). Rapid Structural Characterisation of Ice Structuring Peptides from Type I Shorthorn Sculpin By FT-IR Spectroscopy. *28th Regional Symposium of Malaysia Analytical Sciences*, 17-20th August 2015, Ipoh, Perak.
67. Zalikha Ibrahim, Bimo Ario Tejo, Muhammad Alif Mohammad Latif, Roghayeh Abedikarjiban, Abu Bakar Salleh and **Mohd Basyaruddin Abdul Rahman** (2015). Identification of Druggable Space on Protein Arginine Deiminase Iv (Pad4): A Computational Approach. *28th Regional Symposium of Malaysia Analytical Sciences*, 17-20th August 2015, Ipoh, Perak.
68. Muhammad Shuaib Khan, **Mohd Basyaruddin Abdul Rahman**, Zuki Ab, Noordin Mm,Y Abba, S.M Ibrahim, Abubakar AA and Loqman Mohd Yusof (2015). In-Vitro Effects Of Antifreeze Peptide (Afp1) On Vero Cell Culture During Short Term Cryopreservation. *28th Regional Symposium of Malaysia Analytical Sciences*, 17-20th August 2015, Ipoh, Perak.
69. Saadi Bayat, Abu Bakar Salleh, Emilia Abdulmalek and **Mohd Basyaruddin Abdul Rahman** (2015). The Small Tripeptide Catalyzed Asymmetric Direct Aldol Reaction. *28th Regional Symposium of Malaysia Analytical Sciences*, 17-20th August 2015, Ipoh, Perak.
70. **Mohd Basyaruddin Abdul Rahman**, Saadi Bayat, Emilia Abdulmalek, Normi Mohd Yahaya and Abu Bakar Salleh (2015). Promiscuous Aldo-Keto-Reductase Enzyme And Peptides Mimicked As Asymmetric Organocatalyst In Aldol Reaction, *2nd Annual Peptides Congress*, 20-21 April 2015, Novotel London West, United Kingdom.
71. **Mohd Basyaruddin Abdul Rahman**, Azren Aida Asmawi, Emilia Abdulmalek, Abu Bakar Salleh and Bimo Ario Tejo (2014). Tailoring Peptidomimetics Antifreeze Protein from Exotic Antarctic Marine. *27th Regional Symposium of Malaysia Analytical Sciences*, 9-10th December 2014, Johor Bahru, Johor. ** Invited speaker sponsored by American Chemical Society – Malaysia Chapter*
72. Khairul Azhar Jumbri, Haslina Ahmad, Emilia Abdulmalek and **Mohd Basyaruddin Abdul Rahman** (2014). Biophysical Properties of DNA in Hydrated Ionic Liquid. *27th Regional Symposium Of Malaysia Analytical Sciences*, 9-10th December 2014, Johor Bahru, Johor.
** winner of Best Overall Poster*
73. Rizana Yusof, Emilia Abdulmalek and **Mohd Basyaruddin Abdul Rahman** (2014). Synthesis and Physicochemical Characterization of New Deep Eutectic Solvents (DESs) Tetrabutylammoniumbromide Paired with Ethylene Glycol. *27th Regional Symposium Of Malaysia Analytical Sciences*, 9-10th December 2014, Johor Bahru, Johor.
** winner of Best Poster by American Chemical Society – Malaysia Chapter*
74. Tan Soo Huei, Yahaya M. Normi, Adam Thean Chor Leow, Abu Bakar Salleh, Roghayeh Abedi Karjiban, Abdul Munir Abdul Murad, Nor Muhammad Mahadi, **Mohd Basyaruddin Abdul Rahman** Structure and Molecular Interactions of Bleg1_2507, An Uncharacterized Copper-Scaffold Protein And Potential Drug Target, of *Bacillus lehensis* G1. *27th Regional Symposium Of Malaysia Analytical Sciences*, 9-10th December 2014, Johor Bahru, Johor.
75. Erzam Marlisah, Razali Yaakob*, Md Nasir Sulaiman and **Mohd Basyaruddin Abdul Rahman** (2014), "SSGARL: Hybrid Evolutionary Computation and Reinforcement Learning for Flexible Ligand Docking," International Conference on Computational Science and Technology (ICCST2014), 27-28th August 2014, Kota Kinabalu, Sabah.

76. Sharifa Zaithun Begum, Emilia Abdul Malek, Mohamed Ibrahim Mohamed Tahir and **Mohd Basyaruddin Abdul Rahman** (2014). Putative Design Of Metallopeptides And Its Biophysical Characterisation. *The Regional Fundamental Science Congress 2014*, 19-20th August 2014, UPM.
77. Lim Wui Zhuan, Roghayeh Abedi Karjiban, Mahiran Basri and **Mohd Basyaruddin Abdul Rahman** (2014). A Computational Approach For Predicting High Pressuren Effects On Thermoalkalophilic L1 Lipase. *The Regional Fundamental Science Congress 2014*, 19-20th August 2014, UPM.
78. **Mohd Basyaruddin Abdul Rahman**, Syed Hussinien Hilmie Shah, Azren Aida Asmawi, Emilia Abdulmalek, Bimo Ario Tejo and Abu Bakar Salleh (2014). Design and Function of Exotic Ice Structuring Peptides from Antarctic Yeast *Glaciozyma antarctica*. *International Conference on Civil, Biological and Environmental Engineering 2014*, 27-28th May 2014, Istanbul, Turki.
79. **Mohd Basyaruddin Abdul Rahman** (2014). Enzyme Behavior and Dynamics in Non-Aquoeus Biocatalysis. *2nd International Symposium and Workshop on Functional Genomics and Structural Biology (FGSB2014), 21-24th* January 2014, MINES, Kuala Lumpur.
80. Thean Chor Leow, Rudzanna Ruslan, Mohd Zulhilmi Abdul Rahman, Hafidza Baharom, Raja Noor Zaliha Abdul Rahman, Abu Bakar Salleh, Normi Mohd Yahaya, **Mohd Basyaruddin Abdul Rahman** and Mohd Shukuri Mohamad Ali (2014). Identification and Functional Analysis of a Newly Sequenced Cytochrome P450 Gene from *Bacillus* sp.. *2nd International Symposium and Workshop on Functional Genomics and Structural Biology (FGSB2014), 21-24th* January 2014, MINES, Kuala Lumpur.
81. Ang Swi See, Abu Bakar Salleh, Adam Leow Thean Chor, Normi Mohd Yahaya, Bimo Ario Tejo and **Mohd Basyaruddin Abdul Rahman** (2014). Identification and Functional Analysis of a Newly Sequenced Cytochrome P450 Gene from *Bacillus* sp.. *2nd International Symposium and Workshop on Functional Genomics and Structural Biology (FGSB2014), 21-24th* January 2014, MINES, Kuala Lumpur.
82. Rauda A. Mohamed, Abu Bakar Salleh, Adam Leow Thean Chor, Normi Mohd Yahaya and **Mohd Basyaruddin Abdul Rahman** (2014). Structural Prediction for PHAZ6 by Computer Modeling. *2nd International Symposium and Workshop on Functional Genomics and Structural Biology (FGSB2014), 21-24th* January 2014, MINES, Kuala Lumpur.
83. Mohd Zulhilmi Abdul Rahman, Sayangku Nor Ariati Mohamad Aris, Abu Bakar Salleh, Mohd Shukuri Mohamad Ali, Raja Noor Zaliha Abdul Rahman, Normi Mohd Yahaya, **Mohd Basyaruddin Abdul Rahman** and Adam Leow Thean Chor (2014). Protein Expression and Modelling of Riboflavin Synthase. *2nd International Symposium and Workshop on Functional Genomics and Structural Biology (FGSB2014), 21-24th* January 2014, MINES, Kuala Lumpur.
84. Gol Mohammad Dorrazehi, Mohd Shukuri Mohamad Ali, Raja Noor Zaliha Abdul Rahman, Abu Bakar Salleh, Normi Mohd Yahaya, **Mohd Basyaruddin Abdul Rahman** and Adam Leow Thean Chor (2014). Cloning, Expression and Purification of Riboflavin Synthase from *Photobacterium* sp. J15. *2nd International Symposium and Workshop on Functional Genomics and Structural Biology (FGSB2014), 21-24th* January 2014, MINES, Kuala Lumpur.
85. Wan Atiqah Najiah Wan Hasan, Abu Bakar Salleh, Raja Noor Zaliha Raja Abdul Rahman., Mohd Shukuri Mohd Ali, **Mohd Basyaruddin Abdul Rahman** and Leow Thean Chor (2013). Chimeric Lipases for Changing of pH Profile. *International Congress of the Malaysian Society of Microbiology*, 12-15th December 2013, Langkawi Lagoon Resort, Langkawi, Kedah, Malaysia.
86. **Mohd Basyaruddin Abdul Rahman** (2013). Modeling Enzyme Structural And Dynamics Properties In Ionic Liquids. *International Conference on Ionic Liquids (ICIL 13)*, 11-13th December 2013, Resort World Hotel, Langkawi, Kedah, Malaysia.
87. Muhammad Alif Mohamad Latif, **Mohd Basyaruddin Abdul Rahman**, Bimo Ario Tejo, Roghayeh Abedikarjiban and Nuno Micaelo (2013). Elucidating The Effects Of Different Anions Towards Enzyme Structure And Dynamics In Room Temperature Ionic Liquids. *International Conference on*

Ionic Liquids (ICIL 13), 11-13th December 2013, Resort World Hotel, Langkawi, Kedah, Malaysia. (*Best Poster*)

88. Emilia Abdulmalek, Hanim Salami Mohd Saupi, Bimo A. Tejo, Mahiran Basri, Abu Bakar Salleh, Raja Noor Zaliha Raja Abd Rahman and **Mohd Basyaruddin Abdul Rahman** (2013). Enzymatic Synthesis Of Galactose Oleate Ester in Ionic Liquids. *International Conference on Ionic Liquids (ICIL 13)*, 11-13th December 2013, Resort World Hotel, Langkawi, Kedah, Malaysia.
89. Azren Aida Asmawi, Bimo Ario Tejo, Abu Bakar Salleh, Abdul Munir Abdul Murad and **Mohd Basyaruddin Abdul Rahman** (2014). Synthesis and Structure-Activity Relationship of Ice Structuring Peptides from Type I Shorthorn Sculpin. *26th Regional Symposium Of Malaysia Analytical Sciences*, 4-5th December 2013, Kuching Sarawak.
90. Ruzanna Yahya, Roghayeh Abedi Karjiban, Mahiran Basri, **Mohd Basyaruddin Abdul Rahman** (2013). A Theoretical Insight into Mixed Surfactant Behaviour in Water. *International Conference on Research in Science, Engineering and Technology (ICRSET'2013)*, 13-14th November 2013, Grand Season Hotel, Kuala Lumpur, Malaysia. (Best Paper Presented)
91. Nurul Syahidah Shaari, Roghayeh Abedi Karjiban, **Mohd Basyaruddin Abdul Rahman** and Mahiran Basri (2013). Coarse-grained self-aggregation model of palm kernel oil and DPPC in nano-emulsion system. *Regional Annual Fundamental Science Symposium (RAFSS 2013)*, 20-21st August 2013, Universiti Putra Malaysia.
92. Nur Hana Faujan, Roghayeh Abedi Karjiban, **Mohd Basyaruddin Abdul Rahman** and Mahiran Basri (2013). Computational Simulation of Palm kernel Oil-based Nano-emulsion". *Regional Annual Fundamental Science Symposium (RAFSS 2013)*, 20-21st August 2013, Universiti Putra Malaysia.
93. Emilia Abdulmalek, Hanim Salami Mohd Saupi, Bimo A. Tejo, Mahiran Basri, Abu Bakar Salleh, Raja Noor Zaliha Raja Abd Rahman and **Mohd Basyaruddin Abdul Rahman** (2013). Reusability of Ionic Liquid In Enzymatic Synthesis Of Galactose Oleate Ester. *International Seminar on Mathematics and Natural Sciences* (ISMNS 2013), 15-17th August 2013 Samarkand, Uzbekistan.
94. **Mohd Basyaruddin Abdul Rahman**, Khairulazhar Jumbri, Emilia Abdulmalek, Haslina Ahmad, Bimo Ario Tejo, Abu Bakar Salleh and Nuno Micaelo (2013). Rational Design Of New Alkylimidazolium-Based Room Temperature Ionic Liquids For Molecular Solvation Of DNA. *44th IUPAC World Chemistry Congress,* 11-16th August 2013, Istanbul, Turkey.
95. **Mohd Basyaruddin Abdul Rahman**, Saadi Bayat, Emilia Abdulmalek, Bimo Ario Tejo, Normi Mohd Yahaya and Abu Bakar Salleh (2013). Multifunctional Mimetic Peptides As Asymmetry Catalyst Based On Biocatalytic Promiscuous Aldo-Ketoreductase In Construction Of C-C Bond. *44th IUPAC World Chemistry Congress,* 11-16th August 2013, Istanbul, Turkey.
96. Normi Mohd Yahaya, Tan Soo Huei, Adam Leow Thean Chor, Abu Bakar Salleh, Abdul Munir Abdul Murad and **Mohd Basyaruddin Abdul Rahman** (2013). Sequentially Different, Structurally Similar: Case Study of Predicted Sco Protein of Hypothetical Protein Bleg1_2507 from *Bacillus lehensis* G1 Alkaliphile. *44th IUPAC World Chemistry Congress,* 11-16th August 2013, Istanbul, Turkey.
97. Siti Salwa Abdul Gani, Mahiran Basri, **Mohd Basyaruddin Abdul Rahman**, Anuar Kassim, Raja Noor Zaliha Raja Abdul Rahman, Abu Bakar Salleh and Zanariah Ismail (2013). Characterization of Encapsulated Titaniom Dioxide Using Engkabang Fat Esters for Cosmeceutical Industry. *44th IUPAC World Chemistry Congress,* 11-16th August 2013, Istanbul, Turkey.
98. Saadi Bayat, **Mohd Basyaruddin Abdul Rahman**, (2013). Mimetic Oligopeptides Supported By Rink Amide Am Resin As Asymmetry Catalyst Based On Biocatalytic Promiscuous Aldo-Ketoreductase In Construction Of C-C Bond. *15th Asian Chemical Congress*, 10-12th August 2013, Singapore.
99. Zalikha Ibrahim, **Mohd Basyaruddin Abdul Rahman**, Abu Bakar Salleh and Bimo Ario Tejo (2013). Molecular Dynamics Study of Peptidylarginine Deiminase-4 (PAD-4), a Drug Target for Rheumatoid Arthritis. *15th Asian Chemical Congress*, 10-12th August 2013, Singapore.

100. Chian Ying Teo, **Mohd Basyaruddin Abdul Rahman**, Adam Leow Thean Chor, Abu Bakar Salleh, Pedro J Ballester and Bimo Ario Tejo* (2013). Ligand-Based Virtual Screening for the Discovery of Inhibitors for Protein Arginine Deiminase Type 4 (PAD4), *15th Asian Chemical Congress*, 10-12th August 2013, Singapore.
101. **Mohd Basyaruddin Abdul Rahman**, Wong Khoi Yee, Jiang Yun and Romas J. Kazlauskas (2013). A Single Mutation Improves Acyl Transfer over Hydrolysis in *Pseudomonas fluorescens* esterase. *Protein Engineering : New Approaches and Applications. A Joint Biochemical Society / Protein Society Conference*, 10-12th April 2013, University of Chester, UK.
102. Roghayeh Abedi Karjiban, Mahiran Basri, **Mohd Basyaruddin Abdul Rahman** and Abu Bakar Salleh (2012). Cimputational Simulation of Palm Oil-based Drig Carrrier for Transdermal Nanodelivery of NSAIDs. *7th Singapore International Chemistry Conference (SICC-7)*, 16-19th December 2012, University Town, Natinal University of Singapore.
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104. Mahiran Basri, Ng Sook Han, **Mohd Basyaruddin Abdul Rahman**, Abu Bakar Salleh, Raja Noor Zaliha Raja Abdul Rahman and Zanariah Ismail (2012). Design and Development of Palm Oil Esters-based Nanocosmeceuticals. *Cambodian Malaysian Chemical Conference 2012,* 19-21st October 2012, Siam Reap, Cambodia.
105. **Mohd Basyaruddin Abdul Rahman** (2012). Synthetic Biology : A New Chemistry for A New Biology. *4th Regional Annual Fundamental Science Symposium 2012*, 17 – 18th July, UPM Serdang, Selangor.
106. **Mohd Basyaruddin Abdul Rahman**, Saadi Bayat, Bimo Ario Tejo, Abu Bakar Salleh and Normi Mohd Yahaya (2012). Novel Octapeptide As An Asymmetric Catalyst For Michael Reaction In Aqueous Media. *4th Regional Annual Fundamental Science Symposium*, 17 – 18th July, UPM Serdang, Selangor.
107. Roghayeh Abedi Karjiban, Mahiran Basri, **Mohd Basyaruddin Abdul Rahman** and Abu Bakar Salleh (2012). Atomic Simulation of Tween80 Micelle in Aqueous Solution. *4th Regional Annual Fundamental Science Symposium 2012*, 17 – 18th July, UPM Serdang, Selangor.
108. Ruzanna Yahaya, Roghayeh Abedi Karjiban, Mahiran Basri, **Mohd Basyaruddin Abdul Rahman** and Abu Bakar Salleh (2012). Monte Carlo Simulation of Molecular Interaction in the Mixed Brij System. *4th Regional Annual Fundamental Science Symposium 2012*, 17 – 18th July, UPM Serdang, Selangor.
109. Nurul Syuhada Shaari, Roghayeh Abedi Karjiban, Mahiran Basri, **Mohd Basyaruddin Abdul Rahman** and Abu Bakar Salleh (2012). A Coarse-Grained Molecular Dynamics Simulation of the Spontaneous Aggregation of DPPC in Water. *4th Regional Annual Fundamental Science Symposium 2012*, 17 – 18th July, UPM Serdang, Selangor.
Winner of BEST POSTER
110. Ummu Jameelah Dalimi, Emilia Abdulmalek and **Mohd Basyaruddin Abdul Rahman** (2012). Epoxidation of Used Cooking Oil Under Chemo-enzymatic Condition. *4th Regional Annual Fundamental Science Symposium 2012*, 17 – 18th July, UPM Serdang, Selangor.
111. **Mohd Basyaruddin Abdul Rahman**, Harmiza Harun, Roghayeh Abedikarjiban, Abu Bakar Salleh Adam Leow Thean Chor and Romas J. Kazlauskas (2012). Transition Metal Ions Substitution on Thermostable T1 Lipase. *Annual Symposium - Frontiers in Biological Catalysis*, 10-12th January 2012, Robinson College, Cambridge, UK.
112. **Mohd Basyaruddin Abdul Rahman**, Mohd Zulhilmi Abdul Rahman, Adam Leow Thean Chor, Abu Bakar Salleh, Raja Noor Zaliha Raja Abdul Rahman and Mahiran Basri (2012). Artificial

Metalloenzyme by Introduction of New Manganese Binding Site in T1 Lipase. *Annual Symposium - Frontiers in Biological Catalysis*, 10-12th January 2012, Robinson College, Cambridge, UK.

113. **Mohd Basyaruddin Abdul Rahman**, Nur Syazwani Mohtar, Raja Noor Zaliha Raja Abdul Rahman, Normi Mohd Yahaya and Abu Bakar Salleh (2011). Mining of Glycogen Branching Enzyme from *Geobacillus* sp. Genome Sequence. *International Congress of the Malaysian Society for Microbiology 2011*, 8-11th December, 2011, Bayview Beach Resort Hotel, Penang.
114. Bimo Ario Tejo, Lin Ven Sen and **Mohd Basyaruddin Abdul Rahman** (2011). Structure-Based and Ligand-Based Virtual Screening of Novel Methyltransferase Inhibitors of the Dengue Virus. *Asia Pacific Bioinformatics Network's 10th InCoB - 1st ISCB Asia Joint Conference 2011*, 30th November – 2nd December, 2011, Renaissance Hotel, Kuala Lumpur.
115. **Mohd Basyaruddin Abdul Rahman**, Devandran Krishnan, Md. Jelas Haron, Emilia Abdulmalek, Bimo Ario Tejo, Mahiran Basri and Abu Bakar Salleh (2011). Lipase-catalysed Amino Sugar Derivative in Tri-solvents Mixture. *24thRegional Symposium of Malaysia Analytical Sciences (SKAM 24)*, 21-23rd November 2011, Langkawi, Malaysia.
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192. **Mohd Basyaruddin Abdul Rahman***, Azren Aida. Asmawi, Nurul Akmarina Mohd Abdul Kamal, Norazlinaliza Salim, Emilia Abdulmalek, Haslina Ahmad and Che Azurahanim Che Abdullah (2021). Targeted Anticancer Drugs Nanohubs for Pulmonary Delivery. NanoMITE Annual Symposium 2021, 12-13th March, 2021. Shah Alam, Selangor.
193. Auni Hamimi Idris, Che Azurahanim Che Abdullah, Nor Azah Yusof, **Mohd Basyaruddin Abdul Rahman** (2021). Magnetic Nanostructured Lipid Carrier loaded with Docetaxel for Potential Lung Cancer Theranostic. Annual NanoMITe Symposium 2021, 11-12th March 2021, Malaysia (Oral presenter)
194. CACA NanoMITe Annual Symposium (NMAS 2020), Annual NanoMITe Symposium 2021, 11-12th March 2021, Malaysia (Oral presenter)

195. Fatin NanoMITe Annual Symposium (NMAS 2019), 14-5th November, 2019
196. Nadia NanoMITe Annual Symposium (NMAS 2019), 14-5th November, 2019
197. **Mohd Basyaruddin Abdul Rahman*** (2019). Espousing Molecular Solutions in Multidisplinary and Sustainable Research. SMS. Bangi, Selangor. Keynote Speaker.
198. SKI2019 *21st Industrial Chemistry Seminar*, 10th January 2019, Bangi, Selangor.
199. NanoMITe Annual Symposium (NMAS 2018), 14-5th November, 2018
200. Auni Hamimi Idris, Che Azurahanim Che Abdullah, Nor Azah Yusof, **Mohd Basyaruddin Abdul Rahman** (2018). Synthesis of Iron Oxide Nanoparticles with Controlled Size and Magnetic Properties. 27th Scientific Conference of Microscopy Society of Malaysia, 3-4th December 2018, Melaka, Malaysia (Oral presenter)
201. **Mohd Basyaruddin Abdul Rahman*** (2018). Embracing Molecular Simulation Solutions in Sustainable Applied Biology. 15th Malaysian Applied Biology Symposium, 30th June – 1st July 2018, The Hatten Hotel, Melaka. Plenary Speaker.
202. Madzna Jalbaiti, Auni Hamimi Idris and **Mohd Basyaruddin Abdul Rahman** (2018). Synthesis Of Fish Oil Coated Iron Oxide Nanoparticles As Pickering Emulsion Stabilizer. *21st Industrial Chemistry Seminar*, 10th May 2018, Bangi, Selangor.
203. Anaz Syazreil Mohd Ghause, Muhamad Nor Nu'aim Zaini, Noor Fazrieyana Hamidon, Nurul Akmarina Mohd Abdul Kamal and **Mohd Basyaruddin Abdul Rahman** (2018). Encapsulation Of Synthetic And Natural Anti-Cancer Drugs Into Zinc Imidazolate Frameworks 8 (ZIF-8) For Nano-Delivery System. *21st Industrial Chemistry Seminar*, 10th May 2018, Bangi, Selangor.
204. Azren Aida Asmawi, Norazlinaliza Salim, Ngan Cheng Loong, Haslina Ahmad, Emilia Abdulmalek, Mas Jaffri Masarudin and **Mohd Basyaruddin Abdul Rahman** (2017). Development of Nanocolloidal Carrier Loaded with Lipophilic Drugs Aimed for Pulmonary Delivery in Targeting Lung Cancer. NanoMITe Annual Symposium (NMAS 2017), 14-5th November, 2017, UPM.
205. Amir Faisal Zainal Abidin, Luqman Hakim Mutaza, Azren Aida Asmawi, Nurhafizah Arbain and **Mohd Basyaruddin Abdul Rahman** (2017). Development Of Pharmaceutical Nanoemulsion System Containing Lipophilic Drugs For Pulmonary Drug Delivery. *20th Industrial Chemistry Seminar*, 23rd May 2017, Bangi, Selangor.
206. Nurul Shairah Mohd Nizam, Norfatihah Mamat, Sharifa Zaithun Begum and **Mohd Basyaruddin Abdul Rahman** (2017). Copper (II) Tetra-Peptides Mimicking Catalytic Activity Of Laccase In Xenobiotics Degradation Of Pharmaceutical Waste. *20th Industrial Chemistry Seminar*, 23rd May 2017, Bangi, Selangor.
207. **Mohd Basyaruddin Abdul Rahman** (2017). Bespoke And Structural Elucidation Of Peptide And Peptidomimetic Based On Enzyme Active Site. Integrative Structural Biology Symposium, 6-7th March 2017. Malaysia Genome Institute
208. Sharifa Zaithun Begum, Karen A. Crouse, Izham Saiman and **Mohd Basyaruddin Abdul Rahman** (2017). Mimetic Cu-peptides catalysts based on laccase for xenobiotics degradation. Integrative Structural Biology Symposium & Workshop. 2nd- 10th March 2017, Malaysia Genome Institute.
209. **Mohd Basyaruddin Abdul Rahman**, Norhafizah Arbain, Azren Aida Asmawi, Ngan Cheng Loong, Norazlinaliza Salim (2016). Aerosolized Palm-based Nanoemulsion System Encapsulating Quercertin for Pulmonary Drug Delivery. *Science and Technology Exchange Program (STEP) in Islamic Countries*, 19-22 December 2016, Universiti Putra Malaysia.
210. Noor Hafizah Arbain, Cheng Loong Ngan, Norazlinaliza Salim, Wong Tin Hui and **Mohd Basyaruddin Abdul Rahman**, (2016). Aerosolized Nanoemulsion System Encapsulating Quercertin for Lung Cancer Treatment. *NanoMITe Annual Symposium (NMAS 2016)*, 28th September 2016, Universiti Teknologi Malaysia, Kuala Lumpur.
211. Noor Hafizah Arbain, **Mohd Basyaruddin Abdul Rahman**, Mahiran Basri, Norazlinaliza Salim, Hamed Redza (2016). Palm- based Aerosol Nanoemulsion Formulation Containing Quercetin as Pulmonary Delivery System For Lung Cancer. *Fundamental Science Congress 2016*, 8-10th August 2016, Universiti Putra Malaysia.

