CURRICULUM VITAE

A. BUTIR-BUTIR PERIBADI ***(Personal Details)***			
Nama Penuh *(Full Name)*	Ernee Noryana Binti Muhamad		Gelaran *(Title):* Dr.
No. MyKad / No. Pasport *(Mykad No. / Passport No.)* 791109-01-5366	Warganegara *(Citizenship)* Malaysia	Bangsa *(Race)* Melayu	Jantina *(Gender)* Female
Jawatan *(Designation)*	Senior Lecturer	Tarikh Lahir *(Date of Birth)*	9 Nov. 1979

Alamat Semasa *(Current Address)*	Jabatan/Fakulti *(Department/Faculty)*	E-mel dan URL *(E-mail Address and URL)*
No. 13, Jalan BPP 7/7 Eminence Bandar Putra Permai 43300 Seri Kembangan Selangor Tel: -	Chemistry Department, Faculty of Science, Universiti Putra Malaysia, 43400 Serdang, Selangor Tel: +603-8947-1444 Fax:	E-mel: ernee@upm.edu.my URL: H/P: +601-07956701

B. KELAYAKAN AKADEMIK ***(Academic Qualification)***			
Nama Sijil / Kelayakan *(Certificate / Qualification obtained)*	Nama Sekolah Institusi *(Name of School / Institution)*	Tahun *(Year obtained)*	Bidang pengkhususan *(Area of Specialization)*
Bachelor of Science (BSc. Hons)	Universiti Putra Malaysia	2002	Industrial Chemistry
Master of Science (MSc.)	Universiti Putra Malaysia	2006	Material Chemistry
Doctor of Philosophy (PhD)	Hokkaido University, Japan	2010	Chemical Process Engineering

C. KEMAHIRAN BAHASA *(Language Proficiency)*					
Bahasa / *Language*	Lemah *Poor (1)*	Sederhana *Moderate (2)*	Baik *Good (3)*	Amat Baik *Very good (4)*	Cemerlang *Excellent (5)*
English			√		
Bahasa Melayu				√	
Chinese					
Lain-lain *(other):*					

D. PENGALAMAN SAINTIFIK DAN PENGKHUSUSAN *(Scientific experience and Specialisation)*				
Organization	*Position*	*Start Date*	*End Date*	*Expertise*
Fritz-Haber-Institut der Max-Planck-Gesellschaft Berlin, Germany	Exchange Student	Nov 2003	Nov 2004	Research project on Methanol Steam Reforming
Hokkaido University, Japan	Research Assistant	Nov 2009	March 2010	Adsorption Analysis and PEM fuel cell catalysts

E. PEKERJAAN *(Employment)*				
Majikan / *Employer*	Jawatan / *Designation*	Jabatan / *Department*	Tarikh lantikan / *Start Date*	Tarikh tamat / *Date Ended*
Attractive Avenue Sdn. Bhd. (Ginvera Marketing Group)	QC Chemist	R&D Laboratory	June 2002	Nov 2002
Faculty of Science, UPM	Research Assistant	Chemistry	May 2003	May 2005
Faculty of Science, UPM	Tutor	Chemistry	April 2006	March 2007
Faculty of Science, UPM	Senior lecturer	Chemistry	May 2010	

F. ANUGERAH DAN HADIAH *(Honours and Awards)*				
Name of awards	*Title*	*Award Authority*	*Award Type*	*Year*
Graduate Chemistry Medalists	Best Chemistry Student (Graduan Terbaik Keseluruhan Jabatan Kimia)	Faculty of Science, Universiti Putra Malaysia	National	2001/2002
Research, Invention and Innovation Exhibition	Silver medalists for PRPI poster exhibition	Universiti Putra Malaysia	National	2003
Research, Invention and Innovation Exhibition	Bronze medalists for PRPI poster exhibition	Universiti Putra Malaysia	National	2005
17th Industrial Chemistry Seminar	Best Poster (Overall)	Faculty of Science, Universiti Putra Malaysia	National	2014
18th Industrial Chemistry Seminar	Best Poster (Content) – 3rd place	Faculty of Science, Universiti Putra Malaysia	National	2015

19th Industrial Chemistry Seminar	Best Poster (Presentation) – 2nd place	Faculty of Science, Universiti Putra Malaysia	National	2016
20th Industrial Chemistry Seminar	Best Poster (Overall)	Faculty of Science, Universiti Putra Malaysia	National	2017
International Conference On Catalysis 2018 (iCAT2018)	Best Poster Award	Faculty of Science, Universiti Putra Malaysia	International	2018
Non-Academic Awards				
Awards of Merit				

G. SENARAI PENERBITAN (Sila masukan nama pengarang, tajuk, nama jurnal, jilid, muka surat dan tahun diterbitkan) *(List of publications – author (s), title, journal, volume, page and year published)*

Journal

1. "Optimization and Characterization of Mesoporous Sulfonated Carbon Catalyst and Its Application in Modeling and Optimization of Acetin Production", Nda-Umar, U.I., Ramli, I., **Muhamad, E.N**., Azri, N., Taufiq-Yap, Y.H.- Molecules 25, 22 (2020).