212. Siti Nur Zulaikha Omar, **Mohd Basyaruddin Abdul Rahman**, Muhammad Alif Muhammad Latiff and Norhaidah Daud (2016). Theoretical Investigation on Arsenic(III)/tripeptide Complexes for the Application of Arsenic Ion Detection. *Fundamental Science Congress 2016*, 8-10th August 2016, Universiti Putra Malaysia.
213. Cheng Loong Ngan, Mahiran Basri and **Mohd Basyaruddin Abdul Rahman** (2016). Dual Nano-Carrier System of Quercetin for Potential Pulmonary Delivery *via* Inhalation in Pharmaceuticals. *Fundamental Science Congress 2016*, 8-10th August 2016, Universiti Putra Malaysia.
214. **Mohd Basyaruddin Abdul Rahman** (2015). Enzyme Behavior and Dynamics in Non-Aquoeus Biocatalysis. *2nd Computational Aided Drug Design Conference 2015,* 8-10th December 2015, Penang. Invited Lecture
215. **Mohd Basyaruddin Abdul Rahman**, Saadi Bayat, Emilia Abdulmalek, Normi Mohd Yahaya and Abu Bakar Salleh (2015). Downsizing Proteins to Peptides: A New Perspective in Peptide Research. *40th Annual Conference of the Malaysian Society for Biochemistry & Molecular Biology (MSBMB)*, 10th - 11th June 2015, Putrajaya Marriott Hotel. Invited Lecture
216. Nurul Syuhada Redzuan, **Mohd Basyaruddin Abdul Rahman** (2015). Simulation of Oxidoreductase Behaviours In Deep Eutectic Solvents (DESs). *18thIndustrial Chemistry Seminar*, 9th June 2015, Cyberview Lodge, Cyberjaya.
217. Nur Aishah Md Yusoh, Azren Aida Asmawi, **Mohd Basyaruddin Abdul Rahman** (2014). Design and Dynamic Evaluation of Exotic Ice Structuring Peptides from Antarctic Yeast *Glaciozyma antarctica*. *17thIndustrial Chemistry Seminar*, 24th June 2014, Putrajaya.
218. Leong Lei Jing, Saw Yng Nee, **Mohd Basyaruddin Abdul Rahman** (2014). Peptide With A Purpose: Design And Biophysical Characterisation Of Mimetic Peptide Catalysts And Fatty Acid Conjugated Peptides. *17thIndustrial Chemistry Seminar*, 24th June 2014, Putrajaya.
219. Saadi Bayat, Bimo Ario Tejo, Emilia Abdmalek, Abu Bakar Salleh, Normi Mohd Yahaya and **Mohd Basyaruddin Abdul Rahman** (2014). Rational Design of Mimetic Peptides Based On Promiscuous Aldo-Ketoreductase Enzyme As Asymmetric Catalyst In Aldol Reaction. *EMTECH, UPM & University of Hyogo, Japan Joint Colloquium 2014*, 26-27th May 2014, Universiti Putra Malaysia.
220. Muhammad Alif Mohammad Latif, Bimo Ario Tejo, Roghayeh Abedikarjiban **Mohd Basyaruddin Abdul Rahman** and Nuno Micaelo (2014). Solvation in [BMIM]-based Ionic Liquids: Anion Effect Towards The Solvation Of Amino Acid Side Chain Analogues. *EMTECH, UPM & University of Hyogo, Japan Joint Colloquium 2014*, 26-27th May 2014, Universiti Putra Malaysia.
221. Tan Soo Huei, Yahaya M Normi*, Adam Thean Chor Leow, Abu Bakar Salleh, Roghayeh Abedi Karjiban, Abdul Munir Abdul Murad, Nor Muhammad Mahadi and **Mohd Basyaruddin Abdul Rahman** (2014). Metallo-Beta-Lactamase Like Hypothetical Protein Bleg1_2437 Revealed That *Bacillus lehensis* G1 Alkaliphile Is A Potential Superbug. *EMTECH, UPM & University of Hyogo, Japan Joint Colloquium 2014*, 26-27th May 2014, Universiti Putra Malaysia.
222. Samira, Emilia Abdmalek and **Mohd Basyaruddin Abdul Rahman** (2014). Preparation of 5-amino Salicylic Acid Glyco-Conjugates. *EMTECH, UPM & University of Hyogo, Japan Joint Colloquium 2014*, 26-27th May 2014, Universiti Putra Malaysia.
223. Arilla Sri Masayu Abd Rahim (EMTECH, UPM) Use of Mini Protein that Mimics Uricase in the Development of Nanowire-Based Biosensor. *EMTECH, UPM & University of Hyogo, Japan Joint Colloquium 2014*, 26-27th May 2014, Universiti Putra Malaysia.
224. Wui Zhuan Lim, Roghayeh Abedi Karjiban, Mahiran Basri and **Mohd Basyaruddin Abdul Rahman** (2013). Structural Properties of L1 Lipase at High Pressure: A Molecular Simulation Study". *38th Annual Conference of the Malaysian society for Biochemistry and Molecular Biology*, 28-29th August 2013, Putrajaya Marriot hotel & Spa, Putrajaya.
225. Munira Mazlan, Tuan Zarith Farhana Tuan Zainuddin, Devandran Krishnan and **Mohd Basyaruddin Abdul Rahman** (2013). Enzymatic Levulinate Esters Hydrolysis in Deep Eutectic Solvents**.** *16thIndustrial Chemistry Seminar*, 25th June 2013, Cyberview Resort & Spa, Cyberjaya.

Winner of the BEST OVERALL POSTER

226. Nur Fazrieyana Hamidon, Tasha Ezzati Busrah, Wong Khoi Yee and **Mohd Basyaruddin Abdul Rahman** (2013). Enzymatic Esterification of Vanillyl Esters and Cinnamyl Esters in Deep Eutectic Solvent**.** *16th Industrial Chemistry Seminar*, 25th June 2013, Cyberview Resort & Spa, Cyberjaya.
Winner of the BEST POSTER (CONTENT)

227. Normi Mohd Yahaya, Tan Soo Huei, Thean Chor Leow, Abu Bakar Salleh, Roghayeh Abedi Karjiban, Abdul Munir Abdul Murad and **Mohd Basyaruddin Abdul Rahman** (2013). The "Unknown" Threat of Hypothetical Protein Bleg1_2437 from *Bacillus lehensis* G1 Alkaliphile: Its Antibiotic-Degrading Efficacy Revealed. *National Biotechnology Seminar 2013*, 6-8th June 2013, Penang.

228. Gol Mohammad Dorrazehi, Mohd Zulhilmi Abdul Rahman, Mohd Shukuri Mohamad Ali, Raja Noor Zaliha Raja Abd Rahman, Abu Bakar Salleh, Normi Mohd Yahaya, **Mohd Basyaruddin Abdul Rahman**, Mahiran Basri and Adam Leow Thean Chor* (2013). Unravelling structure of Riboflavin Synthase for Designing of Potential Anti-Bacterial Drug. *National Biotechnology Seminar 2013*, 6-8th June 2013, Penang.

229. Abu Bakar Salleh, Arilla Mas Ayu, Normi Mohd Yahaya, Adam Leow Thean Chor, Bimo Ario Tejo, **Mohd Basyaruddin Abdul Rahman** and Mohd Adzir Mahdi (2013). Development of Mini Proteins that Mimic Uricase. *National Biotechnology Seminar 2013*, 6-8th June 2013, Penang.

230. Hyzurahidayu Haizam, **Mohd Basyaruddin Abdul Rahman**, Abu Bakar Salleh and Bimo Ario Tejo* (2013). Peptide-Based Catalyst For Hydrolysis of Para-Nitrophenyl Acetate (PNPA). *National Biotechnology Seminar 2013*, 6-8th June 2013, Penang.

231. Ang Swi See, Abu Bakar Salleh, Thean Chor Leow, Normi Mohd Yahaya, Bimo Ario Tejo and Mohd **Basyaruddin Abdul Rahman** (2013). Cytochrome P450 for Hydroxylation of Fatty Acids. *5th Structural Biology Colloquium*, 3-5th June 2013, Ipoh.

232. Tan Soo Huei, Normi Mohd Yahaya, Thean Chor Leow, Abu Bakar Salleh, Roghayeh Abedi Karjiban, Abdul Munir Abdul Murad and **Mohd Basyaruddin Abdul Rahman** (2013). Danger Lurking In "The Unknowns": What Structure-To-Function Studies of Hypothetical Protein Bleg1_2437 from *Bacillus Lehensis* G1 Alkaliphile Revealed. *5th Structural Biology Colloquium*, 3-5th June 2013, Ipoh.

233. Wong Khoi Yee, **Mohd Basyaruddin Abdul Rahman**, Yun Jiang and Romas Kazlauskas (2013). Switching Catalysis from Hydrolysis to Acyl Transfer in *Pseudomonas Fluorescens* Esterase. *5th Structural Biology Colloquium*, 3-5th June 2013, Ipoh.

234. Mohd Zulhilmi Abdul Rahman, Abu Bakar Salleh, **Mohd Basyaruddin Abdul Rahman**, Raja Noor Zaliha Raja Abdul Rahman, Mahiran Basri and Thean Chor Leow (2013). Computational Study of T1 Lipase Activation and Metallolipase Engineering Using Modified T1 Lipase As Scaffold. *5th Structural Biology Colloquium*, 3-5th June 2013, Ipoh.

235. Saadi Bayat, Bimo Ario Tejo, Emilia Abdulmalek, Abu Bakar Salleh, Normi Mohd Yahaya and **Mohd Basyaruddin Abdul Rahman** (2013). A Series of Peptides Derived from Promiscuous Aldo-Ketoreductase Catalyzed Aldol Reaction. *5th Structural Biology Colloquium*, 3-5th June 2013, Ipoh.

236. Zalikha Ibrahim, **Mohd Basyaruddin Abdul Rahman**, Abu Bakar Salleh and Bimo Ario Tejo (2013). Molecular Dynamics Study of Peptidylarginine Deiminase-4 (PAD-4), a Drug Target for Rheumatoid Arthritis. *5th Structural Biology Colloquium*, 3-5th June 2013, Ipoh.

237. Syarilaida Zulkefli, Emilia Abdulmalek and **Mohd Basyaruddin Abdul Rahman** (2013). Pre-Treatment of Oil Palm Fibre in Deep Eutectic Solvent. *5th Structural Biology Colloquium*, 3-5th June 2013, Ipoh.

238. Foong Pik Mun, Roghayeh Abedi Karjiban, Bimo Ario Tejo, Abu Bakar Salleh, Thean Chor Leow, Normi Mohd Yahaya and **Mohd Basyaruddin Abdul Rahman** (2013). Exploring the Metal Utilization of Psychrophilic Yeast *Glaciozyma Antarctica* PI12. *5th Structural Biology Colloquium*, 3-5th June 2013, Ipoh.

239. Mohd Hairul Naim Bakri, Normi Mohd Yahaya, Thean Chor Leow, Abu Bakar Salleh, Roghayeh Abedi Karjiban, Abdul Munir Abdul Murad and **Mohd Basyaruddin Abdul Rahman** (2013). Hypothetical Protein Bleg1_3058 of *Bacillus Lehensis* G1: A Novel Monothiol Glutaredoxin?. *5th Structural Biology Colloquium*, 3-5th June 2013, Ipoh.
240. Hafidza Baharum, Abu Bakar Salleh, Raja Noor Zaliha Raja Abdul Rahman, **Mohd Basyaruddin Abdul Rahman**, Mahiran Basri and Thean Chor Leow (2013). Conformational Design of Functional Mini Lipase. *5th Structural Biology Colloquium*, 3-5th June 2013, Ipoh.
241. Muhammad Alif Mohammad Latif, Bimo Ario Tejo, Roghayeh Abedikarjiban, Abu Bakar Salleh, Nuno Miguel da Silva Micaelo and **Mohd Basyaruddin Abdul Rahman** (2013). Modeling Enzyme Structural and Dynamics Properties in Room Temperature Ionic Liquids. *5th Structural Biology Colloquium*, 3-5th June 2013, Ipoh.
242. Norsyazwani Mohtar, Raja Noor Zaliha Raja Abdul Rahman, Thean Chor Leow, Abu Bakar Salleh, Mohd Noor Mat Isa and **Mohd Basyaruddin Abdul Rahman** (2013). Mining the Locally Isolated *Geobacillus Sp*. Geo-05 Genome for Thermostable Glycogen Branching Enzyme. *5th Structural Biology Colloquium*, 3-5th June 2013, Ipoh.
243. Mohammad Hesham Abdelrahman Abu Alrub, Mahiran Basri, Emilia Abdulmalek, Shahrul Ainliah Alang Ahmad, **Mohd Basyaruddin Abdul Rahman**, Raja Noor Zaliha Raja Abd. Rahman and Abu Bakar Salleh (2013). Lipase Catalysed Synthesis and Optimization of Biologically Active Cinnamic Acid Amides. *5th Structural Biology Colloquium*, 3-5th June 2013, Ipoh.
244. Mahashanon Arumugam, Emilia Abdulmalek, Hanis Nabillah Mizan, Mahiran Basri, Abu Bakar Salleh and **Mohd Basyaruddin Abdul Rahman** (2013). Chemo-Enzymatic Epoxidation of Alkenes and Reusability Study of the Lipase and Phenylacetic Acid. *5th Structural Biology Colloquium*, 3-5th June 2013, Ipoh.
245. Roghayeh Abedi Karjiban, Mahiran Basri, **Mohd Basyaruddin Abdul Rahman** and Abu Bakar Salleh (2012). The Structure and Dynamics of Nonionic Surfactant Micelle in Water. *17th Malaysian Chemical Congress (MCC) 2012*, 15-17th October 2012, PWTC, Kuala Lumpur..
246. Ruzanna Yahaya, Roghayeh Abedi Karjiban, Mahiran Basri, **Mohd Basyaruddin Abdul Rahman** and Abu Bakar Salleh (2012). Self-aggreagation of Nanionic Surfactants in Water Elucidated by Monte Carlo Technique. *17th Malaysian Chemical Congress (MCC) 2012*, 15-17th October 2012, PWTC, Kuala Lumpur.
247. Nurul Syuhada Shaari, Roghayeh Abedi Karjiban, Mahiran Basri, **Mohd Basyaruddin Abdul Rahman** and Abu Bakar Salleh (2012). Coarse-Grained Micellization Model of DPPC. *17th Malaysian Chemical Congress (MCC) 2012*, 15-17th October 2012, PWTC, Kuala Lumpur.
248. Emilia Abdulmalek, Mahashanon Arumugam, **Mohd Basyaruddin Abdul Rahman** and Mahiran Basri (2012). Chemo-enzymatic Epoxidation of 1-Nonene and Simple GC-MS SIM Method for Rapid Screening. *2nd National Symposium in Organic Synthesis 2012*, 16th July 2012, Concorde Hotel, Shah Alam, Selangor.
249. Syarilaida Zulkifli, Emilia Abdulmalek and **Mohd Basyaruddin Abdul Rahman** (2012). Swelling and Dissolution of Oil Pal in Deep Eutectic Solvent. *2nd National Symposium in Organic Synthesis 2012*, 16th July 2012, Concorde Hotel, Shah Alam, Selangor.
250. **Mohd Basyaruddin Abdul Rahman** (2012). Synthetic Biology : A Sinfully Powerful Platform For New Biotechnology. *Genome Malaysia DNA Day*, 21st April, MGI Bangi, Selangor.
251. **Mohd Basyaruddin Abdul Rahman** (2011). "Chemists at the Forefront of Industrial Development: From Petroleum to Personalised Medicine", *Industrial Chemistry Technology Seminar*, 9th March 2011, USIM, Nilai.
252. Lim Sen Ven, **Mohd Basyaruddin Abdul Rahman** and Bimo Ario Tejo (2011). Virtual Screening of New Potential Inhibitors Against Methyltransferase of Dengue Virus Using the Program EDULISS and LIDAEUS. *15th Industrial Chemistry Seminar*, 11th May, UPM.

253. Ahmad Fakhri Hashim, Emmy Maryati Omar and **Mohd Basyaruddin Abdul Rahman** (2011). Amino Acids as An Effective Organocatalysts for Microwave Irradiated Asymmetric Michael Addition Reactions. *15th Industrial Chemistry Seminar*, 11th May, UPM.
254. Siti Salwa Abd Gani, Mohd Rezuwan Shah Zakaria, Mahiran Basri*, Chong Kah Huong, **Mohd Basyaruddin Abdul Rahman**, Anuar Kassim, Raja Noor Zaliha Raja Abd Rahman, Abu Bakar Salleh and Zahariah Ismail (2010). Effect of Formation Techniques on the Particle Size of Cosmeceutical Emulsions. Malaysia Science and Technology Congress, Crystal Crown Hotel, Petaling Jaya, Kuala Lumpur. 9-11 Nov 2010.
255. **Mohd Basyaruddin Abdul Rahman** (2010). "Ionic Liquids for Nonaqueous Biocatalysis" – Invited Lecture, *2nd Fundamental Science Congress 2010*, 18 – 19th May, UPM Serdang, Selangor.
256. Naimah Haron, **Mohd Basyaruddin Abdul Rahman**, Bimo Ario Tejo, Roghayeh Abedi Karjiban, Nuno M. Micaelo (2010). "Density and Viscosity Analysis of Amino Acid Tetraethylammonium-based Ionic Liquids by Molecular Dynamics Simulation", *2nd Fundamental Science Congress 2010*, 18 – 19th May, UPM Serdang, Selangor.
Winner of BEST PRESENTER
257. Asrul Farrish O K R Udaiyappan, **Mohd Basyaruddin Abdul Rahman**, Mahiran Basri, Emilia Abdul Malek, Abu Bakar Salleh (2010, "Chemo-Enzymatic Epoxidation of Palm-Based Oils", *2nd Fundamental Science Congress 2010*, 18 – 19th May, UPM Serdang, Selangor.
258. Hanim Salami Mohd Saupi, Emilia Abdulmalek, Bimo Ario Tejo, **Mohd Basyaruddin Abdul Rahman**, Mahiran Basri (2010), "Improved Galactose Oleate Ester Synthesis in Ionic Liquid" *2nd Fundamental Science Congress 2010*, 18 – 19th May, UPM Serdang, Selangor.
259. Syed Hussinien Hielmie Shah, **Mohd Basyaruddin Abdul Rahman**, Mohammad Fairuz Zulkifli, Abdul Munir Abdul Murad, Nor Muhammad Mahadi, Mahiran Basri, Raja Noor Zaliha Abdul Rahman, Abu Bakar Salleh, Bimo A. Tejo (2010). "Novel Antifreeze Peptides Derived from *Leucosporidium antarcticum* Antifreeze Protein: Structure-Function Approaches", *2nd Fundamental Science Congress 2010*, 18 – 19th May, UPM Serdang, Selangor.
260. Ng Sook Han, Mahiran Basri, **Mohd Basyaruddin Abdul Rahman**, Raja Noor Zaliha Raja Abd. Rahman, Abu Bakar Salleh, Zahariah Ismail (2010), "Phase Behaviour Study and Preparation of Palm Oil Esters o/w Emulsions for Cosmeceuticals Stabilized by Xanthan Gum and their Rheology Characterizations", *2nd Fundamental Science Congress 2010*, 18 – 19th May, UPM Serdang, Selangor.
261. Nursyamsyila Mat Hadzir, Mahiran Basri, **Mohd Basyaruddin Abdul Rahman**, Abu Bakar Salleh (2010), "Modeling and Optimization of the Nano-emulsions Ingredients for the Development of an Effective Transdermal Nanodelivery System for Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) using Response Surface Methodology (RSM)", *2nd Fundamental Science Congress 2010*, 18 – 19th May, UPM Serdang, Selangor.
262. Devandran Krishnan, Uswatun Hasanah Zaidan and **Mohd Basyaruddin Abdul Rahman** (2010), "Lipase-catalysed Bioconversion of Glucose Amino Ester in Ionic Liquid", *14th Industrial Chemistry Seminar*, 10th April, Palm Garden Hotel, Putrajaya.
Winner of the BEST OVERALL POSTER
263. Kilarance Jesunathan, Naz Chaikbakskh Langroodi and **Mohd Basyaruddin Abdul Rahman** (2010), "Statistical Design Approach for the Development of Bio-Marine Based Wax Esters", *14th Industrial Chemistry Seminar*, 10th April, Palm Garden Hotel, Putrajaya.
264. **Mohd Basyaruddin Abdul Rahman** (2009). "Enzymatic Esterification in Ionic Liquids", Keynote Lecture, *Regional Conference on Ionic Liquids*, 23-25th November 2009, Universiti Malaya, Kuala Lumpur.
265. Muhammad Fairuz Zulkifli, **Mohd Basyaruddin Abdul Rahman**, Bimo Ario Tejo, Abdul Munir Abdul Murad, Nor Muhammad Mahadi, Mahiran Basri, Raja Noor Zaliha Raja Abd Rahman and Abu Bakar Salleh (2010). "*Ab-initio* and Molecular Dynamics Properties of Anti-freeze Protein from *Leucosporidium antarcticum*", *Structural Biology Colloquium 2009*, 24-25th October 2009, Colmar Tropicale, Bukit Tinggi, Pahang.

266. Roswanira Abdul Wahab, Mahiran Basri, Raja Noor Zaliha Raja Abdul Rahman, Adam Leow Thean Chor, **Mohd Basyaruddin Abdul Rahman** and Abu Bakar Salleh (2009). "Creation of New Thermostable Organic Solvent-Tolerant Enzyme Through Rational Molecular Design of *Geobacillus zalihae* T1 LIPASE", *Structural Biology Colloquium 2009*, 24-25th October 2009, Colmar Tropicale, Bukit Tinggi, Pahang.
267. Faujan Ahmad, Mansour Ghaffari, Mahiran Basri and **Mohd Basyaruddin Abdul Rahman** (2009). "Investigation on Lipase-Catalyzed Synthesis of 3-*O*-Acyl Betulinic Acid in Organic Solvent : Optimization Studies", *1St Fundamental Science Congress*, 17-18th June, Universiti Putra Malaysia.
268. Uswatun Hasanah, **Mohd Basyaruddin Abdul Rahman**, Siti Salhah Othman, Mahiran Basri, Emilia Abdul Malek, Raja Noor Zaliha Raja Abdul Rahman and Abu Bakar Salleh (2009). "Lipase Immobilized on Nano-porous Mica Support for Green Synthesis of Sugar Fatty Acid Esters", *National Symposium on Organic Syntheses*, 14-15th June, Kuala Terengganu.
269. Faujan Ahmad, Mansour Ghaffari, Mahiran Basri, **Mohd Basyaruddin Abdul Rahman** (2009). "Lipase-Catalyzed Synthesis of 3-*O*-Acyl Betulinic Acid in Organic Solvent Using Anhydrides as Acylation", *National Symposium on Organic Syntheses*, 14-15th June, Kuala Terengganu.
270. ***Mohd Basyaruddin Abdul Rahman**, Khairunnisa Majidi, Mahashanon Arumugam, Nik Sasha Khatrina Khairuddin, Nurul 'Ain Mohd Ali Hanafiah, Emmy Maryati Omar[1], Khairulazhar Jumbri and Mahiran Basri (2009). "Innovative Chiral Ionic Liquids in Sustainable Enzymology", *13th Industrial Chemistry Seminar*, 11th April, Palm Garden Hotel, Putrajaya.
(**winner of Best Poster Content*)
271. Nor Izuan Bin Jarmi, **Mohd Basyaruddin Abdul Rahman**, Naz Chaibakhsh Langroodi[1] and Mahiran Basri (2009). "Optimized Enzymatic Production of Succinic Acid Ester Using Central Composite Design Analysis ", *13th Industrial Chemistry Seminar*, 11th April, Palm Garden Hotel, Putrajaya.
272. Naz Chaibakhsh Loongradi, **Mohd Basyaruddin Abdul Rahman**, Mahiran Basri, Raja Noor Zaliha Raja Abdul Rahman and Abu Bakar Salleh (2008). "Optimzation Studies of Adipate Ester in Solvent-Free Media: A Multivariate Analysis", 19th *Annual National Symposium on Analytical Chemistry*, 23-28th November, Kota Kinabalu, Sabah.
273. Noraini Abdul Ghani, **Mohd Basyaruddin Abdul Rahman**, Mahiran Basri, Raja Noor Zaliha Raja Abdul Rahman and Abu Bakar Salleh (2008). "Environmentally Benign Organic Production of Palm-based Epoxides", 19th *Annual National Symposium on Analytical Chemistry*, 23-28th November, Kota Kinabalu, Sabah.
274. Muhammad Aliff Mohamad Latif, **Mohd Basyaruddin Abdul Rahman**, Mahiran Basri, Raja Noor Zaliha Raja Abdul Rahman and Abu Bakar Salleh (2008). "Molecular Dynamics Simulation of Swollen Micelle Nano-emulsion System", 19th *Annual National Symposium on Analytical Chemistry*, 23-28th November, Kota Kinabalu, Sabah.
275. Khairulazhar Jumbri, **Mohd Basyaruddin Abdul Rahman**, Mahiran Basri, Raja Noor Zaliha Raja Abdul Rahman and Abu Bakar Salleh (2008). "Physico-chemical Properties of New Chiral Ionic Liquids Tetraethylammonium Based", 19th *Annual National Symposium on Analytical Chemistry*, 23-28th November, Kota Kinabalu, Sabah.
276. **Mohd Basyaruddin Abdul Rahman**, Khairulazhar Jumbri, Mahiran Basri, Kamaliah Sirat and Abu Bakar Salleh (2008). "Functional Synthesis of New Chiral Ionic Liquids (CILs) for Use in Enzymatic Production of Ester". *National Science Fellowship (NSF) Seminar, Ministry of Science, Technology and Innovation (MOSTI),* 14-16th November, UPM.
277. Muhammad Fairuz Zulkifli, **Mohd Basyaruddin Abdul Rahman**, Mahiran Basri, Raja Noor Zaliha Raja Abdul Rahman and Abu Bakar Salleh (2008). "Structure Elucidation of *Leucosporidium antarcticum* Antifreeze Protein", 19th *BioMalaysia*, 4-6th November, Merdeka Palace, Kuching, Sarawak.

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Exhibitions (Research / Products Innovation and Invention)

International

1. **Mohd Basyaruddin Abdul Rahman**, Azren Aida Asmawi, Bimo Ario Tejo, Emilia Abdmalek, Mahiran Basri, Normi Mohd Yahaya and Abu Bakar Salleh (2015). Exotic Ice Structuring Peptides*. Malaysia Technology Exhibition*, 12-14th February 2015, PWTC Malaysia. (*winner of Silver Medal*).
2. **Mohd Basyaruddin Abdul Rahman**, Bimo Ario Tejo, Azren Aida Asmawi, Emilia Abdmalek, Mahiran Basri, Raja Noor Zaliha Raja Abd. Rahman and Abu Bakar Salleh (2013). Design and

Function of EXOTIC ICE STRUCTURING PEPTIDES from Antarctic Yeast *Glaciozyma antartica. Malaysia Innovation Expo*, 26-28th September 2013, Universiti Putra Malaysia. (*winner of Silver Medal*).

3. Mahiran Basri, Lim Chaw Jiang, Dzolkhifli Omar, **Mohd Basyaruddin Abdul Rahman**, Abu Bakar Salleh and Raja Noor Zaliha Abdul Rahman (2012), "Green Nanoemulsion Intervention for Biopesticide Formulation" *23rd International Invention, Innovation and Technology Exhibition*, Midvalley, Kuala Lumpur, 17-19th May 2012, KLCC. (*winner of Gold Medal*).
4. Mahiran Basri, Lim Chaw Jiang, Dzolkhifli Omar, **Mohd Basyaruddin Abdul Rahman**, Abu Bakar Salleh and Raja Noor Zaliha Abdul Rahman (2011), "New Nanoemulsion Intervention for Pesticide Auxiliary" *22nd International Invention, Innovation and Technology Exhibition*, Midvalley, Kuala Lumpur, 20-22nd May 2011, KLCC. (*winner of Gold Medal*).
5. **Mohd Basyaruddin Abdul Rahman**, Uswatun Hasanah Zaidan, Siti Salhah Othman, Mahiran Basri, Emilia Abdulmalek, Bimo Ario Tejo and Abu Bakar Salleh (2011), "NanoMica for Enzyme Market" *Malaysia Technology Expo* (MTE 2011), 17-19th February 2011, KLCC. (*winner of Silver Medal*).
6. Mahiran Basri, Siti Salwa Abdul Ghani, **Mohd Basyaruddin Abdul Rahman**, Anuar Kassim, Raja Noor Zaliha Raja Abdul Rahman, Abu Bakar Salleh and Zahariah Ismail (2010). ""Nano-Engkabang Formulations for Cosmeceutical Application", *World Exhibition on Innovation, Research and New Technologies (INNOVA)*, 18-20th November 2010, Brussels (*winner of Silver Medal*)
7. Mahiran Basri, Siti Salwa Abdul Ghani, **Mohd Basyaruddin Abdul Rahman**, Anuar Kassim, Raja Noor Zaliha Raja Abdul Rahman, Abu Bakar Salleh and Zahariah Ismail (2010). ""Nano-Engkabang Formulations for Cosmeceutical Application", Malaysia Technology Expo 2010, 4-6th February 2010, Kuala Lumpur (*winner of Bronze Medal*)
8. **Mohd Basyaruddin Abdul Rahman**, Noraini Abd Ghani, Mahiran Basri, Raja Noor Zaliha Raja Abdul Rahman, Abu Bakar Salleh, Paridah Md. Tahir and Nik Ghazali Nik Salleh (2008). "MBiocoatings : Nanoformulation Surface Coating", *Invention and New Product Exposition Expo* (INPEX 2008), 11-14th June 2008, Pittsburgh, USA.
9. **Mohd Basyaruddin Abdul Rahman**, Noraini Abd Ghani, Naz Chaibakhsh Langroodi, Mahiran Basri, Raja Noor Zaliha Raja Abdul Rahman and Abu Bakar Salleh (2008). "Liquid Wax Esters", *Invention and New Product Exposition Expo* (INPEX 2008), 11-14th June 2008, Pittsburgh, USA.
10. **Mohd Basyaruddin Abdul Rahman**, Noraini Abd Ghani, Naz Chaibakhsh Langroodi, Mahiran Basri, Raja Noor Zaliha Raja Abdul Rahman, Abu Bakar Salleh, Paridah Md. Tahir and Nik Ghazali Nik Salleh (2008). Sustainable Production of High Value Added Adipate Esters for Surface Coatings", *Malaysia Technology Expo* 2008, 21-23rd February 2008, PWTC. (*winner of Gold Medal*)
11. **Mohd Basyaruddin Abdul Rahman**, Khairulazhar Jumbri, Ng Shie Ling, Kenneth Seddon, Mahiran Basri, Abu Bakar Salleh and Raja Noor Zaliha Raja Abdul Rahman (2008). "Innovative Chiral Ionic Liquids in Nonaqueous Enzymology", *Malaysia Technology Expo* 2008, 21-23rd February 2008, PWTC. (*winner of Silver Medal*)
12. Raja Noor Zaliha Raja Abd. Rahman, Abd Ghani Abd Aziz, Azmiza Syawani Jasni, Abu Bakar Salleh, Mahiran Basri and **Mohd Basyaruddin Abdul Rahman** (2007), "A New Novel Organic Solvent Tolerant Lipase from *Bacillus sphaericus* 205y for industrial applications", *17th International Inventions, Innovation, Industrial Design Technology Exhibition 2007*, 20-22nd May, Midvalley, Kuala Lumpur. (*winner of Gold Medal*)
13. Abu Bakar Salleh Mahiran Basri, **Mohd Basyaruddin Abdul Rahman**, Siti Salhah Othman, Mohd Zobir Hussein, and Raja Noor Zaliha Raja Abdul Rahman (2005). "Chirazim™ – Highly Enantioselective Enzyme" *33rd International Exhibitions and Inventions of New Techniques and Products*, 6-10th April, Geneva, Switzerland. (*winner of Gold Medal*)
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E. RESEARCH PRODUCTS / PATENTS

Patents

1. **Invention : Novel Fatty Acid Conjugated Peptide as a New Biological Active Molecule**
   Malaysian Patent Application No P1 2018702490 (17th July 2017)

2. **Invention : A Nanoemulsion Pharmaceutical Composition**
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   Publication No. : WO/2009/066976 (28th May 2009)
   United States Patent Application No. 12/515,373
   Japanese Patent Application No. 2009-545507
   Chinese Patent Application No. 200880001260-3
   Hong Kong Patent Application No. 11100308.4
   Malaysian Patent Application No P1 20072080

4. **Invention : A Method for Producing Adipate Ester**
   Malaysia Patent : Patent No. MY-144876-A (31st November 2011)
   Malaysian Patent Application No P1 20072081 (23rd November 2007)
   International Patent Application No. PCT/MY2008/000093 (3rd September 2008)
   Publication No. : WO/2009/066975 (28th May 2009)

5. **Invention : Method of Producing Enantioselective Immobilized *Candida rugosa* Lipase**
   United States Patent : Patent No. 8129152 (6th March 2012)
   United States Patent Application No. US 11/058,159 (1st August 2008)
   Malaysian Patent Application No PI 20040529

6. **Invention : Production of Wax Esters**
   United States Patent : Patent No. 7557228 (7th July 2009)
   Singapore Patent Application No. 2004075149 (28th September 2007)

7. **Invention : Method for Preservation of Cells and Tissue by Anti-freeze Peptide**
   Malaysian Patent Application No PI2016700746 (4th March 2016)

8. **Invention : Antifreeze Peptides Derived From Fungal Protein (Provisional)**
   Malaysian Patent Application No P1 2013001132 (2013)
   Malaysian Patent Application No P1 2013001133 (2013)
   Malaysian Patent Application No P1 2013001134 (2013)
   Malaysian Patent Application No P1 2013001135 (2013)

9. **Invention : An Emulsion System Derives from Engkabang Fat Esters**
   United States Patent Application 20120165415 (22nd June 2010)
   Malaysian Patent Application No P1 20092650 (23rd June 2009)

10. **Invention : Immobilised Enzyme Using a Mica Carrier**
Malaysian Patent Application No P1 2010004391 (20th September 2010)

11. **Invention : A Process for Producing Levulinate and Succinate Esters**
Malaysian Patent Application No P1 20104139 (2nd September 2010)

12. **Invention : Antifreeze Peptides Derived From Fungal Protein**
Malaysian Patent Application No P1 20095441 (23rd December 2009)

13. **Invention : A Herbicide Formulation**
Malaysian Patent Application No P1 20093048 (22nd July 2009)

14. **Invention : A Topical Applied Formulation Containing Illipe Fat and/or Ester and A Method for Producing the Same**
Malaysian Patent Application No P1 20091192 (24th March 2009)

15. **Invention : A Method for Epoxidation of Plant Oils**
International Patent Application No. PCT/MY2009/000033 (26th February 2009)

16. **Invention : Pharmaceutical Composition of Non-Steroidal Anti-Inflammatory Drugs**
Malaysian Patent Application No P1 20090367 (29th January 2009)

17. **Invention: Modified Thermostable Enzyme and Method**
Malaysian Patent Application No P1 20071387 (21 August 2007)

18. **Chirazim™ – Enantioselective Immobilized Lipase**
Malaysian Patent Application No PI 20040529
United States Patent Application No. US 11/058,159

19. **MBSofax™ – New Green Palm-Based Fine Organics**
Malaysian Patent Application No. PI 20033660
Singapore Patent Application No. 200407514-9
Indonesia Patent Application No. ID 00200400665

Trademarks

1. **MBSofax™ – New Green Palm-Based Fine Organics**
Malaysian Trademark Application No. 2004-00882

2. **Chirazim™ – Enantioselective Immobilized Lipase**
Malaysian Trademark : No. 2004-00881

Sequence / Structure Code Accession

1. Thermostable branching enzyme from *Geobacillus* sp. Geo-05 bacteria
Nucleotide sequence : KC951870

2. Antifreeze Peptides from *Glaciozyma antarctica* yeast
Protein Data Bank – 2LQ0.pdb, 2LQ0.pdb, 2LQ0.pdb

F. SYMPOSIUM / SEMINAR / CONFERENCE / WORKSHOP

As Keynote / Plenary Speaker (International)

1. Keynote Speaker, International Symposium On Advanced Materials and Nanotechnology (iSAMN2020). Virtually, 1-3 December 2020, Serdang.
   - Romancing the MATERIALS for Encapsulation and Nanodelivery of Molecules

2. Plenary Speaker, International Conference On Natural Sciences, Mathematics, Applications, Research, and Technology(ICON-SMART). Virtually, 22 - 23 October 2020, Manado, Indonesia.
   - Embracing Molecular Solutions in Sustainable Biocatalysis.

3. Keynote Speaker, *International Conference of the Indonesian Chemical Society, 11-13th August, 2020, Lombok. Indonesia. Keynote Speaker.*
   - Aerosolized Lipid-based Nanoemulsion System Loaded with Anticancer Drugs for Lung Cancer Treatment via Pulmonary Route

4. Keynote Speaker, International Nanotechnology Symposium 2020, 21-23rd February 2020, Kuala Lumpur
   - Aerosolized Nanohubs for the Targeted Smart Delivery for Pulmonary Pathologies.

5. Keynote Speaker, 1st International Symposium on Aerosols Characterization and Therapies. 29th – 31st October 2019, Kaohsiung, Taiwan
   - Aerosolized Nanocolloidal Carrier Systems Containing Drugs for Lung Cancer Treatment by Pulmonary Route.

6. Keynote Speaker, 7th Asian Conference on Coordination Chemistry (ACCC7), 15-18th October 2019, Kuala Lumpur, Malaysia.
   - Embracing Metallomics and Molecular Simulation Solutions in Sustainable Biocatalysis.

7. Keynote Speaker, 1st International MIPAnet Conference on Science and Mathematics (IMC-SciMath) 2019. 9-11th October, 2019, Medan, Indonesia.
   - Embracing Molecular Simulation Solutions in Sustainable Biocatalysis

8. Keynote Speaker, 5th Asian Science Deans Summit 2019, 9-11th July 2019, Malang, Indonesia.
   - Building Collaboration: Experience from Faculty of Science, Universiti Putra Malaysia.

9. Keynote Speaker, *1st International Symposium on Aerosol Chemistry and Related Reaction Dynamics*, Dec 5-8, 2018, Kaohsiung, Taiwan
   - Aerosolized Lipid-based Nanoemulsion System Loaded with Anticancer Drugs for Lung Cancer Treatment via Pulmonary Route

10. Plenary Speaker, *Asian Regional Conference on Systems Biology 2017*, 24-26th October 2017, Bangi, Selangor, Malaysia
    - Computational Chemistry in Systems Biology

11. Keynote Speaker, 4th International Conference on Computation for Science and Technology, 3rd to 4th Nov 2016, Langkawi
    - 'Trending' in Computational Catalysis and Colloids

12. Keynote Speaker, *International Chemical Technology Conference*, 11th October 2014, USIM.
    - Becoming Great A Chemist

13. Keynote Speech, *International Conference on Civil, Biological and Environmental Engineering 2014*, 27-28th May 2014, Istanbul, Turki.
    - Design and Function of Exotic Ice Structuring Peptides from Antarctic Yeast *Glaciozyma antarctica*

14. Plenary Lecture, *2nd International Symposium And Workshop On Functional Genomics And Structural Biology (FGSB2),* January 2014, Kuala Lumpur
    - Enzyme Behavorial in Non-Aquoeus Systems

15. Keynote Lecture, *International Conference on Ionic Liquids (ICIL 13)* , 10-12th December 2013, Sheraton Hotel, Langkawi
    - Modeling Enzyme Structural And Dynamics Properties In Ionic Liquids

As Keynote / Plenary Speaker (National)

16. Keynote Speaker, Symposium On Multidisciplinary Science - Fostering Synergy in Research Through Multidisciplinary Science, 31 July 2019, Bangi, Malaysia.
    - Espousing Molecular Simulations in Multidisciplinary and Sustainable Research

17. Plenary Speaker, 15th Symposium of Malaysian Society of Applied Biology (MSAB), 30th June – 1st July, 2018, Melaka.
    - Embracing Molecular Simulation Solutions in Sustainable Applied Biology

18. Keynote Speaker, Malaysian Young Scientists Assembly, 6th July 2011, USIM.
    - EXPLORE YOURSELF : The Unexamined Life is NOT Worth Living

19. Keynote Speaker, *Industrial Chemistry Technology Seminar*, 9th March 2011, USIM, Nilai.
    - Chemists at the Forefront of Industrial Development: From Petroleum to Personalised Medicine

As Invited Speaker (International)

1. Invited Speaker, COMSTECH International Workshop on Nanomedicine – Development & Challenges. 15-17 March, 2021. Islamabad, Pakistan.
    - Aerosolized Nanohubs for the Targeted Drugs Smart Delivery for Pulmonary Route.

2. Invited Speaker, The 8th Asian Conference on Colloid & Interface Science. 24-27th September 2019, Kathmandu, Nepal
    - Lipid-based aerosolized nanocolloidal carrier system containing anticancer drugs in lung carcinoma treatment.

3. Invited Speaker, 32nd International Symposium of Malaysian Analytical Sciences (SKAM32), 14-16th August 2019, Port Dickson.
    - Embracing Advanced Materials for Enzyme Immobilization and Drug Nanodelivery

4. Invited Speaker, *UPM_Kyutech Joint Seminar*, 22-23th January 2019, UPM, Malaysia

- Aerosolized Lipid-based Nanoemulsion System Loaded with Anticancer Drugs for Lung Cancer Treatment via Pulmonary Route

5. Invited Speaker, *Computational Aided Drug Discovery 2017*, 4-6th December 2017, Langkawi, Malaysia
   - Structural analysis and dynamics of Protein Arginine Deiminase Type 4 (PAD4)

6. Invited Speaker, *Integrative Structural Biology Symposium*, 6-7th March, 2017. Malaysia Genome Institute
   - Bespoke And Structural Elucidation Of Peptide And Peptidomimetic Based On Enzyme Active Site.

7. Invited Speaker, *10th Asia-Pacific Biotech Congress*, 25-27th July 2016 Bangkok, Thailand.
   - Downsizing Antifreeze Proteins to Antifreeze Peptides from Antarctica Inhabitants.

8. Invited Speaker, *2nd International Sciences, Technology and Engineering Conference Advanced Materials, Chemistry and Physics,* 20-23rd April, 2016, Penang, Malaysia.
   - Mimetic Peptides Perspectives in Chemical and Biochemical Reactions.

9. Invited Speaker, *2nd Computational Aided Drug Design Conference 2015,* 8-10th December 2015, Penang.
   - Enzyme Behavior and Dynamics in Non-Aquoeus Biocatalysis.

10. Invited Speaker, *The 10th International Conference on Cutting-Edge Organic Chemistry in Asia (ICCEOCA-10)*, 2-5th November 2015, Kaohsiung, Taiwan.
    - Octapeptide Catalyst Based on Aldo-Ketoreductase for Asymmetric Aldol Reaction. **winner of Lectureship Award*

11. Invited Speaker, *27th Regional Symposium of Malaysia Analytical Sciences*, 9-10th December 2014, Johor Bahru, Johor.
    - Tailoring Peptidomimetics Antifreeze Protein from Exotic Antarctic Marine.
      ** Invited speaker sponsored by American Chemical Society – Malaysia Chapter*

12. Invited Speaker, *9th Science, Technology and Innovation Management Training Course for Researchers in OIC Countries*, 10-16th November 2013, Istana Hotel, Kuala Lumpur.
    - Young Scientists Network

13. Invited Speaker, *4th Regional Annual Fundamental Science Symposium 2012*, 17 – 18th July, UPM Serdang, Selangor.
    - Synthetic Biology : A New Chemistry for A New Biology

14. Invited Panel, *International Conference on Teaching and Learning Education*, 20 - 22nd June 2011, UNITEN.
    - Current Challenges in Science and Education

15. Invited Speaker, *International Conference on Mathematical and Computational Biology 2011*, 12-14th April, 2011 Malacca.
    - Dynamics and Insight of Small Domain in Thermostability of Thermoalkalophilic Lipases

16. Invited Speaker, *Regional Conference on Ionic Liquids*, 23-25th November 2009, Universiti Malaya, Kuala Lumpur.

- Enzymatic Esterification in Ionic Liquids

17. Invited Speaker, *Bioinformatics Seminar*, Department of Physics and Optical Science, University of North Carolina at Charlotte, 12th May 2006, North Carolina, USA.
    - *In Silico* Modification of Enzyme : A Molecular Modeling Approach

18. Invited Panel, *Academic Forum*, University of Cape Town, South Africa, 30th April 2003.
    - Education System of Malaysia and South Africa

As Invited Speaker (National)

19. Invited Speaker, *Distinguished Lecture Series 5.0*, 31st October 2018, UPM, Malaysia
    - The Chronicles of MOFs in UPM : The Visibility Project, The Nodes of Network and A New Benchmark

20. Invited Speaker, *Workshop on Research Methods and Techniques in Drug Discovery*, 22nd August 2017, UPM, Malaysia
    - Introduction of Computational Methods in Drug Discovery

21. Invited Speaker, *40th Annual Conference of the Malaysian Society for Biochemistry & Molecular Biology (MSBMB)*, 10th - 11th June 2015, *Putrajaya Marriott Hotel.*
    - Downsizing Proteins to Peptides: A New Perspective in Peptide Research.

22. Invited Speaker, *Universiti Malaya Researcher's Conference*, 19-20th November 2013, Universiti Malaya, Kuala Lumpur.
    - From Research Scientist to Research Leader - The Journey Starts With You

23. Invited Speaker, *Genome Malaysia DNA Day*, 21st April 2012, MGI Bangi, Selangor.
    - Synthetic Biology : A Sinfully Powerful Platform For New Biotechnology

24. Invited Speaker, *2nd Fundamental Science Congress 2010*, 18 – 19th May, UPM Serdang, Selangor.
    - Ionic Liquids for Nonaqueous Biocatalysis

25. Invited Speaker, *Seminar on Industrial Biotechnology – Horizon Scanning Workshop*, 7th May 2009, SIRIM Berhad, Shah Alam, Selangor.
    - Research and Development Strategies in Enhancing Industrial Biotechnology Industry

26. Invited Speaker, *Sanggar Kerja*, Malaysia Genome Institute, 1st April 2009, Equatorial Hotel, Bangi, Selangor.
    - Blue Oceans in Industrial Biotechnology

27. Invited Speaker, *Pharmaceuticals Lecture Series*, Faculty of Health Science, 29 January 2007, Management and Science University, Shah Alam, Selangor.
    - Molecules @ Work

28. Invited Lecture, *Workshop on Computational Biology*, 9-10th December 2005, UiTM, Shah Alam.
    - Molecular Docking : Autodock

As an Inventor

1. *Malaysia Innovation Expo*, 26-28th September 2013, Universiti Putra Malaysia.
   - Design and Function of EXOTIC ICE STRUCTURING PEPTIDES from Antarctic Yeast *Glaciozyma antartica.* (*winner of Silver Medal*).

2. *23rd International Invention, Innovation and Technology Exhibition*, Midvalley, Kuala Lumpur, 17-19th May 2012, KLCC.
   - Green Nanoemulsion Intervention for Biopesticide Formulation (*winner of Gold Medal*).

3. *Exhibition of Invention, Research & Innovation* (PRPI 2011), 17-19th July 2012, UPM.
   - Formation and Physicochemical Characterization of Glyphosate-Laden Nanoemulsion for Herbicide Application (*winner of Gold Medal*)
   - Design of New Palm Esters Nanocosmeceuticals for High Radical Scavenging Activity (*winner of Gold Medal*)
   - Palm-based Esters Nanoemulsions System Containing Ibuprofen for Topical Drug Delicery (*winner of Silver Medal*)

4. *22nd International Invention, Innovation and Technology Exhibition*, Midvalley, Kuala Lumpur, 20-22nd May 2011, KLCC.
   - New Nanoemulsion Intervention for Pesticide Auxiliary (*winner of Gold Medal*).

5. *Malaysia Technology Expo* (MTE 2011), 17-19th February, KLCC.
   - NanoMica for Enzyme Market" (*winner of Silver Medal*)

6. *Exhibition of Invention, Research & Innovation* (PRPI 2011), 19-21st July 2011, UPM.
   - Proline-Based Chiral Ionic Liquids Catalyst: The Simplest 'Enzyme'? (*winner of Gold Medal*)
   - Towards Efficacy of Lignocellulosic Biomass Utilization by Ionic Liquids" (*winner of Silver Medal*)

7. *Exhibition of Invention, Research & Innovation* (PRPI 2010), 20-21st July, UPM.
   - Natural-based Mica Network as Nanoreactor for Enzymes in Chiral Syntheses (*winner of Gold Medal*)
   - Insight of Self-assembly Formation of Palm-based Esters Nano-emulsion (*winner of Bronze Medal*)

8. *Pameran Anugerah Inovasi Cemerlang Selangor, Sempena Festival Sains, Teknologi dan Inovasi Selangor (FESTiS 2009).*
   - EverGREEN Frontier Solvents for Bespoke Biocatalysis

9. *Exhibition of Invention, Research & Innovation* (PRPI 2009), 28-30th July, UPM
   - Chemo-Enzymatic Green Route Palm-based Epoxides for Benign Surface Coating Nanoformulations
     (*winner of Gold Medal*)
   - Designs and Development of Palm-Based Transdermal Nanoemulsions for NSAIDS (*winner of Gold Medal*)
   - Nano-Engkabang Formulations for Excellent Skin Hydration (*winner of Silver Medal*)

10. *Intellectual Property Right Exhibition - MyIPO*, 23-26th April 2009, KLCC
    - Sustainable Production of High Value Added Adipate Esters for Surface Coatings
      (*winner of National Patent Award (Individual)*)

11. *Malaysia Agriculture and MAHA*, 29-31st July 2008, UPM.
    - Sustainable Production of High Value Added Adipate Esters for Surface Coatings

12. *Innovation Nuclear*, 16-18th July, Agency Nuclear Malaysia.
    - Sustainable and Solventless Surface Coatings (*winner of Silver Award*)

13. *Invention and New Product Exposition Expo* (INPEX 2008), 11-14th June 2008, Pittsburgh, USA. (*winner of Silver Medal*)
    - MBiocoatings : Nanoformulation Surface Coating
    - Liquid Wax Esters

14. *Exhibition of Invention, Research & Innovation* (PRPI 2008), 29-31st July, UPM.
    - Sustainable Optimization and Solventless Biocatalysis of Wax Esters Using Artificial Neural Network (*winner of Gold Medal*)
    - *En Route* to Palm-based Nano-emulsions Self-Assembly (*winner of Gold Medal*)
    - Production of Palm Esters for the Cosmetic Industry (*winner of Gold Medal*)
    - Insight of a Fungi Antifreeze Protein from *Leucosporidium antarcticum* (*winner of Silver Medal*)

15. *Malaysia Technology Expo* (MTE 2008), 27-29th November 2008, PWTC.
    - Sustainable Production of High Value Added Adipate Esters for Surface Coatings (*winner of Gold Medal*)
    - Innovative Chiral Ionic Liquids in Nonaqueous Enzymology (*winner of Silver Medal*)

16. *Exhibition of Invention, Research & Innovation* (PRPI 2007), 27-29th November 2007, UPM.
    - Insight Story of Thermostable Protein Unfolding (*winner of Gold Medal*)
    - *In silico* Protein Design of Novel Metalloenzyme : A New Generation of Industrial Biocatalyst (*winner of Gold Medal*)
    - Innovative Application of Green Engineering Liquids of Facile Imidazalium-based Chiral Ionic Liquids (*winner of Gold Medal*)
    - Chiral Ionic Liquids Coated Enzyme (*winner of Silver Medal*)
    - MBiocoatings™: Green Route Wax Ester Formulation for Surface Coatings (*winner of Silver Medal*)
    - Optimization of Green Route Synthesis of High Value Added Adipate Esters via Response Surface Methodology and Artificial Neural Network (*winner of Silver Medal*)

17. *PECIPTA 2007*, 22-24th August 2007, KL Convention Center.
    - Green Route Production of Petro-based Adipate Esters

18. *Selangor Young Scientist Competition*, 12-15th July 2007, Shah Alam, Selangor.
    - Green Route Production of Petro-based Adipate Esters
      (*winner of Overall Excellent Young Scientist Award and Champion for Product Innovation*)

19. *(I-TEX) International Inventions, Innovation, Industrial Design Technology Exhibition 2007*, 20-22nd May 2007, Midvalley, Kuala Lumpur.
    - A New Novel Organic Solvent Tolerant Lipase from *Bacillus sphaericus* 205y for industrial applications (*winner of Gold Medal*)

20. *Exhibition of Invention, Research & Innovation* (PRPI 2006), 22-24th August 2006, UPM.
    - Green Route Production of Petro-based Adipate Esters (*winner of Gold Medal*)
    - Novel Metalloenzyme : New Structure and Function (*winner of Silver Medal*)

- Protein Structure-Based Design of Novel Semisynthetic Metallotrypsin (*winner of Bronze Medal*)
- Reductive alkylation: A practical approach in structural manipulation (*winner of Bronze Medal*)
- A novel cold active lipase: Gene expression and homology modeling (*winner of Bronze Medal*)
- Production and Novel Characterization of Palm-based Wax Esters (*winner of Bronze Medal*)
- Scale Up Production: Enzymatic Synthesis of Amino-based Surfactants (*winner of Bronze Medal*)

21. *Research & Development Exposition, IPTA 2005*, 30th September – 2nd October 2005, PWTC, Kuala Lumpur.
    - ChirazimTM – Highly Enantioselective Enzyme (*winner of Gold Medal*)
    - Futuristic Nanobioterials as Catalyst Towards Green Route for Organic Synthesis (*winner of Bronze Medal*)

22. *BioMalaysia 2005*, 28-30th April 2005, Putrajaya International Convention Centre, Putrajaya.
    - MBSofax™ – New green palm-based fine organics for industry
    - Chirazim™ – Highly Enantioselective Enzyme

23. *Exhibition of Invention, Research & Innovation 2005*, 16-17th March 2005, UPM.
    - New route to Antimony tetraoxide (Sb_2O_4) promising promoter catalyst in petrochemical industry (*winner of Silver Medal*)
    - Super Enzyme - Enzyme Immobilization in Mesoporous Materials (*winner of Silver Medal*)
    - *In silico* Protein Engineering: A fundamental approach of molecular interaction in protein chemistry (*winner of Bronze Medal*)
    - Designing Novel Metalloenzyme: Molecular modeling and screening of putative ligands
    - Enzymatic Synthesis of Palm Based Ferulate Ester (*winner of Silver Medal*)
    - Synthesis of Kojic Acid Ester Using Lipase

24. *33rd International Exhibitions and Inventions of New Techniques and Products*, 6-10th April 2005, Geneva, Switzerland.
    - Chirazim™ – Highly Enantioselective Enzyme (*winner of Gold Medal*)
    - MBSofax™ – New green palm-based fine organics for industry (*winner of Silver Medal*)

25. *Research & Development Exposition, IPTA 2004*, 27-29th August 2004, PWTC, Kuala Lumpur.
    - Advanced Nanobiomaterial as Catalyst for Green Organic Synthesis (*winner of Bronze Medal*)

26. *Exhibition of Research and Invention UPM 2004,* 19-20th August 2004, UPM.
    - "Structure Dynamics of Two Conformational States of *Candida rugosa* Lipase in Aqueous and Nonaqueous Solvents (*winner of Silver Medal*)
    - High-Throughput Screening on Thermolysin Surface Area for Desinging a Novel Semisynthetic Metalloenzyme (*winner of Silver Medal*)

27. *(I-TEX) International Inventions, Innovation, Industrial Design Technology Exhibition 2004*, 20-22nd May 2004, Midvalley, Kuala Lumpur. (*winner of Gold Medal and Ram Rais Biotechnology Award*)
    - MBSofax™ – New Palm-based Fine Organics for Industry

28. *Research & Development Exposition, IPTA 2003,* 9-12th October, PWTC, Kuala Lumpur.
    - Scale-up Production of Liquid Wax Ester by Immobilized Lipase
    - Immobilization of Lipase from *Candida rugosa* on Kaolin for Esterification Reaction

29. *Exhibition of Invention and Research UPM 2003*, 8-10th July, UPM.

- Application of New Advanced Nanomaterials for Enzyme Immobilization (*winner of Silver Medal*)
- Structural Properties of Modified *Candida rugosa* Lipase in Water and Organic Solvent (*winner of Silver Medal*)
- Enhancement of Lipase Enantioselectivity through Immobilization (*winner of Silver Medal*)
- New Advanced Nanomaterials for Immobilization of Enzyme (*winner of Silver Medal*)
- Synthesis of Optically Pure (-)-methyl Butyrate by Immobilized Lipases (*winner of Silver Medal*)

30. *Exhibition of Invention and Research UPM 2002*, 30th August 2002, UPM.
    - Palm-based Liquid Wax Esters: A Raw Material for Cosmetics (*winner of Gold Medal*)
    - Activated Carbon" *Exhibition of Invention and Research UPM 2002*, July, UPM. (*winner of Gold Medal*)
    - Synthesis of Optically Pure (-)-methyl Butyrate by Immobilized Lipases (*winner of Silver Medal*)
    - Understanding How Enzyme Works: Homology Modeling of F1 Protease from *Bacillus sterothermophilus*

31. Indonesia-*Malaysia-Thailand Golden Triangle (IMT-GT) AgroIndustry Exhibition*, 3-7th July 2002, Hatyai, Thailand.
    - A New Palm Based Materials for Cosmetics

32. *Research & Development Exposition, IPTA 2001*, 2-5th October, PWTC, Kuala Lumpur.
    - Enzymatic Enantioselecective Synthesis of Chiroceuticlas

As a Committee Member

1. *20th Regional Symposium on Analytical Chemistry*, Hatten Hotel, Melaka, 26-29th August 2017. (Co-Chairman)
2. *18th Regional Symposium on Analytical Chemistry*, Paradise Lagoon Hotel, Port Dickson, Negeri Sembilan, 17-19th July 2015. (Chairman)
3. *16thIndustrial Chemistry Seminar*, 25th June 2013, Kuala Lumpur, Malaysia. (Chairman)
4. *Young Scientists Network Colloquium 2014*, 4-6th December 2014, Akademi Sains Malaysia. (Advisor)
5. *Young Scientists Network Strategic Workshop 2013*, 12-14th December 2013, Akademi Sains Malaysia. (Advisor)
6. *National Biotechnology Seminar*, 6-8th June 2013. (Chairman of Technical Committee)
7. *5th Structural Biology Colloquium 2013*, Ipoh, 2-4th June 2013. (Chairman)
8. *National Science Challenge 2013*, Akademi Sains Malaysia. (Co-Chairman)
9. *Workshop on Non-Aqueous Biocatalysis & Peptidomimetics : Molecular Simulations 2013* (NABP-MS 2013), 17-21st June 2013. (Chairman)
10. *Young Scientists Network Inaugural Colloquium 2012*, 12-15th December 2012, Akademi Sains Malaysia. (Advisor)
11. *Workshop on Protein Labeling for BioNMR*, Malaysia Genome Institute, 16-20th July 2012. (Advisor)
12. *Workshop on Methods and Applications of Molecular Simulations Techniques; Monte Carlo & Coarse-Grained Molecular Dynamics*, Malaysia Genome Institute, 25-29th June 2012. (Advisor)
13. *Advanced Protein Crsytallography Workshop*, Malaysia Genome Institute, 16-20th January 2012. (Advisor)
14. *Asia Pacific Bioinformatics Network's 10th InCoB*, 30th Nov – 2nd Dec, 2011. (Steering Committee)
15. *Protein Crsytallography Workshop*, Malaysia Genome Institute, 22-26th September 2011. (Advisor)
16. *Peptide Synthesis Workshop*, Universiti Putra Malaysia, 22-26th June 2011. (Advisor)
17. *4th Structural Biology Colloquium 2011*, KL Sentral, 8th May 2011. (Chairman)

18. *International Conference on Mathematical and Computational Biology 2011 (ICMCB 2011)*, 12-14th April, 2011. (Technical Committee and Chairperson)
19. *Microgravity Sciences Workshop 2*, ANGKASA-UMS, 23-24th November 2009. (Chairman)
20. *Structural Biology Colloquium 2009*, Colmar Tropicale, Bukit Tinggi, Pahang, 24-25th October 2009. (Chairman)
21. *Quantum Mechanics and Molecular Dynamics Workshop,* 23-28th June 2009, UPM. (Advisor)
22. *Designer Biocatalysts for Sustainable Processes in the Conversion of Renewable Raw Materials to Platform Chemicals*, Designer Biocatalysts Group Quarterly Meeting (Chairman)
    i. *1st - 2009, 2nd August 2009, The Puteri Pacific, Johor Bahru*
    ii. *2nd – 2009, 26th October, Colmar Tropicale, Bukit Tinggi, Pahang*
    iii. *3rd – 2010, 6th February 2010, Equatorial Hotel Bangi, Putrajya*
    iv. *4th – 2010,14th July 2010, Putrajya Shangri-La, Putrajya*
    v. *5th – 2010, 8th December 2010, Cyberview Lodge, Cyberjaya*
    vi. *6th – 2011, 8th May 2011, Le Meridien Hotel, KL Sentral*
    vii. *7th – 2012, 4th January 2012, Malaysia Genome Institute*
    viii. *8th – 2012, 2nd July 2012, Gem Beach Resort, Kuala Terengganu*
    i. *9th – 2013, 4th June 2013, Syuen Hotel, Ipoh*

23. *The Effect of Conformation on Protein Function*, Structural Biology Group Quarterly Meeting (Secretary)
    i. *3rd - 2002, 2nd October 2002, Legend Hotel, Kuala Lumpur*
    ii. *4th - 2002, 11th January 2003, Cyberview Lodge Resort, Cyberjaya*
    iii. *1st - 2003, 13th April 2003, Pan Pacific Resort, Pangkor*
    iv. *2nd - 2003, 27th July 2003, Mines Beach Resort, Seri Kembangan*
    v. *3rd - 2003, 15th October 2003, PJ Hilton, Petaling Jaya*
    vi. *4th - 2003, 14th January 2004, Putrajaya Shangri-La, Putrajaya*
    vii. *1st - 2004, 28th April 2004, Grand Plaza Parkroyal, Penang*
    viii. *2nd - 2004, 24th July 2004, Concorde Hotel, Kuala Lumpur*
    ix. *4th - 2004, 30th January 2005, Putrajaya Shangri-La, Putrajaya*
    x. *1st - 2005, 22nd April 2005, Bayview Beach Hotel, Georgetown*
    xi. *3rd - 2005, 2nd October 2005, Bukit Tinggi Golf & Country Club, Pahang*
    xii. *4th - 2005, 21st January 2006, The Citybayview Hotel, Penang*
    xiii. *1st - 2006, 30th April 2006, The Marriott, Putrajaya*
    xiv. *2nd – 2006, 6th August 2006, Palm Garden Resort, Putrajaya*
    xv. *1st - 2007, 14th April 2007, Putrajaya Shangri-La, Putrajaya*
    xvi. *2nd – 2007, 14th July 2007, Concorde Hotel, Shah Alam*
    xvii. *3rd - 2007, 10th November 2007, The Puteri Pacific, Johor Bahru*
    xviii. *4th – 2007, 16th February 2008, Hotel Bayview, Langkawi*
    xix. *1st – 2008, 24th May 2008, Le Meridien, Kota Kinabalu*

24. *12th Industrial Chemistry Seminar,* 5th April 2008, Kuala Lumpur, Malaysia. (Advisor)
25. *12th Asian Chemical Congress,* 23-25th August 2007, Kuala Lumpur, Malaysia. (Committee and Chairperson of Session – Theoretical Chemistry)
26. *11th Industrial Chemistry Seminar,* 28th April 2008, Kuala Lumpur, Malaysia. (Chairperson)
27. *Theoretical Science Leagues – Expository Lecture Series V : Computational Physical Sciences 2006,* Universiti Putra Malaysia, 12-15th December 2006. (Co-Chairman)
28. 18th *Annual National Symposium on Analytical Chemistry*, Hyatt Regency Hotel, Johor Bahru. 12-14th September 2005, (Chairperson of Session)
29. *17th Annual National Symposium on Analytical Chemistry*, Kuantan, Pahang, 24-26th August, 2004. (Chairperson of Session)

30. *Structural Biology Colloquium 2004*, Grand Plaza Park Royal, Penang, April 2004. (Secretary)
31. *Structural Biology Colloquium 2003*, Pan Pacific Pangkor Island, Perak, 10-12th April 2003. (Secretary)
32. *Malaysian Science and Technology Congress 2002 – Life Science*, Hilton Hotel, Kuching, 12-14th December 2002. (Chairperson of Session)
33. *Malaysian Conference on Catalysis*, IDEAL Conference Hall, Universiti Putra Malaysia, 11- 13th November 2001. (Secretary)
34. *8th Annual National Seminar on Industrial Chemistry*, IDEAL Conference Hall, Universiti Putra Malaysia, 19th September 2001. (Head of Publicity Committee)
35. *Workshop on Science and Technology Education in the State of Selangor*, De Palma Inn, Kuala Selangor, 6th - 9th September 2001. (Facilitator)
36. *Seminar on Entrepreneur Skills*, Universiti Putra Malaysia, 21st March 2001. (Committee)
37. *Strategic Planning Towards e-University*, IDEAL, Universiti Putra Malaysia, 11-12th October 2000. (Committee)
38. *13th Annual National Symposium on Analytical Chemistry*, Paradise Lagoon Hotel, Port Dickson, Negeri Sembilan, 6-7th September 2000. (Secretary)
39. *7th Annual National Seminar on Industrial Chemistry*, Universiti Putra Malaysia, 23rd March 2000. (Secretary)
40. *Strategic Planning and Consultation Workshop to Achieve Higher Education Institute Award*, Faculty of Science and Environmental Studies, Universiti Putra Malaysia, 7th October 1999. (Repertoire)
41. *9th International Symposium on the Relations between Homogeneous and Heterogeneous Catalysis*, University of Southampton, Southampton, England, 19-24th July, 1998. (Committee)
42. Student Exchange UTM-ITB at Institute Technology of Bandung, Bandung, Indonesia, December 1993. (Secretary)

As a Participant (Workshop / Training)

1. *2nd National Professor Congress*, 9-10th November 2013, Istana Hotel, Kuala Lumpur.
2. *NMR Methods for Labeled Proteins*, 26-27 September 2013, Bruker HQ, Fallanden, Switzerland.
3. *Advanced NMR Methods*, 23-25 September 2013, Bruker HQ, Fallanden, Switzerland.
4. *Introduction to Peptide and Protein NMR by Using Bruker 700MHz Cryoprobe*, 20-22 August, Malaysia Genome Institute.
5. *ASM International Conference (ASMIC) 2010 : Wealth Creation Through Science, Technology and Innovation – Creating the Environment for Technology Based Innovation*, 2-3rd June 2010, KLCC.
6. *Bengkel Pelarasan Penyediaan RMK10 – Klaster Bioteknologi MOSTI,* Putrajaya International Convention Center, Putrajaya, 8th January 2010.
7. *Stakeholder Workshop on Industrial Biotechnology,* SIRIM, Concorde Hotel Shah Alam, 21st December 2009.
8. *Second National Seminar and Workshop on Computer Aided Drug Design*, iPHARM, USM Penang, 8-11th December 2009.
9. *Technology Foresight Workshop,* MOSTI, Palm Garden Hotel,Putrajaya, 13-15th October 2009.
10. *2nd IAP Conference for Young Scientists in conjunction with the World Economic Forum's Annual Meeting of the New Champions*, 10-12th September 2009, Dalian, China
    ** winner of Outstanding Academic - Young Scientist*
11. *SRI's Five Disciplines of Innovation Program,* UPM-SRI, Pullman Lakeside Putrajaya, 21-22nd July 2009.
12. *Retreat Key Performance Indicator (KPI) MOSTI,* Putrajaya International Convention Center, Putrajaya, 25th February 2009.
13. *Patent Workshop,* Malaysia Genome Institute, 22-23th November 2008.

14. *Learning Outcomes IV Workshop,* Center of Academic Development, UPM, 19th February 2008.
15. *Manuscript Writing II Workshop,* Faculty of Science, UPM, 14-16th November 2007.
16. *Bengkel Menjana Insan Seimbang Melalui Kaedah 10Qs* Excel Training and Consultant, UPM, 22-23rd October 2007.
17. *Seminar on Malaysian Qualifications Framework Credit System*, Centre for Academic Development UPM, 9th October 2007.
18. *Business and Commercialisation Through MTDC Seminar*, University Business Center UPM, 2nd August 2007.
19. *Manuscript Writing I Workshop,* Faculty of Science, UPM, 18-20th June 2007.
20. *Management Review Meeting Workshop for ISO 9001:2000*, Port Dickson, 20-22nd April 2007.
21. *Seminar on Protein Electrophoresis: Techniques, Applications and Troubleshooting* by GE Healthcare, University of Edinburgh, Edinburgh, Scotland, 13th November 2006,.
22. *Basic Course in Radiation Protection in Teaching and Research*, University of Edinburgh, Edinburgh, Scotland, 17 October 2006.
23. 56th Lindau Meeting of Nobel Laureates with Young Scientist, Lindau, Germany, 25-30th June 2006.
24. *Workshop on Learning Outcomes Initiative 1*, Centre for Academic Development UPM, 21-22 February 2006.
25. *National Seminar on Pharmaceutical and Computational Biology*, Sunway Resort, 8th December 2005.
26. *Hala Tuju Penyelidikan,* Riviera Bay Resort, Melaka, 22-24th November 2005.
27. *Student Centered Learning : Faculty of Science*, Century Mahkota Melaka, 15-16th July 2005.
28. *Student Centered Learning Workshop Phase 2*, Centre for Academic Development UPM, 15-16th June 2005.
29. Seminar Series on Computational Biology, Faculty of Agriculture, UPM, 30th April 2005.
30. Training of Trainers UPM KM Portal, Centre for Academic Development UPM, 26 April 2005.
31. *Protein Crystallography Workshop*, Universiti Sains Malaysia, Penang, 16-18th August 2004.
32. *Peningkatan Tahap Kualiti – Tahap 6*, 2-17th April 2004, Residence Hotel, Universiti Tenaga Nasional,
33. *ISO 9001:2000 QMS Assessor / Lead Auditor Training Course*, SIRIM, Concorde Hotel, Shah Alam, 17-21st May 2004.
34. *Methods in Molecular Modeling Workshop*, Universiti Sains Malaysia, Penang, 23-28th April 2004.
35. *Peningkatan Tahap Kualiti – Tahap 3*, 3-16th November 2003, Universiti Putra Malaysia
36. *Methods in Molecular Modeling Workshop*, Universiti Sains Malaysia, Penang, 23-28th June 2003.
37. *National Seminar on Hostel/College Management (SPARK)*, Langkawi, 13-16th April 2003.
38. *"Strengthing Networking in X-ray Technology" International Conference On X-Rays And Related Techniques In Research And Industry*, Concorde Hotel, Shah Alam, 30-31st October 2002.
39. *Towards Excellence in Research Workshop*, Palm Garden, Putrajaya, 28th October 2002.
40. *UPM's Knowledge Discovery*, Awana Genting Highlands, Pahang, 23rd-25th October 2002.
41. *FSAS Management Review of ISO 9001:2000*, Guoman Resort, Port Dickson, 21st-24th September 2002.
42. *Internal Auditor Workshop on ISO 9001:2000*, Universiti Putra Malaysia, 16-17th September 2002.
43. *Oil and Gas Symposium 2002*, University Technology of Malaysia, Johore, 22-23rd June 2002.
44. *Workshop on College Fellow*, City Bayview Hotel, Malacca, 7-9th June 2002.
45. *Implementation on ISO 9001:2000*, Century Mahkota Hotel, Malacca, 19-21st April 2002.
46. *National Seminar on Hostel/College Management (SPARK)*, Kota Kinabalu, Sabah, 23-25th October 2001.
47. *Induction Course*, Universiti Putra Malaysia, 1-21st October 2001.
48. *Workshop for Preparation of Quality Manual, Strategy Plan and Checking of Supporting Documents in ISO 9001:2000*, Hyatt Regency, Kuantan, 10-12th August 2001.

49. *Workshop for Checking ISO 9001:2000 Procedures* in the Department of Chemistry, 2-3rd August 2001.
50. *ISO 9001:2000 Introductory Course*, Universiti Putra Malaysia, 23rd June 2001.
51. *Workshop on Isolation, Identification and Preservation of Bacteria*, Department of Biochemistry and Microbiology, Universiti Putra Malaysia, 8th - 12th May 2001.
52. *Workshop for Preparation and Checking of ISO 9001:2000 Procedures*, Riviera Bay Resort Hotel, Melaka, 27-29th April 2001.
53. *Workshop for Preparation and Checking of ISO 9001:2000 Procedures*, Casuarina Parkroyal Hotel, Ipoh, 13-15th April 2001.
54. *Workshop on ISO 9001:2000, Intermediate Level*, Equatorial Hotel, Malacca, 30th March -1st April 2001.
55. *Seminar Millenium Analysis Surface*, Universiti Teknologi Mara, Shah Alam, 27th March 2001.
56. *ISO 9000 Awareness Workshop* by Zainal Consultancy, Universiti Putra Malaysia, 21st February 2001.
57. *Team Building Course Towards ISO 9000/2001*, Jeram Besu, Pahang, 5-7th January 2001.
58. *MBCC Protein Sequencing Workshop*, Molecular Biology Cooperative Centre, Universiti Malaya 25-29th September 2000.
59. *Workshop on Introduction to Proteomics*, Biotechnology Academy, UKM-MTDC, 18-22nd September 2000.
60. *Practical Training / Visiting Lecturer on Protein Engineering*, University of Osaka, Japan, 1-28th June 2000.
61. *Pedagogy Workshop*, Department of Education, Universiti Putra Malaysia, 23-25th May 2000.
62. *Bacteriology Workshop*, Department of Biochemistry and Microbiology, Universiti Putra Malaysia, 24th April 2000.
63. *Practical Training on Hydroformylation process*, University of Milan, Milan, Italy, July 1997.
64. *British Petroleum Team Management Course Towards Excellency*, Southampton, England, 10-13th June 1997.
65. *Practical Training on Energy Dispersive EXAFS*, European Synchrotron Radiation Facilities, Grenoble, France, May 1997.
66. *Malaysian Student Symposium*, University of Portsmouth, Porstmouth, England, March 1997.
67. *Practical Training on Extended X-ray of Absorption of Fine Structure*, Daresbury Laboratory, Synchrotron Radiation Source, Warrington, England, November 1996.
68. *International Seminar on Islamic Thought in 21st Century*, London, England, July 1996.
69. Malaysia's Education Delegation for the *Friendship Programme for the 21st Century*, Tokyo, Japan July 1994.

G. TEACHING AND EDUCATION

More than 20 years experienced in teaching chemistry as a major subject at the university level. Subjects taught for undergraduate include general chemistry, inorganic chemistry, physical chemistry, catalysis chemistry, petroleum chemistry, computational chemistry, protein chemistry and chemical engineering. Subjects taught for postgraduate include research methodology in chemistry, synchrotron radiation, theoretical chemistry, computational chemistry, molecular modelling and synthetic biology.

Previous Reponsibilities (17 years)

(Ph.D) = Doctorate Level (MS) = Master Level (B) = Bachelor Level
(D) = Diploma/Certificate Level (L) = Lecture (P) = Practical

No.	Subject	Course Credit	Contact Hour	Number of Student	Responsibilities Semester
1.	Computational Chemistry (CHM 3701)	3 + 1	14 (L)	31 (B)	Lecturer Sem 2 2020/21
2.	Protein Chemistry (CHM 3702)	3 + 0	14 (L)	42 (B)	Lecturer Sem 1 2020/21
3.	Research Methodology in Chemistry (CHM 5901)	3 + 0	14 (L)	40 (M)	Lecturer Sem 2 2019/20
4.	Protein Chemistry (CHM 3702)	3 + 0	14 (L)	40 (B)	Lecturer Sem 1 2019/20
5.	Computational Chemistry (CHM 3701)	3 + 1	14 (L)	24 (B)	Lecturer Sem 2 2018/19
6.	Protein Chemistry (CHM 3702)	3 + 0	14 (L)	40 (B)	Lecturer Sem 1 2018/19
7.	Computational Chemistry (CHM 3701)	3 + 1	14 (L)	24 (B)	Lecturer Sem 2 2017/18
8.	Protein Chemistry (CHM 3702)	3 + 0	28 (L)	35 (B)	Coordinator Sem 1 2017/18
9.	Computational Chemistry (CHM 3701)	3 + 1	14 (L)	38 (B)	Lecturer Sem 2 2016/17
10.	Computational Chemistry (CHM 3701)	3 + 1	28 (L)	60 (B)	Lecturer Sem 1 2016/17
11.	Research Methodology in Chemistry (CHM 5901)	3 + 0	14 (L)	38 (Ph.D)	Lecturer Sem 1 2016/17
12.	Computational Chemistry (CHM 3701)	3 + 1	28 (L)	40 (B)	Lecturer Sem 2 2015/16
13.	Oleochemistry (CHM 3504)	2 + 0	14 (L)	41 (B)	Lecturer Sem 1 2015/16
14.	Petroleum Chemistry (CHM 3601)	3 + 0	14 (L)	44 (B)	Lecturer Sem 1 2015/16
15.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	14 (L) 14(P)	48 (B)	Co-ordinator Sem 2 2014/15
16.	Computational Chemistry (CHM 3701)	3 + 1	14 (L)	40 (B)	Lecturer Sem 2 2014/15
17.	Research Methodology in Chemistry (CHM 5901)	2 + 0	2 (L)	33 (Ph.D)	Lecturer Sem 1 2014/15

18.	Petroleum Chemistry (CHM 3601)	3 + 0	14 (L)	18 (B)	Lecturer Sem 1 2014/15
19.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	14 (L) 14(P)	58 (B)	Co-ordinator Sem 1 2014/15
20.	Computational Chemistry (CHM 3701)	3 + 1	14 (L)	33 (B)	Lecturer Sem 2 2013/14
21.	Petroleum Chemistry (CHM 3601)	3 + 0	14 (L)	26 (B)	Lecturer Sem 2 2013/14
22.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	14 (L) 14(P)	33 (B)	Lecturer Sem 2 2013/14
23.	Research Methodology in Chemistry (CHM 5901)	2 + 0	2 (L)	36 (Ph.D)	Lecturer Sem 1 2013/14
24.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	28 (L)	52 (B)	Lecturer Sem 1 2013/14
25.	Recent Techniques in Chemistry (CHM 6001)	2 + 0	2 (L)	12 (Ph.D)	Lecturer Sem 2 2012/13
26.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	28 (L)	34 (B)	Lecturer Sem 2 2012/13
27.	Petroleum Chemistry (CHM 3601)	3 + 0	14 (L)	80 (B)	Lecturer Sem 1 2012/13
28.	Recent Techniques in Chemistry (CHM 6001)	2 + 0	2 (L)	30 (Ph.D)	Lecturer Sem 2 2011/12
29.	Recent Techniques in Chemistry (CHM 6001)	2 + 0	2 (L)	20 (Ph.D)	Lecturer Sem 2 2010/11
30.	Recent Techniques in Chemistry (CHM 6001)	2 + 0	2 (L)	10 (Ph.D)	Lecturer Sem 2 2009/10
31.	Recent Techniques in Chemistry (CHM 6001)	2 + 0	2 (L)	15 (Ph.D)	Lecturer Sem 2 2008/09
32.	Recent Techniques in Chemistry (CHM 6001)	2 + 0	2 (L)	12 (Ph.D)	Lecturer Sem 1 2008/09
33.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	14 (L)	80 (B)	Lecturer Sem 1 2008/09
34.	Recent Techniques in Chemistry (CHM 6001)	2 + 0	2 (L)	10 (Ph.D)	Lecturer Sem 2 2007/08
35.	Petroleum Chemistry (CHM 3601)	3 + 1	14 (L)	80 (B)	Lecturer Sem 2 2007/08
36.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	14 (L)	80 (B)	Lecturer Sem 2 2007/08
37.	Research Methodology (CHM 5901)	3 + 0	14 (L)	30 (Ph.D)	Lecturer Sem 1 2007/08
38.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	42 (L)	76 (B)	Co-ordinator Sem 1 2007/08
39.	Petroleum Refinery (CHM 3602)	3 + 0	14 (L)	77 (B)	Lecturer Sem 1 2007/08
40.	Recent Techniques in Chemistry (CHM 6001)	2 + 0	2 (L)	10 (Ph.D)	Lecturer Sem 2 2006/07
41.	Petroleum Chemistry (CHM 3601)	3 + 1	14 (L)	96 (B)	Lecturer Sem 2 2006/07
42.	Petrochemicals	3 + 0	14 (L)	82 (B)	Lecturer

	(CHM 3603)				Sem 2 2006/07
43.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	14 (L)	77 (B)	Lecturer Sem 2 2006/07
44.	Petroleum Refinery (CHM 3602)	3 + 0	14 (L)	78 (B)	Lecturer Sem 1 2006/07
45.	Advanced Spectrocopy in Chemistry (CHM 5901)	2 + 0	2 (L)	10 (MS)	Lecturer Sem 2 2005/06
46.	Petroleum Chemistry (CHM 3601)	3 + 0	14 (L)	81 (B)	Lecturer Sem 2 2005/06
47.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	28 (L) 20 (P)	80 (B)	Co-ordinator Sem 2 2005/06
48.	Petroleum Refineries (CHM 3602)	3 + 0	14 (L)	81 (B)	Lecturer Sem 1 2005/06
49.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	28 (L) 20 (P)	80 (B)	Co-ordinator Sem 1 2005/06
50.	Basic Chemistry (C 0001)	2 + 1	8 (P)	50 (D)	Co-ordinator Sem 1 2005/06
51.	Recent Techniques in Chemistry (CHM 6001)	2 + 0	2 (L)	8 (Ph.D)	Lecturer Nov 2004/05
52.	Advanced Spectrocopy in Chemistry (CHM 5901)	2 + 0	2 (L)	10 (MS)	Lecturer Nov 2004/05
53.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	28 (L) 20 (P)	80 (B)	Co-ordinator Nov 2004/05
54.	Petroleum Chemistry (CHM 3601)	3 + 0	14 (L)	100 (B)	Co-ordinator Nov 2004/05
55.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	28 (L)	80 (B)	Co-ordinator May 2004/05
56.	Petroleum Refinery (CHM 3602)	3 + 0	14 (L)	82 (B)	Lecturer May 2004/05
57.	Basic Chemistry (C 0001)	2 + 1	8 (P)	50 (D)	Lecturer May 2004/05
58.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	28 (L) 20 (P)	100 (B)	Co-ordinator Nov 2003/04
59.	Petroleum Chemistry (CHM 3601)	3 + 0	14 (L)	100 (B)	Lecturer Nov 2003/04
60.	Organic Chemistry (CHM 3201)	3 + 1	14 (P)	120 (B)	Lecturer Nov 2003/04
61.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	28 (L)	150 (B)	Co-ordinator May 2003/04
62.	Petroleum Refinery (CHM 3602)	3 + 0	14 (L)	52 (B)	Lecturer May 2003/04
63.	Basic Chemistry (C 0001)	2 + 1	8 (P)	50 (D)	Lecturer May 2003/04
64.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	14 (L) 20 (P)	170 (B)	Co-ordinator Nov 2002/03
65.	Petroleum Chemistry (CHM 3601)	3 + 0	28 (L)	51 (B)	Co-ordinator Nov 2002/03
66.	Basic Physical Chemistry II (C 0102)	2 + 1	8 (L) 8 (P)	12 (D)	Co-ordinator Nov 2002/03

67.	Basic Inorganic Chemistry I (C 0201)	2 + 1	8 (L) 8 (P)	12 (D)	Co-ordinator Nov 2002/03
68.	Organic Chemistry I (CHM 3201)	3 + 1	20 (P)	150 (B)	Lecturer May 2002/03
69.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	14 (L) 20 (P)	170 (B)	Lecturer May 2002/03
70.	Petroleum Refining (CHM 3602)	3 + 0	14 (L)	112 (B)	Lecturer May 2002/03
71.	General Chemistry (CHM 2001)	2 + 1	20 (P)	150 (D)	Co-ordinator May 2002/03
72.	Basic General Chemistry (C 0001)	2 + 1	8 (L) 8 (P)	50 (D)	Co-ordinator May 2002/03
73.	Technology Principles in Chemistry (CHM 3500)	4 + 0	14 (L)	120 (B)	Co-ordinator Nov 2001/02
74.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	14 (L) 20 (P)	170 (B)	Lecturer Nov 2001/02
75.	Petrochemicals (CHM 3603)	3 + 0	14 (L)	85 (B)	Lecturer Nov 2001/02
76.	Analytical Chemistry (CHM 3401)	3 + 1	20 (P)	150 (B)	Lecturer Nov 2001/02
77.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	14 (L) 20 (P)	170 (B)	Lecturer May 2001/02
78.	Technology Principles in Chemistry (CHM 3500)	4 + 0	14 (L)	120 (B)	Lecturer May 2001/02
79.	Petroleum Refining (CHM 3602)	3 + 0	14 (L)	57 (B)	Lecturer May 2001/02
80.	Analytical Chemistry (CHM 3401)	3 + 1	20 (P)	150 (B)	Lecturer May 2001/02
81.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	14 (L) 20 (P)	170 (B)	Lecturer Nov 2000/01
82.	Petrochemicals (CHM 3603)	3 + 0	14 (L)	85 (B)	Lecturer Nov 2000/01
83.	Technology Principles in Chemistry (CHM 3500)	4 + 0	14 (L)	120 (B)	Lecturer Nov 2000/01
84.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	14 (L) 20 (P)	170 (B)	Lecturer May 2000/01
85.	Technology Principles in Chemistry (CHM 3500)	4 + 0	14 (L)	120 (B)	Lecturer May 2000/01
86.	Physical and Inorganic Chemistry (CHM 3010)	3 + 1	14 (L) 20 (P)	170 (B)	Lecturer Nov 1999/2000
87.	Petrochemicals (CHM 3603)	3 + 0	14 (L)	80 (B)	Lecturer Nov 1999/2000
88.	Technology Principles in Chemistry (CHM 3500)	4 + 0	14 (L)	120 (B)	Lecturer Nov 1999/2000
89.	General Chemistry (CHM 2001)	2 + 1	14 (L) 20 (P)	120 (B)	Lecturer May 1999/2000

Invigilation of Undergraduates Training

No.	Subject	Course Credit	Contact Hour	Number of Student	Responsibilities Semester
1.	Industrial Training in Perak	4	3	6 (B)	Invigilator July 2013
2.	Industrial Training in Perak	4	3	3 (B)	Invigilator August 2012
3.	Industrial Training in Penang	4	3	8 (B)	Invigilator May 2007
4.	Industrial Training in Sabah	4	3	5 (B)	Invigilator May 2005
5.	Industrial Training in Penang	4	3	18 (B)	Invigilator May 2004
6.	Industrial Training in Penang	4	3	19 (B)	Invigilator May 2003
7.	Counselling and Practical Teaching in Malacca	6	3	10 (B)	Invigilator May 2002
8.	Counselling and Practical Teaching in Malacca	6	3	12 (B)	Invigilator May 2001

Other Responsibilities of Teaching

1. Development of Master by Coursework Programmes (40 credits) – 2016-2020
   i. MS in Analytical Chemistry
   ii. MS in Materials Physics
   iii. MS in Tropical Biology
   iv. MS in Mathematical Sciences
   - *Involved as Co-ordinator for the development of the above programmes.*

2. Development of Revised Chemistry Programmes (130 credits) – 2014
   i. B. Sc (Hons) Majoring in Chemistry
   ii. B. Sc (Hons) Majoring in Industrial Chemistry
   iii. B. Sc (Hons) Majoring in Petroleum Chemistry
   iv. B. Sc (Hons) with Education in Chemistry
   - *Involved as Committee Member for the development of the above programme.*

3. Member of Curriculum Committee at Department of Chemistry.
   i. Development of courses in teaching higher chemistry for MS and Ph.D.
   ii. Protein Chemistry (CHM 3702) – new
   iii. Computational Chemistry (CHM 3701) – new
   iv. Forensic Chemistry (CHM 3403) – new
   v. Oil Spill Control (CHM 3604) – new
   vi. Petroleum Chemistry (CHM 3601) – revised
   - *Involved as co-ordinator and developer for the development of the above new courses.*

4. Head of Committee, Development of Revised Chemistry Programmes (120 credits) – 2008
   i. B. Sc (Hons) Majoring in Chemistry
   ii. B. Sc (Hons) Majoring in Industrial Chemistry
   iii. B. Sc (Hons) Majoring in Petroleum Chemistry
   iv. B. Sc (Hons) with Education in Chemistry

- *Involved as Head of Committee Member for the development of the above programme.*

5. Development of new Programmes – 2012
   i. MS (Analytical Chemistry)
   ii. Diploma in Science (Industrial Chemistry)
   - *Involved as committee member for the development of the above programme.*

6. Co-ordinator of the Chemistry Coursework for Laboratory Assistant Bridging Programme, Universiti Putra Malaysia, August 2002 - December 2005.
   i. Basic Chemistry I (C 0001)
   ii. Basic Chemistry II (C 0002)
   iii. Basic Physical Chemistry I (C 0101)
   iv. Basic Physical Chemistry II (C 0102)
   v. Basic Inorganic Chemistry I (C 0201)
   vi. Basic Inorganic Chemistry II (C 0202)
   - *Involved as co-ordinator and developer for the development of the all above courses.*

7. Co-ordinator for the online Lecture Note, 2003 – 2007.
   i. Physical and Inorganic Chemistry (CHM 3010)
   ii. Petroleum Refining (CHM 3602)
   iii. Petrochemicals (CHM 3601)

Teaching Assessment

Teaching Evaluation

No.	Subject	Responsibilities Semester	Average (over 5.0)
1.	Protein Chemistry (CHM 3702)	Lecturer Sem 1 2019/20	
2.	Computational Chemistry (CHM 3701)	Lecturer Sem 2 2018/19	
3.	Protein Chemistry (CHM 3702)	Lecturer Sem 1 2018/19	
4.	Computational Chemistry (CHM 3701)	Lecturer Sem 2 2017/18	
5.	Protein Chemistry (CHM 3702)	Coordinator Sem 1 2017/18	
6.	Computational Chemistry (CHM 3701)	Lecturer Sem 2 2016/17	
7.	Computational Chemistry (CHM 3701)	Lecturer Sem 2 2014/15	4.61
8.	Physical and Inorganic Chemistry (CHM 3010)	Lecturer Sem 2 2014/15	4.70
9.	Petroleum Chemistry (CHM 3601)	Lecturer Sem 1 2014/15	4.87
10.	Physical and Inorganic Chemistry (CHM 3010)	Lecturer Sem 1 2014/15	4.54
11.	Physical and Inorganic Chemistry (CHM 3010)	Lecturer Sem 2 2013/14	4.73

12.	Petroleum Chemistry (CHM 3601)	Lecturer Sem 2 2013/14	4.78
13.	Computational Chemistry (CHM 3701)	Lecturer Sem 2 2013/14	4.79
14.	Physical and Inorganic Chemistry (CHM 3010)	Lecturer Sem 1 2013/14	4.36
15.	Physical and Inorganic Chemistry (CHM 3010)	Lecturer Sem 2 2012/13	4.93
16.	Petroleum Chemistry (CHM 3601)	Lecturer Sem 2 2012/13	4.56
17.	Recent Techniques in Chemistry (CHM 6001)	Lecturer Sem 2 2007/08	4.63
18.	Petroleum Chemistry (CHM 3601)	Lecturer Sem 2 2007/08	4.32
19.	Physical and Inorganic Chemistry (CHM 3010)	Co-ordinator Sem 1 2007/08	4.21
20.	Recent Techniques in Chemistry (CHM 6001)	Lecturer Sem 2 2006/07	4.74
21.	Petrochemicals (CHM 3603)	Lecturer Sem 2 2006/07	4.43
22.	Physical and Inorganic Chemistry (CHM 3010)	Co-ordinator Sem 1 2005/06	4.18
23.	Physical and Inorganic Chemistry (CHM 3010)	Co-ordinator Nov 2004/05	4.08
24.	Petroleum Chemistry (CHM 3601)	Co-ordinator Nov 2004/05	4.17
25.	Physical and Inorganic Chemistry (CHM 3010)	Co-ordinator May 2004/05	4.25
26.	Physical and Inorganic Chemistry (CHM 3010)	Co-ordinator Nov 2003/04	4.63
27.	Petroleum Chemistry (CHM 3601)	Lecturer Nov 2003/04	4.07
28.	Physical and Inorganic Chemistry (CHM 3010)	Co-ordinator May 2003/04	4.15

Graduate Studies Supervision Evaluation

No.	Responsibilities Semester	Percentage (%)	Average
29.	Sem 2 2007/08	96.10	4.81
30.	Sem 1 2007/08	95.00	4.75
31.	Sem 2 2006/07	96.82	4.84
32.	Sem 1 2006/07	95.45	4.77

Academic Examiner (External / Internal)

Doctor of Philosophy

1. Murad Awadh Salem Bahadi. Synthesis And Characterization Of Renewable Crude Palm Kernel Oil-Based Biolubricants. Universiti Kebangsaan Malaysia, 18th May 2021.
2. Abdul Haadi bin Abdul Manap. The Molecular Dynamics Simulation Of Nanostructure Distortion In Soft Lithography Demolding Process. Universiti Sains Malaysia, 12th April 2021.
3. Fariz Adzmi. Encapsulated *Trichoderma harzianum* UPM40 and The Role Of Biocontrol Agents Against *Sclerotium rolfsii*. Institute of Tropical Agriculture, Universiti Putra Malaysia, 21st July 2018.
4. Nur Ellina binti Azmi. Development Of Non-Invasive Quantum Dots-Enzyme Based Biosensor For Uric Acid Detection. Institute of Advanced Materials, Universiti Putra Malaysia, 29th November 2017.
5. Ayesha Fatima. Computational Approach to Elucidating Apoptotic Mechanism of Zerumbone Targeting Beta Catenin in Cancer Cells. Institute of Bioscience, Universiti Putra Malaysia, 9th August 2017.
6. Intan Soraya Che Sulaiman. Design and Optimization of Nanoemulsion Formulation Containing Extract of Clinacanthus Nutans Lindau Leaves for Cosmeceutical Application. Faculty of Science, Universiti Putra Malaysia, 15th June 2017.
7. Noor Khairin Mohd. Synthesis and Characterization of Fatty Hydrazide Derivatives as Corrosion Inhibitors. Faculty of Science, Universiti Putra Malaysia, 20th April 2017.
8. Ibrahim Birma Bwatanglang. Folic Acid Conjugated Chitosan-Based Mn(2+)-Doped ZnS Quantum Dots For Breast Cancer Cell Imaging And Targeted Drug Delivery, Faculty of Science, Universiti Putra Malaysia, 27th March 2017.
9. Ng Chean Hui. Synthesis and Biological Evaluation of a Series of Analogues of 2,4,6-Trihydroxy-3-Geranyl-Acetophenone (THGA), an Anti-Inflammatory Natural Product Compounds, Faculty of Science, Universiti Putra Malaysia, 9th January 2017.
10. Noorulsyahidani Golbaha. Lipase Immobilization In Modified Mesoporous Silica Nanoparticle By Physical Adsorption And Covalent Binding Method As Reusable Catalyst For Esterification Reaction. Faculty of Science, Universiti Teknologi Malaysia, 28th November 2016.
11. Jahwarhar Izuan Abdul Rashid. Development of DNA Eloctrochemical Sensor Based on SINWS/AuNPs-Modified Electrode for Early Detection of Dengue Virus. Institue of Advanced Technology, Universiti Putra Malaysia, 2nd August 2016.
12. Ang Swi See. Identification and Functional Analysis of A Cyctochrome P450 from *Bacillus lehensis* G1. Faculty of Biotechnology and Biomolecular Sciences, Universiti Putra Malaysia, 6th June 2016.
13. Shokoh Parham. The Aluminium-Titanium Bimetal Oxide Nanoparticles Loaded on Cotton Textiles As A Potential Anitmicrobial Wound Dressing. Faculty of Science, Universiti Teknologi Malaysia, 10th March 2016.
14. Ali Dabbagh. A New Drug Triggering Mechanicm in Thermosensitive Nanorobots Using Low-Melting-Point Polymer Nanoshells, Universiti Malaya, February 2016.
15. Lina Ismail Jassim. Development of Ester-Based Drilling Fluids for Wellbore Enhancement, Insitute of Advanced Technology. Universiti Putra Malaysia, 17th November 2015.
16. Liman Muhammad Gidado, Development of Cobalt Doped Zinc Oxide Photocatalyst Nanoparticles For The Removal Of Nitrobenzene, 18th December 2015.
17. Woo Fong Yen. Design and Development of Galantamine Hydrobromide Transdermal Patch. Faculty of Science, Universiti Putra Malaysia, 16th November 2015
18. Tan Ming Yueh. Synthesis, Characterization and Bioactivities of Schiff Based Derived from Natural Product Analogues and Their Metal Complexes. Faculty of Science, Universiti Putra Malaysia, 16th October 2015.

19. Siti Munirah binti Mohd Faudzi. Design, Synthesis, Biological Evaluation and Structure Activity Relationship of Diarylpentadienone and Chalcone Analogues as Potential Anti-inflammatory Agent. Faculty of Food Science and Technology, Universiti Putra Malaysia, 10th March 2015.
20. Moohamad Ropaning Sulong. Recombinant Thermostable Maltogenic Amylase from Geobacillus sp. SK70 and its Variants. Faculty of Biotechnology and Biomolecular Sciences, Universiti Putra Malaysia, 20th January 2015.
21. Lye Yan Ni. Kajian Penghasilan Biopelincir Berasaskan Terbitan Alkilamino Hidroksi Amida Daripada Metil Linoleat Minyak *Jatropha curcas* Linn. Faculty of Science, Universiti Kebangsaan Malaysia, 6th February 2014.
22. Naowara M. Ali Aliafi. Synthesis And Characterization Of Oleyl Oleate Wax Ester For Biolubricant Base Oil. Faculty of Science, Universiti Kebangsaan Malaysia, 25th September 2013.
23. Lee Ek Giat. Studies on the Properties of ZnO Nanoparticles and Its Photocatalytic Activity. Faculty of Science, Universiti Putra Malaysia, 2013.
24. Tan Siang Loong. Synthesis, Characterisation and Biological Activities of Mixed-Ligand Copper(II) Complexes Containing Saccharin as One of the Ligands. Faculty of Science, Universiti Putra Malaysia, 2013.
25. Nurulhaidah Daud. Development of Heavy Metal Ions Sensor Utilizing Amino Acid and Peptide as Recognition Element. Faculty of Science, Universiti Putra Malaysia, 9th July 2012.
26. Salina Mat Radzi. Scale-up Production of Wax Esters. Faculty of Science, Universiti Putra Malaysia, 8th June 2006.
27. Tan Kian Peng. Redox Behaviour and the Effects of Dopants on the Nature of Oxidants in/on Vanadyl Pyrophosphate Catalysts. Faculty of Science, Universiti Putra Malaysia, 19th November 2003.

Master of Science

28. Tuan Nurul Azura Binti Tuan Kob @ Yaakub, Faculty of Science, Universiti Putra Malaysi, , 6th December 2019.
29. Farah Afiqah Abdullah, Faculty of Science, Universiti Kebangsaan Malaysia, 18th May 2018.
30. Nur Syafiqah Abdul Ghani. Molecular Simulation of Amyloid Beta (1-42) with Zinc in Alzheimer Disease. Faculty of Science, Universiti Putra Malaysia, 9th June 2016.
31. Zetty Shafiqa Othman. Pembangunan Sistem Pengekstrakan Pelarut Binari Menggunakan Cecair Ionik Dan Pelarut Eutektik Dalam Sebagai Bahan Aditif Peningkatan Hasil Rotenon. Faculty of Science, Universiti Kebangsaan Malaysia, 18th May 2016.
32. Nurul Syahidah Shaari. Coarse-Grained Molecular Dynamics Simulation of Palm Kernel Oil-Based Nanoemulsion System. Faculty of Science, Universiti Putra Malaysia, 13th May 2016.
33. Rohana Othman. Development of Palm Methyl Esters Microemulsions As Aerosol Insecticides. Faculty of Science, Universiti Putra Malaysia, 16th October 2015
34. Siti Norhidayah Othman. Cloning and *In-silico* analysis of MADS-Box genes isolated from the *Hibiscus sabdariffa* L. var UMKL. Faculty of Science, Universiti Putra Malaysia, 2015.
35. Afini Razani. Synthesis of TiO_2 and Fe_2O_3 for Photocatalytic Degradation of 2,4-Dicholorophenoxyacetic Acid. Faculty of Science, Universiti Putra Malaysia, 2015.
36. Siti Hana Abu Bakar, "Comparison Study of Patchouli Extraction Processes Using Molecular Dynamic Simulation Approach", Universiti Malaysia Pahang, 16th April 2014.
37. Yoon Kam Yee, Master of Science, "Structural Studies of HBV Dimer with N-Terminal Extension", Universiti Putra Malaysia, 22nd November 2013.
38. Fatahiya Mohamed Tap, Master of Science, "Folding Studies of TRP-Cage Miniprotein, Amyloid A4 Peptide and α-Conotoxin RgIA Peptide Using Molecular Dynamics Simulation", Faculty of Bioprocess Engineering, Universiti Teknologi Malaysia, 19th July 2013.

39. Jong Chin Yun, Master of Science, "Synthesis and Photocatalytic Activity of $BiVO_4$, Ag- $BiVO_4$ and Cu- $BiVO_4$ in Degradation of Methylene Blue", Universiti Putra Malaysia, 26th June 2013.
40. Lim Guan Sheng, Master of Science, "Development of Rapid, Cheap and Intelligent Ligand Discovery Platform Technology for Peroxisome Proliferator-Activater Receptor Gamma", Institute of Pharmaceutical and Nutraceutical, Universiti Sains Malaysia, 29 March 2013.
41. Noremylia Mohd Bakhori, Master of Science, "Development of Fluorescence Based DNA Biosensor Utilizing Quantum Dot for Early Detection of *Ganoderma boninense*", Faculty of Science, Universiti Putra Malaysia, 7 January 2013.
42. Mohd Yusuf Harun, Master of Science, "Production of Bioethanol from Water Hyacinth (*Eichhornia crassipes*)", Faculty of Engineering, Universiti Putra Malaysia, 20 December 2011.
43. Ahmad Zaidi Ismail, Master of Science, "Reflux Synthesis and Physicochemical Characterization of Movtenbox Catalyst Used for Propane Oxidation to Acrylic Acid", Faculty of Science, Universiti Putra Malaysia, 29 November 2011.
44. Nur Kusaira Khairul Ikram, Master of Science, "Discovery of Potential New Neuraminidase Inhibitors from Plants Natural Products: Virtual Screening and Bioassay Studies", Institute of Pharmaceutical and Nutraceutical, Universiti Sains Malaysia, 17 August 2011.
45. Safura Taufiq, Master of Science, Electrochemical Detection of DNA Hybridization Based on Bismuth Oxide Nanoparticles/Chitosan-Modified Electrodes with Methylene Blue as an Electrochemical Indicator, Faculty of Science, Universiti Putra Malaysia, 22 March 2011.
46. Loh Hwee Ying, Master of Science, "Docking and Synthesis of Cyclic Peptides as Possible Inhibitors for Dengue Virus Type 2 NS2B-NS3 Serine Protease", Faculty of Science, Universiti Malaya, March 2011.
47. Wan Haizum Wan Nor Azmin, Master of Science, "Synthesis and Physco-chemical Studies of Nanostructured Zinc Oxide and Its Composites Films", Faculty of Science, Universiti Putra Malaysia, 25 February 2011.
48. Hadieh Monajemi, Master of Science, "Fidelity of Protein Synthesis: Ab-initio and Oniom Studies on Cognate and Non-cognate Aminoacyl-tRNAs During Peptide Bond Formation", Faculty of Science, Universiti Malaya, 22 September 2010.
49. Shahrul Afzan Mohd Rawi, Master of Science, "Porphyrin Based Dendrimer as Catalysts in Photocatalysis of D-Limonene to Caryone", Faculty of Science, Universiti Teknologi Malaysia, 6 September 2010.
50. Hanani Yazid, Master of Science, "Synthesis and Characterization of Supported Gold Nanoparticles and Its Application in the Reduction of p-Nitrophenol", School of Chemistry, Universiti Sains Malaysia, 16 August 2010.
51. Lau Su Chen, Master of Science, "Biomimetic Mesoporous Catalyst Based on Iron(III) Porphyrin Dendrimer Supported on MCM-41 for Selective Oxidation of Trimethylphenol", Faculty of Science, Universiti Teknologi Malaysia, 18 March 2009.
52. Hasmah Bidin, Master of Science, "Enzymatic Synthesis of Palm-based Amino Esters Surfactants", Faculty of Science, Universiti Putra Malaysia, 6 March 2009.
53. Mohd Rezuwan Shah Zakaria, Master of Science, "Formation and Stability of Palm-Oleyl Esters Nanoemulsions Stabilized by Nonionic Surfactants", Faculty of Science, 19 February 2009.
54. Amaliawati Ahmad Latiffi, Master of Science, "Expression of Alkaline Protease from *Bacillus sterothermophilus* F1 in *Pichia pastoris*", Faculty of Biotechnology and Biomolecular Sciences, Universiti Putra Malaysia, 7 August 2008.
55. Ninie Suhana Abdul Manan, Master of Science, "Electrochemical Behaviour of Parasulfonato-calix[4]arene Ions in the Presence of Ionic Liquids as Supporting Electrolyte" Universiti Malaya, 31 July 2008.
56. Mohd Abdul Fatah Abdul Manan, Master of Science, "Synthesis, Characterisation and Biological Activities of Schiff Base Ligands Containing Isatin and Some of Their Metal Complexes", Faculty of Science, Universiti Putra Malaysia, 14 April 2008.

57. Norazlina Hashim, Master of Science, "Preparation and Physico-chemical Properties of Polypropylene and Oil Palm Empty Fruit Bunch Fibre Composites", Faculty of Science, Universiti Putra Malaysia, 15 January 2008.
58. Nur Ariesma binti Razana, Master of Science, "Penyediaan dan Pencirian Zarah Nano SnO_2 serta Kajian Aktiviti Pemangkinannya Terhadap Stirena", Universiti Sains Malaysia, 12th November 2007.
59. Tan Yin Yin, Master of Science, "Synthesis and Characterization of Transition Metal-Doped Titania Silica Aerogels as Photocatalysts", Universiti Teknologi Malaysia, 20th September 2007.
60. Mohd Zaihanif Husin, Master of Science, "Phase Behaviour and Properties of Sulphonated Methyl Ester and Fatty Alcohol Ether Sulphate Produce from MPOB", Faculty of Science, Universiti Putra Malaysia, 7th May 2007.
61. Wong Pei Meng, Master of Science, "Characterization of Molybdenum-Vanadium Oxide Catalyst Prepared by Homogeneous Precipiation Method Using Urea Hydrolysis", Faculty of Science, Universiti Putra Malaysia, 23rd April 2007.
62. Azliyana Abdul Rahman, Master of Science, "Polymer-added TiO_2 Photocatalysts for the Degradation of Volatile Organic Compounds (VOCs)", Universiti Teknologi Malaysia, 5th January 2007.
63. Chin Sek Peng, Master of Science, "Thermo Effects of Methionine Aminopeptidase: Molecular Dynamics Studies", School of Pharmaceutical Science, Universiti Sains Malaysia, 11th August 2006.
64. Elrashid Saleh Mahdi Saleh, Master of Science, "The Effects of Allelic Variations on Biotransformation Activity of cyctochrome P450 2D6 : Molecular Modelling Studies", School of Pharmaceutical Science, Universiti Sains Malaysia, 19th February 2006.
65. Noorfarizan Nasriah Mhamat Nasudin, Master of Science, "Synthesis and Characterisation of Bismuth Oxide Powders", Faculty of Science, Universiti Putra Malaysia, 17th June 2005.
66. Thahira Begum, Master of Science, "Synthesis, Caharacterisation and Biological Activities of Mixed-Ligand Copper(II) Complexes Containing Saccharin as One of the Ligands", Faculty of Science, Universiti Putra Malaysia, 22th January 2005.
67. Habibah Zainal Abidin, Master of Science, "The Evolution, Production and Derivatisation of the Citric Acid in *Garcinia atroviridis*", Universiti Faculty of Science, Universiti Putra Malaysia, 24th May 2004.
68. Mohd Asri Razali, Master of Science, "Synthesis and Characterisation of Vanadium Antimony Oxide Catalysts", Faculty of Science, Universiti Putra Malaysia, 20th December 2004.
69. Ling Szu Szu, Master of Science, "Perbandingan Degradasifoto Larutan Akueus Pewarna Asid Oren 51 Menggunakan Mangkin TiO_2 Dalam Pelbagai Bentuk" Universiti Teknologi Malaysia, 3rd January 2003.

H. ADMINISTRATIVE DUTIES AND OTHER RESPONSIBILITIES

International Level

1. International Reviewer, International Research Collaboration Proposals (RISPRO-KI), Indonesia 2020.
2. International Advisor, Aerosol Science Research Centre, Taiwan, 2018-2020.
3. Committee Member, Asian Science Deans Council, 2018-2019.
4. Chairman, MDSM-MIPAnet Enhancing Regional Collaboration in Science & Mathematics Education and Research, Kuala Lumpur, 2019
5. Expert/Consultant, Symbiotic Leadership Interaction Session - Program Southeast Asian Scholars for Higher Education Leadership 2018.
6. Committee Member, Asian Society for Colloid and Surface Science (ASCASS), 2017-2019
7. Committee Member, Baltic Conference Series 2017, Stockholm, Sweden, 8-11th October 2017.
8. Distinguished Visiting Scholar, Department of Chemistry, University of California, Berkeley, Amerika Syarikat, 2017.
9. Committee Member, 10th Asia-Pacific Biotech Congress, Bangkok, Thailand, July 25-27, 2016.
10. Malaysia Head of Delegation, Board of Governors, International Centre for Genetic Engineering and Biotechnology, Trieste, Italy, 6-7th June 2012.
11. Steering Committee, Asia Pacific Bioinformatics Network's 10th InCoB, 30th Nov – 2nd Dec, 2011.
12. Advisory Board, Material Science Research India (An International Research Journal of Material Science),
13. Editorial Board, The Open Catalysis Journal (Bentham)
14. Editorial Board, Journal of Chemical Biology & Therapeutics (OMICS)
15. Editorial Board, JSM Enzymology and Protein Science (JSciMedCentral)
16. Editorial Board, Journal of Advanced Catalysis Science and Technology (Cosmos Scholar)

National Level

17. External Assessor, Master of Analytical Chemistry, Universiti Malaysia Pahang, 2021.
18. External Assessor, Bachelor of Science (Oleochemistry), Universiti Kebangsaan Malaysia, 2021.
19. Panelist, Anugerah Saintis Muda Negara 2020 & Anugerah Juruteknik (Sains) Negara 2020.
20. Evaluator, Research Grant, Minitry of Higher Education 2020.
21. External Assessor, Bachelor of Science (Chemistry), Universiti Sains Malaysia, 2020.
22. Deputy Chairperson of The Chemical Sciences Discipline Group (Akademic of Sciences Malaysia), 2019 – 2021.
23. President, Persatuan Sains Analisis Malaysia, 2018 - 2021
24. External Assessor, Bachelor of Science (Industrial Chemistry) Program, Universiti Teknologi Malaysia, 2019.
25. Project Leader, International Dean's Course-Malaysian Chapter (My-IDC) AKEPT, 2018-2022.
26. Patron, Persatuan Guru-guru STEM Malaysia, 2018-2020
27. Counselor, PERMATA STEM Mentoring Programme, STEM Talent Mentoring Programme, 2017 – present
28. Head of Consultant, ADIWIRA STEM Reality TV Show. KRU Studios and Ministry of Education, 2017-2018.
29. Task Force, National Centre for STEM, Academy of Sciences Malaysia, 2017-2019.
30. Resource Person, Duta Sains, Ministry of Science, Technology and Innovation. 2015-2018.
31. Working Group Member, The Mid-Term Review Of Malaysia Education Blueprint 2015-2025 (Higher Education) Study, Academy of Sciences Malaysia, 2018-2019.
32. Advisor, Persatuan Guru-guru STEM Malaysia, 2018-2020
33. Head, Joint Steering Committee on Science Media Centre Malaysia, Academy of Sciences Malaysia-BERNAMA, 2017-2018.

34. Task Force Member, The Establishment Of National Centre For Materials Science, Academy of Sciences Malaysia, 2017-2019.
35. Chairman, Science Deans Council Malaysia, Ministry of Higher Education, 2017-2018.
36. Head of Consultant, ADIWIRA STEM Realtiy TV Show. KRU Studios and Minitry of Education, 2017-2018.
37. Evaluation Panel, Fundamental Research Grants, Ministry of Higher Education, 2017-present
38. Evaluation Panel, Newton Advanced Fellowships And Newton Mobility Grants, 2016-present
39. Co-Chairman, 30th Regional Symposium of Malaysian Analytical Sciences, Melaka, 26-29th August 2017.
40. Task Force, National Centre for STEM, Academy of Sciences Malaysia, 2017-2019.
41. Resource Person, Duta Sains, Ministry of Science, Technology and Innovation. 2015-2018
42. ASM Science Education Committee 2015-2017, Akademi Sains Malaysia.
43. Advisory Committee, Science, Technology & Innovation Policy, Academy of Sciences Malaysia, 2013 – present.
44. Steering Committee, Science Outlook, Academy of Sciences Malaysia, 2014 – present.
45. National Steering Committee, Development of Science Act, Ministry of Science, Technology and Innovation, 2012 – 2015.
46. Co-Chairman, Pakar Rujuk Ilmu Kimia (Chemistry Expert), Dewan Bahasa & Pustaka, 2013 – present.
47. Judge, Petrosains Science Show Competition, 2014-2018.
48. Judge and Question Committee for National Science Challenges, Academy of Sciences Malaysia (2008-2014)
49. Reviewer, Technofund Technology Park Malaysia- MOSTI, 2013-2014.
50. Director, MyBiotech@School, MOSTI , 2010. Grant from BIOTEK MOSTI RM 530,000.00.
51. Judge, International Exposition of Research and Inventions of Instituions of Higher Learning - PECIPTA, 8-10th October 2009.
52. Patron, Professional Development and Training, Informative Charismatic Training and Management Consultant (PG0192510-P), Malaysia, 2007 – 2010.
53. Advisor, National Science Challenge 2015, Akademi Sains Malaysia.
54. Chairman, 28th Regional Symposium of Malaysian Analytical Sciences, Ipoh, 17-19th August 2015.
55. Advisor, 3rd Colloquium, Young Scientists Network – Akademi Sains Malaysia, 4-6th December 2014.
56. Advisor, National Science Challenge 2014, Akademi Sains Malaysia.
57. Advisor, 2nd Colloquium, Young Scientists Network – Akademi Sains Malaysia, 12-15th December 2013.
58. Chairman, 16th Industrial Chemistry Seminar, 23rd June 2013.
59. Chairman, Technical Committee, National Biotechnology Seminar, 6-8th June 2013.
60. Chairman, 5th Structural Biology Colloquium 2013, Ipoh, 2-4th June 2013.
61. Co-Chairman, National Science Challenge 2013, Akademi Sains Malaysia.
62. Chairman, Workshop on Non-Aqueous Biocatalysis & Peptidomimetics : Molecular Simulations 2013 (NABP-MS 2013), 17-21st June 2013.
63. Advisor, Inaugural Colloquium, Young Scientists Network – Akademi Sains Malaysia, 12-15th December 2012.
64. Advisor, Workshop on Protein Labeling for BioNMR, Malaysia Genome Institute, 16-20th July 2012.
65. Advisor, Workshop on Methods and Applications of Molecular Simulations Techniques; Monte Carlo & Coarse-Grained Molecular Dynamics, Malaysia Genome Institute, 25-29th June 2012.
66. Advanced Protein Crsytallography Workshop, Malaysia Genome Institute, 16-20th January 2012.
67. Co-ordinator, Malaysia Year of Science, MGI – BIOTEK, MOSTI, 2012.
68. Advisor, Advanced Protein Crsytallography Workshop, Malaysia Genome Institute, 16-20th January 2012.

69. Chairman, Young Scientists Network – Akademi Sains Malaysia, October 2011 – 2015.
70. Expert Working Groups, Chemical Sciences, National Science and Research Council, July 2011 – present.
71. Advisor, Protein Crsytallography Workshop, Malaysia Genome Institute, 22-26th September 2011.
72. Advisor, Peptide Synthesis Workshop, Universiti Putra Malaysia, 22-26th June 2011.
73. Chairman, 4th Structural Biology Colloquium 2011, KL Sentral, 8th May 2011.
74. Technical Committee and Chairperson, Mathematical Biology Session – International Conference on Mathematical and Computational Biology 2011 (ICMCB 2011), 12-14th April, 2011.
75. National Nanotechnology Research and Development Committee, Nanotechnology Division MOSTI, February 2011 – present.
76. ASM Outreach Committee, Akademi Sains Malaysia, August 2010 – present.
77. ASM Biodiversity Committee, Akademi Sains Malaysia, April 2010 – present.
78. ASM Associate, Akademi Sains Malaysia, February 2010 – 2012.
79. Chairman, Designer Biocatalysts Group, Designer Biocatalysts for Sustainable Processes in the Conversion of Renewable Raw Materials to Platform Chemicals, 2009-2013
    a. 1st - 2009, 2nd August 2009, The Puteri Pacific, Johor Bahru
    b. 2nd – 2009, 26th October, Colmar Tropicale, Bukit Tinggi, Pahang
    c. 3rd – 2010, 6th February 2010, Equatorial Hotel Bangi, Putrajya
    d. 4th – 2010,14th July 2010, Putrajya Shangri-La, Putrajya
    e. 5th – 2010, 8th December 2010, Cyberview Lodge, Cyberjaya
    f. 6th – 2011, 8th May 2011, Le Meridien Hotel, KL Sentral
    g. 7th – 2012, 4th January 2012, Malaysia Genome Institute
    h. 8th – 2012, 2nd July 2012, Gem Beach Resort, Kuala Terengganu
    i. 9th – 2013, 4th June 2013, Syuen Hotel, Ipoh
80. Expert Reviewer Panel (Biotechnology), Science Fund Evaluation Committee, Ministry of Science, Technology and Innovation, 2010 - present.
81. Co-ordinator, Malaysia Innovative Carnival, MGI – BIOTEK, MOSTI, 2010.
82. Director/Co-ordinator, MyBio@School, National Biotechnology Promotion Tour to Schools, 2009 - present.
83. Chairman, 3rd Structural Biology Colloquium 2009, Colmar Tropicale, Bukit Tinggi, Pahang, 24 – 26th October 2009.
84. Advisor, Theoretical and Computational Chemistry Workshop 2009, Universiti Putra Malaysia, 22-26th June 2009.
85. Malaysia Delegates, BioAtlanta 2009, Ministry of Science, Technology and Innovation, 18-21st May 2009.
86. Panel Committee, Suruhanjaya Perkhidmatan Awam Malaysia, October 2008.
87. Director, Structural and Synthetic Biology Research Centre, Malaysia Genome Institute, Ministry of Science, Technology and Innovation, 1st October 2008 – present.
88. Chairperson, Theoretical Chemistry Session – 12th Asian Chemical Congress, Kuala Lumpur, Malaysia, 23-25th August 2007.
89. Co-chairman, Theoretical Science Leagues – Expository Lecture Series V : Computational Physical Sciences 2006, Universiti Putra Malaysia, 12-15th December 2006.
90. Facilitator, National Biotechnology Promotion Tour to Schools, 2004 - 2008.
91. Project Developer, Development of CD ROM for Science National Project, Dewan Bahasa dan Pustaka, 2004 – 2006.
92. SIRIM Lead Auditor (MS ISO 9001:2000), May 2004 - present.
93. Secretary, 2nd Structural Biology Colloquium 2004, Grand Plaza Parkroyal, Penang, 25-28th April 2004.
94. Secretary, 1st Structural Biology Colloquium 2003, Pangkor, Perak, 11-13th April 2003.

95. Secretary, National Structural Biology Group Research, The Effect of Conformation on Protein Function, Structural Biology Group Quarterly Meeting, January 2003 – 2008.
    a. 3rd - 2002, 2nd October 2002, Legend Hotel, Kuala Lumpur
    b. 4th - 2002, 11th January 2003, Cyberview Lodge Resort, Cyberjaya
    c. 1st - 2003, 13th April 2003, Pan Pacific Resort, Pangkor
    d. 2nd - 2003, 27th July 2003, Mines Beach Resort, Seri Kembangan
    e. 3rd - 2003, 15th October 2003, PJ Hilton, Petaling Jaya
    f. 4th - 2003, 14th January 2004, Putrajaya Shangri-La, Putrajaya
    g. 1st - 2004, 28th April 2004, Grand Plaza Parkroyal, Penang
    h. 2nd - 2004, 24th July 2004, Concorde Hotel, Kuala Lumpur
    i. 4th - 2004, 30th January 2005, Putrajaya Shangri-La, Putrajaya
    j. 1st - 2005, 22nd April 2005, Bayview Beach Hotel, Georgetown
    k. 3rd - 2005, 2nd October 2005, Bukit Tinggi Golf & Country Club, Pahang
    l. 4th - 2005, 21st January 2006, The Citybayview Hotel, Penang
    m. 1st - 2006, 30th April 2006, The Marriott, Putrajaya
    n. 2nd – 2006, 6th August 2006, Palm Garden Resort, Putrajaya
    o. 1st - 2007, 14th April 2007, Putrajaya Shangri-La, Putrajaya
    p. 2nd – 2007, 14th July 2007, Concorde Hotel, Shah Alam
    q. 3rd - 2007, 10th November 2007, The Puteri Pacific, Johor Bahru
    r. 4th – 2007, 16th February 2008, Hotel Bayview, Langkawi
    s. 1st – 2008, 24th May 2008, Le Meridien, Kota Kinabalu
96. Principal Researcher, Structural Biology Group, Molecular Biology Cooperative Center, National Biotechnology Directorate, Malaysia, 2002-present.
97. Secretary, Malaysian Conference on Catalysis, Universiti Putra Malaysia, 12-13rd November 2001.
98. Facilitator, Workshop on Science and Technology Education in the State of Selangor, De Palma Inn, Kuala Selangor, 6th - 9th September 2001.
99. Principal Researcher, Combinatorial Catalysis (COMBICAT), Malaysia – Max Planck Institute, Germany, 2001-2005.
100. Secretary, 13th Annual National Symposium on Analytical Chemistry, Paradise Lagoon Hotel, Port Dickson, Negeri Sembilan, 6-7th September 2000.

University Level (Universiti Putra Malaysia)

101. Member, Jawatankuasa Pengajian Program Master Kejuruteraan Struktur dan Pembinaan, Fakulti Kejuruteraan, UPM, 2021 – 2023.
102. Member, Jawatankuasa Pengajian Program Master Perubatan, Fakulti Sains Perubatan dan Sains Kesihatan, UPM, 2021 – 2023.
103. Member, Jawatankuasa Program Pengajian MoFS, Fakulti Sains dan Teknologi Makanan, UPM, 2020.
104. Member, Ahli Jawatankuasa Pengajian Program Bacelor Sains dan Teknologi Alam Sekitar FPAS UPM, 2020 – 2023.
105. Member, Jawatankuasa Pengajian Bacelor Sains Komputer Multimedia UPM 2020.
106. Member, Jawatankuasa Pengajian Program Master dan Bacelor Kejuruteraan Perisian, FSKTM UPM 2020 – 2023.
107. Chairperson, Pengerusi Jawatankuasa Siasatan Dalaman 2020.
108. Member, Jawatankuasa Pemurnian Pelan Strategik UPM 2020-2025.
109. Member, Senat Dalam Jawatankuasa Senat - Jawatankuasa Penilaian Kesetaraan Akademik 2020-2023.
110. Member, Jawatankuasa Pemilih (Penyelidikan) Universiti Putra Malaysia 2020.
111. Member, Penyelidik Interim Institut Teknologi Maju, Universiti Putra Malaysia 2020.
112. Chairman/Co-ordinator, Unshackling Young Academics, 2016 (April and November)
113. Chairman, Royal Society of Chemistry Accreditation, 2014-2015.

114. Chairman, Putra Nobel Minds, 2014-2015.
115. Chairman, 15th Industrial Chemistry Seminar, 25th June 2013.
116. Advisor, 12th Industrial Chemistry Seminar, 5th April 2008.
117. Fellow Researcher, Institute of Mathematical Research, 2006-present.
118. Programme Manager, Complex and and Non-Linaer System at Theoretical Studies Laboratroy, Institute of Advanced Technology, 2006-2007.
119. Chairman, Malam Kegemilangan Sains 2004, 6 August 2004.
120. Fellow Researcher, Institute of Bioscience, 2003-present.
121. Fellow Researcher, Institute of Advanced Technology, 2000-2002 and 2006-2007.
122. Representative University Officer, Programme of *Kembara Sang Pendeta di Bumi Afrika*, Cape Town, South Africa, 24th April – 5th May 2003.
123. Co-ordinator, Chemistry Coursework for Laboratory Assistant Bridging Programme, 2002-2006.
124. Member, Committee for the e-University, 2000-2002.
125. Internal Auditor (MS ISO 9001:2000), December 2000-present.
126. Acting College Master, Kolej Pendeta Za'ba, 2003.
127. Residential Fellow – (Portfolio : Information and Communication Technology) of the Kolej Pendeta Za'ba (9th Residential College), Universiti Putra Malaysia, 2000-2003.
128. Head of Publicity Committee, 8th Annual National Seminar on Industrial Chemistry, 23rd September 2001.
129. Secretary, 7th Annual National Seminar on Industrial Chemistry, 23rd March 2000.

Faculty Level (Faculty of Science)

130. Co-Chairman, Malam Kegemilangan Sains 2013, 20th January 2014.
131. Member, Patent Committee, 2013 – 2014.
132. Advisor, Malam Kegemilangan Sains 2008, 18th December 2008.
133. Deputy Management Representative, International Standard (ISO 9001:2000), September 2006 – 2008.
134. Chairman, Information and Communication Technology Committee, 2006 – 2008.
135. Chairman, Sports and Affair Club, 2004 – 2008.
136. Chairman, ISO Implementation, 2002 – 2006.
137. Member, the Committee for the Quality Day Celebration, 9-10th April 2003.
138. Member, Publicity Committee, 2002 – 2008.
139. Member, Digital and Information Technology (Website), 2002 – 2008.
140. Member, Quality Assurance Committee for International Standard (ISO 9001:2000) of the Faculty, 2002 – 2008.
141. Head of Information Committee, Silver Jubilee Week Celebration, 6-11th June 2001.
142. Member of the Committee, Internal Seminar on Entrepreneur Skills, 4th February 2001.
143. Repertoire, Planning and Consultation Workshop to Achieve Higher Education Institute Award, 7th October 1999.
144. Advisor, Student's Association Faculty of Science and Environmental Studies (PEMAFSAS), 1999-2004.

Department Level (Department of Chemistry)

145. Head, Computational Chemistry Unit, 2013 – 2014.
146. Member, Curriculum Committee, 2013 – 2014.
147. Head of Department, 2007-2008.
148. Co-ordinator, Multimedia and Digitalising Committee, 2004-2006.
149. Head of Implementation, International Standard (ISO 9002:2000), 2002-2006.
150. Head of Computer Laboratory, December 2002 – 2006.
151. Member, Petroleum Chemistry Unit, 2002 – 2008.

152. Member, Curriculum Committee, 2002 – 2008.
153. Member, Multimedia and Computer Committee, 2002 – 2008.
154. Head, Computer Laboratory, 1999 – 2005.
155. Advisor, Chemistry Club, 2001 – 2005.
156. Academic Advisor, Department of Chemistry, Universiti Putra Malaysia, 1999 – present.

I. CONSULTANCY WORKS

Consultant

1. Project Leader, International Deans' Course Malaysian Chapter, MyIDC Cycle 2, 2020-2021, AKEPT-DAAD Germany.
2. MOSTI STEM to School, 2020
3. Project Leader, International Deans' Course Malaysian Chapter, MyIDC Cycle 1, 2018-2020, AKEPT-DAAD Germany.
4. Curriculum UM, Bachelor, Chemistry
5. Curriculum USM, Bachelor, Chemistry
6. Curriculum UTM, Bachelor, Chemistry
7. Curriculum UM, Master in Medicinal Chemistry
8. Curriculum USIM, Bachelor, Chemistry
9. Head of Consultant, ADIWIRA STEM Realtiy TV Show. KRU Studios and Minitry of Education, 2017-2018.
10. Reviewer, Technofund Milestone 2 And 3 Verification Site Visit, "Application Of Shrimp Biodefence Genes Expression As Trait Markers For Disease Resistance In Black Tiger Shrimp (Penaeus monodon) Aquaculture" (Project No.: Tf0810b084), Pegagau Aquaculture Hatchery, Tuaran, Sabah, 20 February 2014.
11. Co-Chairman, *Chemistry Expert Panel*, Dewan Bahasa dan Pustaka, 2013 – 2014.
12. Reviewer, Technofund Milestone 1 Verification Site Visit, "Application Of Shrimp Biodefence Genes Expression As Trait Markers For Disease Resistance In Black Tiger Shrimp (Penaeus monodon) Aquaculture" (Project No.: Tf0810b084), Pegagau Aquaculture Hatchery, Tuaran, Sabah, 6 February 2013.
13. External Assessor, Industrial Chemistry Technology Bachelor Programme, Faculty of Science and Technology, Universiti Sains Islam Malaysia, 1-31st March 2011.
14. Director, MyBiotech@School, MOSTI , 2010. Grant from BIOTEK MOSTI RM 530,000.00.
15. Judge, International Exposition of Research and Inventions of Instituions of Higher Learning - PECIPTA, 8-10th October 2009.
16. Programme Advisor, Field of Chemistry, IKIP International College, Kuantan , Pahang, 10th August 2009 – 11th August 2010.
17. Patron, Professional Development and Training, Informative Charismatic Training and Management Consultant (PG0192510-P), Malaysia, 2007 – present.
18. Evaluator, Diploma in Science (Chemistry and Biology), School of Arts and Science, Tun Abdul Rahman College, Kuala Lumpur, 2008.
19. Evaluator, Advanced Diploma in Science (Chemistry and Biology) cum Bachelor of Science Degree – Campbell University (USA), School of Arts and Science, Tun Abdul Rahman College, Kuala Lumpur, 2008.
20. Evaluator, Master (Chemistry) – Deparmtent of Chemistry, Faculty of Science, Universiti Perguruan Sultan Idris, Tanjong Malim, Perak, 2007.
21. Translator, Translated Malay Language of *Materials Sheet and Data Sheet* for the Global Language Translations & Consulting, USA, 2003 – 2006.
22. Project Developer, *Development of CD ROM for Science National Project*, Dewan Bahasa dan Pustaka, 2004 – 2006.
23. Advisory Board, *The Open Catalysis Journal* (Bentham Open), (2008 – present).
24. Advisory Board, *Material Science Research India* (An International Research Journal of Material Science), January 2003 – present.

Quality Control

1. Chairman of Quality Control Committee for Integrated Curriculum for Secondary Schools : Science Practical Form 2, Division of Text Book, Ministry of Education, 2004.
2. Chairman of Quality Control Committee for Integrated Curriculum for Secondary Schools : Chemistry Practical Form 4, Division of Text Book, Ministry of Education, 2003.

National Examination Script (Public Examination)

1. Questions Developer, Malaysia Higher School Certificate Exam : Examination Syndicate, Ministry of Education
   2017 : Chemistry
2. Questions Developer, Matriculation Exam : Division of Matriculation, Ministry of Education
   2012 : Chemistry SK027
   2010 : Chemistry SK027
3. Examiner, Matriculation Exam : Division of Matriculation, Ministry of Education
   2006 : Chemistry SK027 : 25-29th April, Hotel Grand Bluewave, Shah Alam
   2005 : Chemistry SK027 : 15-19th November, Hotel Residence, Kajang
   Chemistry SK027 : 19-23rd April, Hotel Holiday Villa, Subang
   2004 : Chemistry SK027 : 17-22th October, Hotel Holiday Royal Adelphi, Seremban
   2003 : Chemistry SK027 : 25-29th September, Hotel Awana, Genting
   Chemistry SK027 : 24-28th February, Hotel Holiday Villa, Subang
4. Examiner, High Certificate of Eduation : Exam Board Council, Ministry of Education
   2005 : Chemisry 2 (962/2) : 1-27th December

Journal Reviewer (*Cited Journals)*

1. *Synthetic Communications* manuscript entitiled, "Convenient and efficient method for synthesis of 2,4,6-triarylpyridines using catalytic amount of PEG1000-based dicationic acidic ionic liquid under solvent-free conditions", Yi-Ming Ren*, Ze Zhang, Shuo Jin, 2016.
2. *Journal of Molecular Catalysis B: Enzymatic* manuscript entitiled, "An organic solvent stable lipase from Burkholderia cepacia RQ3: Isolation, characteristics and application for efficient synthesis of glucose/maltose oleate ester", Hao Zhang, Bin Wu, Song Qin and Bingfang He, 2014.
3. *Journal of Chemical & Engineering Data* manuscript entitiled, "Novel Amino Acids Based Ionic Liquids Analogues: Neutral Hydroxylic Amino Acids", Farouq S. Mjalli, Rashid Al-Hajri, Ala'a Al-Muhtaseb and Omar Ahmed, 2014.
4. *ACS Sustainable Chemistry & Engineering* manuscript entitiled, "Facile one-pot synthesis of glycidol from glycerol and dimethyl carbonate catalyzed by tetraethylammonium prolinate ionic liquids", Fan Ouyang, Yan, Zhou, Na Hu, Xiang-Shu Chen, Zhen Yang and Duan-Jian Tao, 2014.
5. *The Open Catalysis Journal* manuscript entitiled, "Aerobic Oxidation of Benzylic Alcohols under Atmospheric Pressure Catalyzed by 2,3-Dichloro-5,6-dicyano-1,4-benzoquinone (DDQ)/*tert*-Butyl Nitrite", Zhiming Hu, Lili Sheng, Weimin Mo, Xinquan Hu, Baoxiang Hu, Nan Sun and Zhenlu Shen, 2014.
6. *Journal of Chemical Technology & Biotechnology* manuscript entitiled, "Continuous Lipase Esterification Using Process Intensification Technologies", Sebastien Elgue, Annelyse Conte, Alain Marty and Jean-Stephane Condoret, 2013.
7. *Journal of Molecular Catalysis B: Enzymatic* manuscript entitiled, "Application of response surface methodology for the lipase-catalyzed synthesis of sugar esters in ionic liquids/organic solvent mixtures", 2013.
8. *Sains Malaysiana* manuscript entitiled, "Selective Monolaurin Synthesis from Lauric Acid Esterification with Glycerol using ZrSO4/SBA-15 Catalyst", 2013.

9. *Renewable Energy* manuscript entitiled, "Novel homogeneous/heterogeneous thermoregulated catalytic system for biodiesel production", 2013.
10. *Food Chemistry* manuscript entitiled, "A chiral ligand exchange CE system for studying the inhibitory effect of kojic acid on tyrosinase", 2013.
11. *Food Chemistry* manuscript entitiled, "Ester synthesis in aqueous media by lipase: alcoholysis, esterification and substrate hydrophobicity", 2013.
12. *Chemical Engineering Journal* manuscript entitiled, "Improved production of fuel oxygenates via glycerol acetylation with acetic acid", 2013.
13. *Applied Clay Science* manuscript entitiled, "Superior activities of lipase immobilized on pure and hydrophobic clay supports: Characterization and catalytic activity studies", 2013.
14. *Letters in Organic Chemistry* manuscript entitiled, "Lipases Aided Esterification of (2,2-Dimethyl-1,3-dioxolan-4-yl)methanol", 2013.
15. *International Journal of Biochemistry Research & Review* manuscript entitiled, "Bio–Chemical Study of Synthesized Various Compounds of Anil– Arabinose Compound", 2013.
16. *The Open Catalysis Journal* manuscript entitiled, "Oxidation of cyclic alcohols by alkaline hexacyanoferrate(III) catalyzed by rhodium(III)", 2013.
17. *Colloids and Surfaces B: Biointerfaces* manuscript entitiled, "Lipolytic Biocatalyst Based On Recyclable Magnetite-Polysiloxane Nanoparticles", Anamaria Durdureanu-Angheluta, Maurusa Elena Ignat, Lucia Pricop, Adina Coroaba, Adrian Fifere, Stelian Sergiu Maier, Mariana Pinteala and Anca Chiriac, 2013.
18. *Food Chemistry* manuscript entitiled, "Optimization of Immobilization Conditions for Chick Pea β-Galactosidase (CpGal) to Alkylamine Glass Using Response Surface Methodology and Its Applications in Lactose Hydrolysis", Devesh Kishore and Arvind M. Kayastha, 2012.
19. *Applied Clay Science* manuscript entitiled, "Acid Activated Montmorillonite as Catalysts in Methyl Esterification Reactions of Lauric Acid", Leandro Zatta, Luiz Ramos, Fernando Wypych and Fernando Wypych, 2012.
20. *BMC Biotechnology* manuscript entitiled, "Immobilized *Rhizopus oryzae* Lipase Catalyzed Synthesis of Palm Stearin and Cetyl Alcohol Wax Esters: Optimization by Response Surface Methodology", Mohamed Sellami, Imen Aissa, Fakher Frikha, Youssef Gargouri and Nabil Miled, 2011.
21. *Food Chemistry* manuscript entitiled, "Enzymatic Synthesis of Naringin Palmitate", Xia Zhang, Lin Li, Jian-rong Huang, Ling Chen, Xiao-xi Li, Guo-qin Liu, Bing Li, 2011.
22. *Asia-Pacific Journal of Chemical Engineering*, manuscript entitiled, "Optimization of L-asparaginase Production by *Aspergillus Terreus* MTCC 1782 Using Response Surface Methodology and Artificial Neural Network Linked Genetic Algorithm", Gurunathan Baskar, Sahadevan Renganathan, 2011.
23. *Process Biochemistry* manuscript entitiled, "Lipase-Directed Synthesis of Pentyl Valerate in Organic Solvents: Study of Immobilization and Reaction Parameters", Tripti Raghavendra, Nilam Panchal, Amita R Shah, Datta Madamwar, 2011.
24. *Industrial & Engineering Chemistry Research* manuscript entitiled, "Synthesis of Biosurfactants: Enzymatic Esterification of Diglycerol and Oleic Acid. 1. Kinetic Modelling", Mercedes Martínez, Rubén Oliveros And José Aracil, 2011.
25. *The Open Catalysis Journal* manuscript entitiled, "Catalytic Asymmetric Addition of Diethylzinc to Benzaldehyde Using A-Pinene-Derived Ligands", Konstantin P. Volcho, 2011.
26. *Chemical Product and Process Modeling* manuscript entitled, "Xylitol Production by *Pichia Guilliermondii* : Predictive Modelling Capability of Artificial Neural Network", 2010.
27. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* manuscript entitled, "Optimization of Water in Oil Nanoemulsions by Mixed Surfactants" by Li-Ching Peng, Chi-Hsien Liub, Chang-Chin Kwana, Keh-Feng Huang, 2010.

28. *Journal of Molecular Modeling* manuscript entitled, "*In silico* approaches into understanding CAL B lipase using Molecular dynamics simulation and Docking" by Kumaresan J, Kothai T and Lakshmi B.S, 2010.
29. *Journal of Molecular Catalysis B: Enzymatic* manuscript entitled, "A Novel Thermophilic Lipase from *Fervidobacterium nodosum* Rt17-B1 Representing a New Subfamily of Bacterial Lipases", by Shanshan yu. Songcheng Yu, Weiwei Han, Honglei Wang and Yang Feng, 2010.
30. *Current Opinion in Drug Discovery & Development* manuscript entitled, "Solventless synthesis", by Deborah Gaer, 2009.
31. *Langumuir* manuscript entitled, "Colloidal Assembly of Proteins with Delaminated Lamellas of Layered Metal Hydroxides", by Jing He, Zhe An, Zhou Liangbiao and Yan Wang, 2009.
32. Reviewer, *The Open Catalysis Journal* manuscript entitled, "Characterization of Catalyst-Supported Dielectric Barrier Discharge Reactor", by Shuiliang Yao*, Shin Yamamoto, Satoshi Kodama, Chieko Mine, and Yuichi Fujioka, 2009.
33. *Biocatalysis and Biotransformation* manuscript entitled, "Biotransformation of progesterone and testosterone by *Geobacillus kaustophilus*", Safa Al-Tamimi, Sameera Al-Awadi, Soshama Oommen, and Mohammad Afzal, 2009.
34. *Biotechnology Progress* manuscript entitled, "Modeling and Optimization of Microbial Hyaluronic Acid Production by *Streptococcus zooepidemicus* Using Radial Basis Function Neural Network Coupling Quantum-behaved Particle Swarm Optimization Algorithm", by Long Liu, Jun Sun, Guocheng Du*, Jian Chen* and Wenbo Xu, 2009.
35. *Journal of Industrial Microbiology and Biotechnology* manuscript entitled, "Media Optimization for Biosurfactant Production by *Rhodoccous erythropolis* MTCC 2794: Artificial Intelligence vs. A Statistical Approach" by Moumita P. Pal, Bhalchandra K. Vaidya, Kiran M. Desai, Renuka M. Joshi, Sanjay N. Nene* and Bhaskar D. Kulkarni, 2009.
36. *Malaysian Journal of Microbiology* manuscript entitled, "Immobilization of Mucor racemosus NRRL 3631 Lipase with Different Polymer Carriers Produced by Radiation Polymerization", by Abeer Abd El-Hadi and Hanan Mostafa, 2009.
37. *Process Biochemistry* manuscript entitled, "Characterisation of the Lipase Immobilized on Mg/Al Hydrotalcites for Biodiesel" by Zeng Hong-yan, Liao Kai-bo, Deng Xin, Zhang Fan and Jiang He, 2008.
38. *Journal of Industrial Microbiology and Biotechnology* manuscript entitled, "Production of laccases in submerged process by Pleurotus sajor-caju PS-2001 in relation to carbon and organic nitrogen sources, antifoams and Tween 80" by Fernanda Bettin, Queli Montanari, Raquel Calloni, Tamara A. Gaio, Mauricio M. Silveira, Aldo J. P. Dillon*, 2008.
39. *Applied Clay Science* manuscript entitled, "Enzyme immobilization. Part 2. Utilization of modified bentonite as a new and efficient support for immobilization of *Candida rugosa* lipase" by M. Ghiaci*, S. Soleimanian, H. Aghaei, M. E. Sedaghat, 2008
40. *Applied Clay Science* manuscript entitled, "Enzyme immobilization. Part 1. Immobilization of alkaline phosphatase on Na-bentonite and modified bentonite" by M. Ghiaci*, S. Soleimanian, H. Aghaei, M. E. Sedaghat, 2008
41. *Journal of Molecular Catalysis B : Enzymatic* manuscript entitled, "Enhancement of the Activity and Enantioselectivity of Lipase in Organic Systems by Immobilization onto Low-Cost Support" by Guang Yang, Jianping Wu, Gang Xu and Lirong Yang*, 2008.
42. *Journal of Chemical Technology & Biotechnology* manuscript entitled, "Optimization of Immobilized Lipase-catalyzed Transesterification by Response Surface Methodology and Mixture Design" by Demir Cevdet* and Yasin Yucel, 2008.
43. *Journal of Chemical Technology & Biotechnology* manuscript entitled, "Statistical optimization of recycled-paper enzymatic hydrolysis for simultaneous saccharification and fermentation via central composite design" by Qing Liu*, Ke-ke Cheng, Jian-an Zhang and Jin-ping Li, 2008.

44. *Journal of Molecular Catalysis B : Enzymatic* manuscript entitled, "Influence of Differently Modified Palygorskites in the Immobilization of a Lipase" by Jianhua Huang, Yuanfa Liu and Xingguo Wang*, 2007.
45. *Process Biochemistry* manuscript entitled, "Calcined Layered Double Hydroxides as a "Biomolecular Vessel" for Bromelain: Immobilization, Storage and Release" by Wenying Shi, Min Wei*, Jing He, Guoying Rao, Heli Yang, 2006.
46. *Journal of Chromatography B* manuscript entitled, "Immobilization of Lipase onto Micron-size Magnetic Beads" by Xianqiau Liu, Yueping Guan, Rui Shen and Huizhou Liu, 2005.
47. *Catalysis Today* manuscript entitled, "Dimethyl Adipate Hydrogenation at Presence of Pt Based Catalysts" by Flávia Camargo Alves Figueiredo, Elizabete Jordão and Wagner Alves Carvalho, 2005.
48. *Biocatalysis and Biotransformation* manuscript entitled, "Water-in-Oil Microemulsion as the Reaction Medium for the Solvent-Sensitive Yellow Lacasses" by Janine Rodakiewicz Nowak, Natalia N. Pozydnyakova and Olga V. Turkovskaya, 2005.
49. *Pertanika Journal of Tropical Agricultural Science* manuscript entitiled, "Purification and Characterisation of β-1,3-glucaenase from *Trichoderma harzianum* BIO 10671" by Muszkhazli Mustafa, 2004
50. *Malaysian Journal of Analytical Science* manuscript entitled, "Penyingkiran Sebatian Organik yang Terlarut dalam Air Melalui Kaedah Fotodegradasi Berasaskan Titanium Dioksida" by M. S. Elias, Z. Zainal, M. Z. Hussien and T. Yap, 2000
51. *Malaysian Journal of Analytical Science* manuscript entitled, "Fotodegradasi Heterogeneous Orange C Dengan Kehadiran Pelbagai Bahan Pengoksida Dioksida" by M. F. Md Din, M. R. Salim, W. A. Abu Bakar and A. Aris.
52. *Malaysian Journal of Analytical Science* manuscript entitled, "Penyediaan Bahan Penderia Untuk Fenol Menggunakan Reagen 4-Aminoantipairin Terpegun Dalam Filem Sol Gel" by D. Adan and M. Ahmad. 200
53. *Malaysian Journal of Analytical Science* manuscript entitled, "Analisis Kandungan Arsenik di dalam Tembakau, Penuras dan Habuk Rokok" by M. S. Meor Yusoff, A. Latifah and C. U. Chong. 2000

J. ACADEMIC AWARDS / HONOURS

International

No.	Awards	Details	Awarding Institutions	Year
1.	Silver Medal	Antifreeze Peptides for Frozen Based Industries.	International Conference and Exposition on Inventions by Institutions of Higher Learning (PECIPTA)	2019
2.	Fellowship	International Dean's Course, Berlin, Germany	DAAD Germany	2016
3.	Lectureship Award	An invitation to deliver a series of lectures during one-week visit in Singapore	Asian Core Program/Advanced Research Network	2015
4.	Silver Medal	Design and Function of EXOTIC ICE STRUCTURING PEPTIDES from Antarctic Yeast *Glaciozyma antartica*	Malaysia Technology Expo	2015
5.	Silver Medal	Design and Function of EXOTIC ICE STRUCTURING PEPTIDES from Antarctic Yeast *Glaciozyma antartica*	*Malaysia International Exhibition, UPM*	2013
6.	Gold Medal	New Nanoemulsion Intervention for Pesticide Auxiliary	*22nd International Invention, Innovation and Technology Exhibition*, Midvalley, Kuala Lumpur	2011
7.	Silver Medal	NanoMica for Enzyme Market	Malaysia Technology Expo 2011	2011
8.	Silver Medal	Nano-Engkabang Formulations for Cosmeceutical Application	*World Exhibition on Innovation, Research and New Technologies (INNOVA)*	2010
9.	Bronze Medal	Nano-Engkabang Formulations for Cosmeceutical Application	Malaysia Technology Expo 2010	2010
10.	Outstanding Academic - Young Scientist	2nd IAP Conference for Young Scientists in conjunction with the World Economic Forum's Annual Meeting of the New Champions	Inter Academy Panel on International Issues (IAP) (Germany)	2009
11.	Young Scientist Award	Young Scientists of Asia Conclave 2009, Bangalore, India (TWAS-ROCASA)	Academy of Sciences for Developing Nation (TWAS)	2009
12.	Silver Medal	MBAdipate : Liquid Wax Ester	INPEX, Pittsburgh, USA	2008
13.	Gold Medal	Sustainable Production of High Value Added Adipate Esters of Surface Coatings	Malaysia Technology Expo 2008	2008

14.	Silver Medal	Innovative Chiral Ionic in Nonaqueous Enzymology	Malaysia Technology Expo 2008	2008
15.	ECI Fellowship	Enzyme Engineering XIX, British Columbia, Canada	Engineering Conferences International (ECI)	2007
16.	Young Chemists Award	The 41st IUPAC World Chemistry Congress, Torino, Italy	International Union of Pure and Applied Chemistry (IUPAC)	2007
17.	Gold Medal	A New Novel Organic Solvent Tolerant Lipase from *Bacillus sphaericus* 205y for industrial applications	*International Inventions, Innovation, Industrial Design Technology Exhibition*, KL	2007
18.	IDB Merit Fellowship	Post Doctoral in Genetic Engineering at University of Edinburgh, Scotland	Islamic Development Bank (IDB), Saudi Arabia	2006
19.	Young Scientist	56th Lindau Meeting of Nobel Laureates with Young Scientist	Lindau Nobel Council and Academy of Sciences Malaysia	2006
20.	Young Chemist Travel Award	Application of Nanobioterials as Catalyst for Environmentally Benign Organic Reaction	The American Chemical Society(ACS), Hawaii, USA	2005
21.	Gold Medal	Chirazim™ – Highly Enantioselective Enzyme	*33rd International Exhibitions and Inventions of New Techniques and Products*, Geneva	2005
22.	Silver Medal	MBSofax™ – New green palm-based fine organics for industry	*33rd International Exhibitions and Inventions of New Techniques and Products,* Geneva	2005
23.	Ram Rais Biotechnology Special Award	MBSofax™ – New green palm-based fine organics for industry	MINDS	2004
24.	Gold Medal (*Inovation and Invention Award*)	MBSofax™ – New green palm-based fine organics for industry	*International Inventions, Innovation, Industrial Design Technology Exhibition*, Midvalley, Kuala Lumpur	2004
25.	TWAS Research Grant Award	This grant is awarded for high level and promising scientific research to be carried out in developing countries by individual scientists	Third World Academy of Science (TWAS)	2002
26.	JSPS Fellowship Award	This fellowship is awarded for a study visit in Microbiology at the Osaka University, Japan	Japan Society for the Promotion of Science (JSPS)	2000
27.	JICA Scholarship	This scholarship is awarded to active student to follow the Friendship	Japan International Cooperation Agency	1994

		Programme for the 21st Century in Japan	(JICA)	

National

No.	Awards	Details	Awarding Institutions	Year
28.	Outstanding Scholastic Achievement (shortlisted)	Recognising the most worthy Malaysian who has demonstrated excellence and merit.	Merdeka Award	2020
29.	Excellent Service Award	This award is presented to dedicated and outstanding service in UPM for year 2019.	Universiti Putra Malaysia	2020
30.	Silver Medal	Peptides for Wound Healings	*Malaysia Technology Expo*	2019
31.	Gold Medal	Mimicked Metallopeptide Catalysts Based On Laccase For Green C-C Bond Forming Reactions	*Exhibition of Invention, Research & Innovation UPM*	2016
32.	Silver Medal	Bespoke Antifreeze Peptidomimetics From Exotic Antarctic Inhabitants	*Exhibition of Invention, Research & Innovation UPM*	2016
33.	Gold Medal	Peptides Mimicking Promiscuous Aldo-Keto-Reductase Enzyme As Asymmetric Organocatalyst In Aldol Reaction	*Exhibition of Invention, Research & Innovation UPM*	2014
34.	Gold Medal	Molecular Insight into Structure and Stability of DNA in Ionic Liquids	*Exhibition of Invention, Research & Innovation UPM*	2014
35.	Excellent Service Award	This award is presented to dedicated and outstanding service in UPM for year 2013.	Universiti Putra Malaysia	2013
36.	Top Research Scientist Malaysia	Top Research Scientist Malaysia	*Academy of Sciences Malaysia*	2012
37.	Gold Medal	Formation and Physicochemical Characterization of Glyphosate-Laden Nanoemulsion for Herbicide Application	*Exhibition of Invention, Research & Innovation UPM*	2012
38.	Gold Medal	Design of New Palm Esters Nanocosmeceuticals for High Radical Scavenging Activity	*Exhibition of Invention, Research & Innovation UPM*	2012
39.	Silver Medal	Palm-based Esters Nanoemulsions System Containing Ibuprofen for Topical Drug Delivery	*Exhibition of Invention, Research & Innovation UPM*	2012
40.	Best Poster	Coarse-Grained Molecular Dynamics Simulation of DPPC in Water	*Exhibition of Invention, Research & Innovation UPM*	2012
41.	Gold Medal	Proline-Based Chiral Ionic Liquids Catalyst: The Simplest 'Enzyme'?	*Exhibition of Invention, Research & Innovation UPM*	2011
42.	Silver Medal	Towards Efficacy of Lignocellulosic	*Exhibition of Invention,*	2011

		Biomass Utilization by Ionic Liquids	*Research & Innovation UPM*	
43.	Gold Medal	New Nano-Emulsion Intervention for Biopesticide Formulation	*Exhibition of Invention, Research & Innovation UPM*	2011
44.	Silver Medal	Self-Assembly Behaviour of Alkylpolyglucosides (APG) in Mixed Surfactant-Stabilized Nanoemulsion System	*Exhibition of Invention, Research & Innovation UPM*	2011
45.	Gold Medal	Natural-based Mica Network as Nanoreactor for Enzymes in Chiral Syntheses	*Exhibition of Invention, Research & Innovation UPM*	2010
46.	Silver Medal	Novel Antifreeze Peptides Derived from Fungal Protein	*Exhibition of Invention, Research & Innovation UPM*	2010
47.	Silver Medal	Sustainable Biocatalytic Synthesis of Xylitol Sugar Estes using Multivariate Chemometrics Analysis	*Exhibition of Invention, Research & Innovation UPM*	2010
48.	Silver Medal	New Nano-emulsion System in Weeds Control Formulations	*Exhibition of Invention, Research & Innovation UPM*	2010
49.	Bronze Medal	Insight of Self-assembly Formation of Palm-based Esters Nano-emulsion	*Exhibition of Invention, Research & Innovation UPM*	2010
50.	National Intellectual Property Award (Individual Patent)	Sustainable Production of High Value Added Adipate Esters of Surface Coatings	Malaysia Intellectual Property Right Day 2009 by MyIPO	2009
51.	Silver Medal	Designs and Development of Palm-Based Transdermal Nanoemulsions for NSAIDS	*Research & Development Exposition – PECIPTA* 2009, KL Convention Center	2009
52.	Gold Medal	Chemo-Enzymatic Green Route Palm-based Epoxides for Benign Surface Coating Nanoformulations	*Exhibition of Invention, Research & Innovation UPM*	2009
53.	Gold Medal	Designs and Development of Palm-Based Transdermal Nanoemulsions for NSAIDS	*Exhibition of Invention, Research & Innovation UPM*	2009
54.	Silver Medal	Nano-Engkabang Formulations for Excellent Skin Hydration	*Exhibition of Invention, Research & Innovation UPM*	2009
55.	Ten Outstanding Young Malaysian Award	This recognition is awarded to young Malaysian for outstanding achievements in scientific and technological development.	*Junior Chamber International – Malaysia (JCIM)*	2008
56.	Excellent Researcher	This recognition is awarded to excellent researcher in promoting applied mathematical sciences.	Institute of Mathematical Research	2008

57.	Best Chemistry Project (MS)	Facile Synthesis and Optimisation of New Functionalised Chiral Ionic Liquids	Faculty of Science, UPM	2008
58.	Gold Medal	*En Route* to Palm-based Nano-emulsions Self-Assembly	*Exhibition of Invention, Research & Innovation UPM*	2008
59.	Gold Medal	Sustainable Optimization and Solventless Biocatalysis of Wax Esters Using Artificial Neural Network	*Exhibition of Invention, Research & Innovation UPM*	2008
60.	Gold Medal	Production of Palm Esters for the Cosmetic Industry	*Exhibition of Invention, Research & Innovation UPM*	2008
61.	Silver Medal	Insight of a Fungi Antifreeze Protein from *Leucosporidium antarcticum*	*Exhibition of Invention, Research & Innovation UPM*	2008
62.	Silver Innovation Nuclear Award	Sustainable and Solventless Surface Coatings	Agency Nuclear Malaysia	2008
63.	Patent Incentive Award	Patents filed for year 2007	Universiti Putra Malaysia	2008
64.	Gold Medal	A New Novel Organic Solvent Tolerant Lipase from *Bacillus sphaericus* 205y for industrial applications	*International Inventions, Innovation, Industrial Design Technology Exhibition (ITEX*), KL	2007
65.	Selangor Excellent Young Scientist	This award is presented to the most excellent young scientist in Selangor.	State of Selangor	2007
66.	Champion of Product Innovation	Green Route Wax Ester Formulation for Wood Coating	State of Selangor	2007
67.	Most Popular Lecturer (Chemistry)	This award is presented to the most popular lecturer by students' choice.	Faculty of Science, UPM	2007
68.	Excellent Young Scientist	This award is presented to the excellent young scientist in UPM for year 2006.	Universiti Putra Malaysia	2007
69.	Gold Medal	Insight Story of Thermostable Protein Unfolding	*Exhibition of Invention, Research & Innovation UPM*	2007
70.	Gold Medal	*In silico* Protein Design of Novel Metalloenzyme : A New Generation of Industrial Biocatalyst	*Exhibition of Invention, Research & Innovation UPM*	2007
71.	Gold Medal	Innovative Application of Green Engineering Liquids of Facile Imidazalium-based Chiral Ionic Liquids	*Exhibition of Invention, Research & Innovation UPM*	2007
72.	Silver Medal	Chiral Ionic Liquids Coated Enzyme	*Exhibition of Invention, Research & Innovation UPM*	2007

73.	Silver Medal	MBiocoatings™: Green Route Wax Ester Formulation for Surface Coatings	*Exhibition of Invention, Research & Innovation UPM*	2007
74.	Silver Medal	Optimization of Green Route Synthesis of High Value Added Adipate Esters via Response Surface Methodology and Artificial Neural Network	*Exhibition of Invention, Research & Innovation UPM*	2007
75.	Silver Medal	A Novel Organic Solvent Tolerant 205y Lipase: From Computational to Molecular Approaches	*Exhibition of Invention, Research & Innovation UPM*	2007
76.	Bronze Medal	Comparison of Estimation Capabilities of Response Surface Methodology (RSM) with Artificial Neural Network (ANN) in Lipase-catalyzed Synthesis of Palm-based Wax Ester	*Exhibition of Invention, Research & Innovation UPM*	2007
77.	Bronze Medal	Topical Palm-Based Nanoemulsions As The Delivery System For NSAIDs	*Exhibition of Invention, Research & Innovation UPM*	2007
78.	Bronze Medal	Production of New Palm Amino Acid Surfactant Using Enzyme Technology	*Exhibition of Invention, Research & Innovation UPM*	2007
79.	Adi Saintis Muda (Young Scientist)	This award is presented to outstanding and most prominent young scientist at FS for year 2006.	Faculty of Science, UPM	2006
80.	Gold Medal	Green Route Production of Petro-based Adipate Esters	*Exhibition of Invention, Research & Innovation UPM*	2006
81.	Silver Medal	Novel Metalloenzyme : New Structure and Function	*Exhibition of Invention, Research & Innovation UPM*	2006
82.	Bronze Medal	Protein Structure-Based Design of Novel Semisynthetic Metallotrypsin	*Exhibition of Invention, Research & Innovation UPM*	2006
83.	Bronze Medal	Reductive alkylation: A practical approach in structural manipulation	*Exhibition of Invention, Research & Innovation UPM*	2006
84.	Bronze Medal	A novel cold active lipase: Gene expression and homology modeling	*Exhibition of Invention, Research & Innovation UPM*	2006
85.	Bronze Medal	Production and Novel Characterization of Palm-based Wax Esters	*Exhibition of Invention, Research & Innovation UPM*	2006
86.	Bronze Medal	Scale Up Production: Enzymatic Synthesis of Amino-based Surfactants	*Exhibition of Invention, Research & Innovation UPM*	2006
87.	Malaysian Excellent Scientist	This award is presented for outstanding achievement by Malaysian scientist at international level.	Ministry of Higher Education	2005

88.	Excellent Service Award	This award is presented to dedicated and outstanding service in UPM for year 2004.	Universiti Putra Malaysia	2005
89.	Gold Medal	Chirazim™ – Highly Enantioselective Enzyme – for category Potential to Commercialised	IPTA-MOSTI *National Research & Development Exposition,* PWTC, Kuala Lumpur	2005
90.	Bronze Medal	Futuristic Nanobioterial as Catalyst Towards Green Route For Organic Synthesis – for category Breakthrough Technologies	IPTA-MOSTI *National Research & Development Exposition,* PWTC, Kuala Lumpur	2005
91.	Silver Medal	Super Enzyme - Enzyme Immobilization in Mesoporous Materials	*Exhibition of Invention, Research & Innovation UPM*	2005
92.	Silver Medal	New route to Antimony tetraoxide (Sb_2O_4) promising promoter catalyst in petrochemical industry	*Exhibition of Invention, Research & Innovation UPM*	2005
93.	Silver Medal	Enzymatic Synthesis of Palm Based Ferulate Ester	*Exhibition of Invention, Research & Innovation UPM*	2005
94.	Silver Medal	Synthesis of Kojic Acid Ester Using Lipase	*Exhibition of Invention, Research & Innovation UPM*	2005
95.	Bronze Medal	*In silico* Protein Engineering: A fundamental approach of molecular interaction in protein chemistry	*Exhibition of Invention, Research & Innovation UPM*	2005
96.	ICI Award for Best Chemistry Project	Screening of Biocatalyst for the Production of Adipate Esters	ICI (Malaysia) Sdn. Bhd.	2005
97.	Adi Saintis Muda (Young Scientist)	This award is presented to outstanding and most prominent young scientist at FS for year 2004.	UPM – *Science Excellent & Quality Day*	2004
98.	Adi Pengajar (Top Lecturer)	This award is presented to outstanding contribution in lecture and communication with the undergraduates at FS for year 2004.	UPM – *Science Excellent & Quality Day*	2004
99.	Academic Book	This award is presented to outstanding achievement in publishing materials related to academic and research works by Faculty members in year 2004	UPM – *Science Excellent & Quality Day*	2004
100.	Silver Medal	Green Production Of Palm-Based Wax Esters	MOSTE *National Research & Development Exposition,* PWTC, Kuala Lumpur	2004
101.	Bronze Medal	Advanced Nanobiomaterial as Catalyst for Green Organic Synthesis	MOSTE *National Research & Development Exposition,* PWTC, Kuala Lumpur	2004

102.	Silver Medal	Scale-up Production of Palm-based Wax Esters	*Research & Development Exhibition*, Institute of Bioscience, UPM	2004
103.	Bronze Medal	High-Throughput Screening onThermolysin Surface Area for Designing a Novel Semisynthetic Metalloenzyme	*Research & Development Exhibition*, Institute of Bioscience, UPM	2004
104.	Silver Medal	Enhancement of lipase enantioselectivity through immobilization	MOSTE *National Science & Technology Exhibition,* Kuala Lumpur	2003
105.	Gold Medal	Enhancement of lipase enantioselectivity through immobilization	*Exhibition of Invention, Research & Innovation UPM*	2003
106.	Silver Medal	Structural properties of modified *Candida rugosa* lipase in water and organic solvent	*Exhibition of Invention, Research & Innovation UPM*	2003
107.	Silver Medal	New nanomaterials for immobilization of enzyme	*Exhibition of Invention, Research & Innovation UPM*	2003
108.	Excellent Researcher	This award is presented to outstanding researcher at FSAS yearly	UPM – Science Excellent	2002
109.	Gold Medal	Palm-based liquid wax esters: a raw material for cosmetics	*Exhibition of Invention, Research & Innovation UPM*	2002
110.	Gold Medal	Activated Carbon	*Exhibition of Invention, Research & Innovation UPM*	2002
111.	Gold Medal	Enrichment of DHA in the fish oil from *monopterus albus*	*Exhibition of Invention, Research & Innovation UPM*	2002
112.	SilverMedal	Synthesis of optically pure (-)-menthyl butyrate by immobilized lipases	*Exhibition of Invention, Research & Innovation UPM*	2002
113.	Best Multimedia Project	Modul Pengajaran Multimedia Spektrofotometer Ultralemabayung-Nampak	Faculty of Science and Environmental Studies	2002
114.	NBD Fellowship	The fellowship supported a workshop of the Proteomics and Protein Sequencing Training	National Biotechnology Directorate, MOSTI	2001
115.	UPM / SLAB Scholarship	This scholarship is awarded to outstanding graduate student to pursue a degree of Ph.D. at the University of Southampton, England	Universiti Putra Malaysia	1997
116.	MARA Scholarship	This scholarship is awarded to outstanding student to pursue a postgraduate degree programmes in the UK	Majlis Amanah Rakyat (MARA)	1995

117.	Ministry of Education Scholarship	This scholarship is awarded to outstanding student to pursue an undergraduate at the University Technology of Malaysia, Johore.	Ministry of Education	1991

K. ACADEMIC / PROFESSIONAL HONOURS

International

1. Committee Member - Asian Deans' Science Council (2018-present)
2. Committee Member - Asian Society for Colloid and Surface Science, Japan (2017-present)
3. Fellow – FSRC (383930), Royal Society of Chemistry, United Kingdom (2016-present)
4. Member (01031744), Biochemical Society, United Kingdom (2011-present)
5. Alumni Member, Global Young Scientist Academy (2012 – present)
6. Founding Member, Global Young Scientist Academy (2009 – 2011)
7. Member (30022318) , American Chemical Society, United States of America (2008-present)
8. Member (05077557), The New York Academy of Sciences (2007-present)
9. Member, The Science Advisory Board, United States of America (2006-present)
10. Member, World Academy of Young Scientists (2005-present; via online)
11. Editorial Board, Journal of Chemical Biology & Therapeutics (OMICS)
12. Editorial Board, JSM Enzymology and Protein Science (JSciMedCentral)
13. Editorial Board, Journal of Advanced Catalysis Science and Technology (Cosmos Scholar)
14. Advisory Board for the The Open Catalysis Journal (Bentham Open), (2008 – present).
15. Advisory Board for the Material Science Research India (An International Research Journal of Material Science), (2003 – present).
16. Committee Member of the University of Southampton Society - Malaysian Branch, Kuala Lumpur, Malaysia (2000-present)
17. Elected Graduate (GRSC), Royal Society of Chemistry, United Kingdom (1996-1998).
18. Member of the Malaysian Students Association, University of Southampton, England, 1996-1999.

National

19. Chairman, Malaysia Deans Science and Mathematics Council, (2017-present)
20. Vice President, Malaysian Analytical Science Association, Malaysia (2017 – present)
21. Fellow Academy of Sciences Malaysia (2015-present)
22. Editorial Board, Malaysia Journal of Catalysis (2016-present)
23. Vice Chairman, Islamic Development Bank Alumni Society –Malaysia Branch (2014-present)
24. National Advisory Board, American Chemical Society – Malaysia Chapter (2014-present)
25. Founding Chairman, Young Scientists Network – Akademi Sains Malaysia (2012 – 2015)
26. Member (MPN 1331), National Professor Council (2010 – present)
27. Associate Fellow, Akademi Sains Malaysia (2010 – 2013)
28. Associate Member (A/2257/4776/05), Institut Kimia Malaysia (2004 – present)
29. Member, Malaysian National Institute of Translation, Malaysia (2003 – present)
30. Member, Young Professionals Chamber Malaysia, Malaysia (2002 – present)
31. Member, Malaysian Microbiology Society, Malaysia (2000 – present)
32. Member, UTM ALUMNI, Universiti Teknologi Malaysia (2004 - present)
33. Member, SERATAS ALUMNI (Raja Tun Azlan Shah Science School), (2000 – present)
34. President, Science and Technology Association, Universiti Teknologi Malaysia, (1993 – 1994)

Other Activities

35. Athletic Team, Faculty of Science, 2003 – 2006.
36. Hockey Player, Faculty of Science, 2003 – 2005.
37. Volleyball Player, Faculty of Science, 2003 – 2007.
38. Member, Southampton Volleyball Club, University of Southampton, 1996 - 1998.

L. EXTENSION / COMMUNITY SERVICE

Outreach

1. ADIWIRA STEM, Reality TV Show, 2017-2018
2. Seeds of Science, 2018-2020
3. Global I-Lead, STEM CAMP & International STEM Olympiad, 2017-2019, UPM.
4. Noble Laureate Outreach Camp, 2014-2018, UPM.
5. Kolokium Kebangsaan Pendidik Sains, Teknologi, Kejuruteraan dan Matematik (KKPSTEM) Wilayah Pantai Timur 2017, 14-15 May, 2017, Kuala Trengganu.
6. Kolokium Kebangsaan Pendidik Sains, Teknologi, Kejuruteraan dan Matematik (KKPSTEM) Wilayah Pantai Timur 2016, 23-24 May, 2016, Kuala Trengganu.
7. Transmisi Komuniti Saintifik bersama Orang Asli, 19-21st February 2016.
8. Duta Sains (Science Ambassador) – Jerlun Parlimentary – November 2015 – March 2016.
9. Judge, National Science Challenges, Academy of Sciences Malaysia
   2017 : National (Final) : BTP, Kuala Lumpur, 25th August 2017.
   2016 : National (Final) : UKM, Selangor, 18th August 2016.
   2015 : National (Final) : MATRADE, Kuala Lumpur, 22nd October 2015.
   2015 : National (Semi Final) : UPM, 15th August 2015.
   2014 : National (Semi Final) : UPM, 23th August 2014.
   2014 : State of Sarawak : Penview Hotel , Kuching, Sarawak, 14th May 2014.
   2014 : State of Perlis : SMK Padang Besar (U), Perlis, 14th May 2014.
   2013 : National (Semi Final) : UPM, 24th August 2013.
   2013 : State of Johor : SMK Teknik, Johor Bahru, 30th July 2013.
   2013 : State of Labuan : JPN Labuan, Labuan, 5th July 2013.
   2012 : State of Labuan : SMK Labuan, Labuan, 12h July 2012.
   2008 : National (Final) : Pusat Sains Negara, KL, 21st October 2008.
   2007 : State of Sabah : Kuala Penyu, Sabah, 26th July 2007.
   2006 : State of Pahang : Pekan, Pahang, 27th July 2006.
   2005 : State of Johor : Pontian, Johor, 25th April 2005.

10. Judge, *Petrosains Science Show Competition*, Petronas, 2014 – present.
    2015 : National (Final) : Auditorium DBKL, Kuala Lumpur, 29th October 2015.
    2014 : National (Final) : Auditorium National Museum, Kuala Lumpur, 20th October 2014.

11. Director, *MyBiotech@School* program, 2010 – 2013.
    2013: *BioBorneo2013, Kota Kinabalu (18-20 Feb); BioKelantan2013, Kota Bharu (1-3 March)*
    2012: *BioBorneo2012, Kuching (22-25 Feb); SMK Bachok, Kelantan (29 Sept); SMK Besut, Terengganu (30 Sept); Kolej Matrikulasi Melaka (1&2 Dec);*
    2011: *MRSM Tun Ghafar Baba; MRSM Jasin; SMK Dato' Dol Said, Jasin Melaka (29 Jan)*
    2010 : *SMK Seri Pekan; SMK Ahmad; SMK Peramu Jaya; Pekan, Pahang (7 Aug); SBP Integrasi Pekan; MRSM Tun Abdul Razak, Pekan, Pahang (8 Aug); SMK Jalan 4; SMK Jalan 3, Bandar Baru Bangi, Selangor (2 Oct); SMK Kota Marudu; SMK Kota Marudu II; SMK Bandau; SMK Tandek Kota Marudu, Sabah (16 Oct); SMK Abdul Rahim; SMK Abdul Rahim II; SMK Kudat; SMK Kudat II; SMK Sikuati; SMK Sikuati II; SMK Pinawantai; SMK Matungsong; SMK Banggi; SMK Lok Yuk; SMK St. Peter, Kudat, Sabah (17 Oct); SMKA Tun Ahmad Zaidi; SMK Kuching High; SMK Bandar Semariang; Kolej Datu Patinggi Abang Haji Abdillah; MRSM Kuching; SMK Semerah Padi; SMK Demak Baru; SMK Tun Abdul Razak; SMK Petra Jaya; SMKA Sheikh Haji Othman Abdul Wahab; SMKA Matang, Kuching, Sarawak (6 Nov); Sek Sukan Negeri Tabuan Jaya; SMK Bandar Kuching No. 1; SMK Bandar Kuching No. 2; SMK Penrissen No. 1;*

SMK Penrissen No. 2; SMK Pending; SMK Padungan; SMK Sungai Tapang; SMK Jalan Arang; SMK TDPH Abdul Ghapor; SMK Tun Abdul Razak, Kuching, Sarawak (7 Nov); SMK Seri Perak; SMK Convent; SMK St Anthony; SMK Horley Methodist; SMK Teknik SMK Abdul Rahman Talib; SMK San Min; SMK Seri Setia; SMK Seri Kandi; SMK Sultan Abdul Aziz; SMK Raja Muda Musa; SMK Sungai Manik; SMK Sultan Abdullah; SMK Dato' Sagor, Teluk Intan, Perak (13Nov); Sek Men Sains Teluk Intan (SEMESTI); SMK Hutan Melintang; SMK Khir Johari; SMK Rungkup; SMK Tun Razak; SMK Seri Muara; SMK Seri Perkasa; SMK Ulu Bernam, Teluk Intan, Perak (14 Nov); Kolej Matrikulasi Negeri Sembilan, Kuala Pilah, Negeri Sembilan (4 & 5 Dec); Kolej Matrikulasi Pulau Pinang, Kepala Batas, Penang (11 & 12 Dec)

12. *YSN Science Outreach@School* program.
    2015: SMK Muhibbah, Sungai Siput, Perak.
    2014: SM Sains Raja Tun Azlan Shah, Taiping, Perak.

13. Invited Speaker "Promotion of Agrobiotechnology in UPM" and Facilitator, *Promotion of Biotechnology to Schools in Malaysia*, 2004 – 2008.
    2008 : SMK Desa Cempaka, Nilai (12 April); SMK Agama Kedah, Alor Star; SMK Guar Perahu, Penang (23-24 February);
    2007 : Kolej Matrikulasi Labuan (15-16 December); MRSM Beseri, Perlis (9 September); SMS Tuanku Syed Putra, Perlis (8 September); SMK Bintulu, Sarawak (2 September); SMK Baru Bintulu, Sarawak (1 September); SMK Pahang (29 July); SMK Pahang (28 July); SMK Dato' Bentara Luar, Segamat, Johor (8 July); SMK Labis, Labis, Johor (7 July); SMK Dato' Seri Maharaja Lela, Kampung Gajah, Perak (); SMK Dato' Abdul Rahman Yasin, Bota Kanan, Perak (); MRSM Tun Ghafar Baba, Melaka (25 March); SMK, Alor Gajah, Melaka (24 March);
    2006 : SMK Ungku Aziz, Sabak Bernam (10 September); SMK Sungai Besar, Selangor (9 September); SMK Bandar, Kuala Trengganu (3 September); SMK Ibrahim Fikri, Kuala Trengganu (2 September); SMK Buyong Adil, Tapah, Perak (27 August); SMK Clifford, Kuala Kangsar, Perak (26 August); SMK Megat Dewa, Kodiang, Kedah (21 August); SMK Jitra, Jitra, Kedah (20 August); SMK Labuan, WP (26 March); SM Sains, Labuan, WP (25 March); SMK Kedawang Langkawi, Kedah (5 February); SMK Mahsuri Langkawi (4 February);
    2005 : SM Sultan Abdul Halim, Jitra, Kedah (25 September); SMK Putra, Kangar, Perlis (24 September); SMK Ghafar Baba, Melaka (24 July); SMK Dato Panglima Abdullah, Semporna (Jun); SMK Kibabutan, Tawau, Sabah (June);
    2004 : SM Sik, Sik, Kedah (7 August); SM Sains, Machang Kelantan (18 July);

14. Back to School Programme, Academy of Sciences Malaysia
    MRSM Tawau, Sabah – 13th February 2011
    SM Sains Raja Tun Azlan Shah, Taiping, Perak, 17th July 2010
    Sekolah Menengah Sains Labuan, Labuan, 15th April 2010

15. Invited Panel, "Science and Education", New Zealand Week 2012 – Pusat Sains Negara.
16. Invited Speaker and Dialogue with "Malaysia Young Eminent Scientist" (Motivation Lecture and Dialogue with Primary and Secondary School Students) for Future Scientists Think Camp 2008, organized by Oracle Education Foundation and Ministry of Education in collaboration with Academy of Sciences Malaysia, Serting, Negeri Sembilan, 26th April 2008.
17. Invited Speaker "Dialogue with Young Scientist" (Motivation Lecture) for Excellent Motivation Camp for Youth – SPM 2008, Institut Latihan Perindustrian, Nibong Tebal, Penang, 3rd May 2008.
18. Invited Speaker "Dialogue with Young Scientist" (Motivation Lecture) for Excellent Motivation Camp for Youth – SPM 2007, Engineering Campus, Universiti Sains Malaysia, Nibong Tebal, Penang, 29th April 2007.

19. Invited Speaker, "Promotion of Biotechnology" for the SPM 2006 candidate at SM Sains Raja Tun Azlan Shah (Science School), Taiping, Perak, 16th September 2006.
20. Judge for DUMEX National Science Championship, "The Academy of Sciences Malaysia Challenge Trophy 2006", Kompleks Sekolah Wawasan, USJ 8, Subang Jaya, 9th September 2006.
21. Invited Speaker, "Promotion of Biotechnology" for the Science Youth Camp 2006, Ibnu Sina Fundamental Institute, Universiti Teknologi Malaysia, Johor Bahru, Johor, 20th June 2006.
22. Head of Judges for "Judging Certification for Innovation in Science and Engineering", INTEL-ISEF and Division of School, Ministry of Education, Langkasuka Hotel, Langkawi, 4-7th April 2005.
23. Promotion of UPM / Graduate Studies Lecture for Kembara Sang Pendeta di Bumi Afrika, Cape Malay, South Africa, 28th April 2003.
24. Promotion of UPM / Motivation Lecture for the Secondary Schools in Machang, Kelantan, 9-12th October 2002.
25. Member, Organising Committee for Malaysian Day at University of Southampton, Southampton, England, March 1996.

Advisor

26. Advisor, Tinta Kasih 4.0: Stay At Home & Feel The Chemistry, FaSSA & Department of Chemistry, 2021.
27. Advisor, Putra Scientist Gen Z, Department of Chemistry, 2021.
28. Advisor, Bio-Superhero Outreach 3.0 (BSO3.0) - New Norm Biology Adventure In Community, Department Biology, 2021.
29. Advisor, Let's Listen To Nature 5.0 (LLTN5.0), Department of Biology, 2021.
30. Advisor, Future Biologist Caliphs 2.0: The Embarkment of Biologist Caliphs into the Life of Islam and Science, Department of Biology, 2021.
31. Advisor, Kursus Pengurusan Majlis, Deputy Dean (Academic, Student Affairs & Alumni Staff), 2021.
32. Advisor, BioGreen Week 2.0 2021 - Our Promise to Our Planet- Small Steps, to a Greener Future, Department of Biology, 2021.
33. Advisor, Brainy Maths Competition, Department of Mathematics & Statistics, 2021.
34. Advisor, Science Ace Carnival, FaSSA, Department of Biology, Department of Physics, Department of Chemistry, Department of Mathematics & Statistics, 2021.
35. Advisor, Experiential Alumni 2.O, Department of Physics, 2021.
36. Advisor, Wow Physics Talk Show 2021 4.0, Department of Physics, 2021.
37. Advisor, Maths Union Day 2021, Department of Mathematics & Statistics, 2021.
38. Advisor, Bicara Akademik: Sains dan Pendidikan, Tunjang Kemajuan Negara, 2021.
39. Advisor, Future Career Talk 2.0: Get Your Future Started, 2021.
40. Advisor, Biologist Outreach 2.0-Bio-Superhero, Department of Biology, 2020.
41. Advisor, Open Day-UPM's International Day of Mathematics, Department of Mathematic, 2020.
42. Advisor, Lets Listen to Nature 4.0, Department of Biology, 2020.
43. Advisor, Chemistry Club, Department of Chemistry, Universiti Putra Malaysia, 2000-2005
44. Advisor, Organising Committee for Petroleum Refining Visit to Petronas Refinery, Melaka, 2nd September 2005.
45. Advisor, COMBICAT UM & UPM Committee for Industrial Visit to BASF-Petronas Petrochemcials Complex, Gebeng, Pahang, 28-30th May 2003.
46. Advisor, Organising Committee for Kembara Sang Pendeta di Bumi Afrika, Cape Malay, South Africa, 24th April – 5th May 2003.
47. Advisor, Organising Committee for Chemistry Nite, Palm Garden, Putrajaya, 21st January 2003.
48. Advisor, Organising Committee for "Khidmat Bakti Siswa" in Machang, Kelantan, 9-12th October 2002.
49. Advisor, Organising Committee for Chemistry Highlight Nite, Palace of Golden Horses, Seri Kembangan, 21st January 2002.

50. Advisor, Organising Committee for Petroleum Refining Visit to Petronas Refinery, Kerteh Trengganu, 8-11th July 2001.
51. Advisor, Organising Committee for an Educational Visit to MTBE/Polypropylene Plant at Gurun Petrochemical Area, Gurun, Kedah, for CHM 3603 (Petrochemicals) on 6th March 2001.
52. Advisor, Organising Committee for Kolej Pendeta Za'ba Open Day and Aidilfitri Celebration, Universiti Putra Malaysia, 11-13th Januari 2001.
53. Advisor, Webpage Board, Kolej Pendeta Za'ba, Universiti Putra Malaysia, Januari 2001-present.
54. Advisor, Editorial Board, Kolej Pendeta Za'ba, Universiti Putra Malaysia, Januari 2001-present.
55. Advisor, CyberLab Computer Centre, Kolej Pendeta Za'ba, Universiti Putra Malaysia, December 2000-present.
56. Advisor, Belum Forest Expedition, Faculty of Science and Environmental Studies Students Association (PEMAFSAS), 31st March to 6th April 2000.
57. Advisor, Organising Committee for an educational visit to MTBE/Polypropylene Plant at Gebeng Petrochemical Area, Kuantan, Pahang for KIM 3603 (Petrochemicals) on 6th March 2000.
58. Advisor, Organising Committee for Khidmat Pendidikan Cameron Highlands 1994 at Cameron Highlands, April 1994.

M. REFEREES

Academic and Research

1. Professor Datin Paduka Setia Dato' Dr Aini Ideris
   Universiti Putra Malaysia
   43400 UPM Serdang
   Selangor Darul Ehsan, Malaysia
   Email : aiini@upm.edu.my

2. Professor Dr. Zulkarnain Zainal
   Department of Chemistry
   Faculty of Science
   Universiti Putra Malaysia
   43400 UPM Serdang
   Selangor Darul Ehsan
   Email : zulkar@upm.edu.my

3. Emeritus Professor Dr. Nor Muhammad Mahadi
   Malaysia Genome Institute
   Jalan Kajang, 43000 Bangi
   Selangor Darul Ehsan, Malaysia
   Email : normm@pc.jaring.my

Outreach

4. Mrs Hazami Habib
   Chief Executive Officer
   Academy of Sciences Malaysia
   Level 20, West Wing, Menara MATRADE
   Jalan Sultan Haji Ahmad Shah
   50480 Kuala Lumpur, Wilayah Persekutuan, Malaysia
   Email : hazami@akademisains.gov.my

M. B. Abdul Rahman
Professor of Chemistry
BSc (Universiti Teknologi Malaysia); Ph.D. (University of Southampton, UK)
Post-Doctoral (University of Edinburgh, UK)
Distinguised Visiting Scholar (University of California, Berkeley, USA)
Fellow, Akademi Sains Malaysia
Fellow, Royal Society of Chemistry (United Kingdom)
Fellow, International Association of Advanced Materials (Sweden)
Chemist, Institut Kimia Malaysia
Foundation Chairman, Young Scientists Network; Founding Member, Global Young Academy (GYA)
Chief-in-Editor, Malaysia Journal of Analytical Sciences
Editorial Board, The Open Catalysis Journal (Bentham)
Editorial Board, Journal of Chemical Biology & Therapeutics (OMICS)
Editorial Board, JSM Enzymology and Protein Science (JSciMedCentral)
Editorial Board, Journal of Advanced Catalysis Science and Technology (Cosmos Scholar)
Top Research Scientists Malaysia (2012); Outstanding Young Malaysian (2008)