2. "Influence of heterogeneous catalysts and reaction parameters on the acetylation of glycerol to acetin: A review", Nda-Umar, U.I., Ramli, I.B., **Muhamad, E.N.**, Amadi, U.F., Taufiq-Yap, Y.H. - Applied Sciences 10, 20 (2020)1-34, 7155.

3. "K_2O doped dolomite as heterogeneous catalyst for fatty acid methyl ester production from palm oil", Yahaya, M., Ramli, I., **Muhamad, E.N.**, Nda-Umar, U.I., Taufiq-Yap, Y.H. – Catalysts 10,7 (2020) 1-17, 791.

4. "Synthesis and characterization of sulfonated carbon catalysts derived from biomass waste and its evaluation in glycerol acetylation", Nda-Umar, U.I., Ramli, I., **Muhamad, E.N.**, Taufiq-Yap, Y.H., Azri, N. - Biomass Conversion and Biorefinery (2020).

5. "Free solvent oxidation of molecular benzyl alcohol by newly synthesized AuPd/titania catalysts", JamJam, N.M., Taufiq Yap, Y.H., **Muhamad, E.N.**, Izham Saiman, M., Saleh, T.A. - Inorganic Chemistry Communications 107 (2019) 107471.

6. "Tansesterification of rendered chicken fats catalyzed by waste chicken eggshells for biodiesel production", **Ernee Noryana Muhamad**, Dian Wahyuni Md Bahrin, Khairunisa Mokhtar – Asian Journal of Green Chemistry, Vol. 4, 4 (2020) 367-378 ISSN: 2588-4328 (online), ISSN: 2588-5839 (printed).

	7. "Thermogravimetric analysis of slow pyrolysis in chicken skin waste", Anuar, N.F., Ma'Amor, A., Mahmud, H.N.M.E., Musa, M., **Muhamad, E.N.**- Energy Sources, Part A: Recovery, Utilization and Environmental Effects (2019). 8. "Review - An Overview of Recent Research in the Conversion of Glycerol into Biofuels, Fuel Additives and other Bio-Based Chemicals", Usman Idris Nda-Umar, Irmawati Ramli, Yun Hin Taufiq-Yap, **Ernee Noryana Muhamad** – Catalysts 9, 15 (2019) 1-47. ISSN: 2073-4344. (Q2) 9. "Response surface methodology: photodegradation of methyl orange by CuO/ZnO under UV light irradiation", Siti Nur Surhayani Jefri, Abdul Halim Abdullah, **Ernee Noryana Muhamad** – Asian Journal of Green Chemistry, 3 (2019) 271-287. ISSN: 2588-4328. 10. "Functionalizing Graphene Oxide with Alkylamine by Gamma-ray Irradiation Method", Noraniza Ahmad Daud, Buong Woei Chieng, Nor Azowa Ibrahim, Zainal Abidin Talib, **Ernee Noryana Muhamad** and Zurina Zainal Abidin. – Nanomaterials, 7, 135 (2017) 1-15. ISSN: 2079-4991. (Q2) 11. "Preparation and Characterization of Modified Calcium Oxide from Natural Sources and Their Application In The Transesterification of Palm Oil", Aqliliriana, C.M**., Ernee, N.M**., Irmawati, R. – Int. J. of Scientific & Tech. Research, 4 (11), 168-175 (2015). ISSN: 2277-8616. 12. "Evidence of nonelectrochemical shift reaction on a CO-tolerant high entropy state Pt-Ru anode catalyst for reliable and efficient residential fuel cell systems", Takeguchi Tatsuya, Yamanaka Toshiro, Asakura Kiyotaka, **Muhamad Ernee Noryana**, Uosaki Kohei, and Ueda Wataru – Journal of the American Chemical Society, 134 (35), 14508 (2012). ISSN: 0002-7863. (Q1)

13. "Physicochemical studies of Ni, Co, and Pt promoted MoVNbOx catalysts synthesized by impregnation method", Wong, M.S., Irmawati, R., Ahangar, H.A., Yap, Y.H.T., Tan, Y.P., **Muhamad, E.N.** – *Oriental Journal of Chemistry* 28 (1), 59 (2012). ISSN: 0970 - 020X.

14. "Effect of Addition of SnO_x to the Pt_2Ru_3/C Catalyst on CO Tolerance for the Polymer Electrolyte Fuel Cell," Guoxiong Wang, Tatsuya Takeguchi, **Ernee Noryana Muhamad**, Toshiro Yamanaka, and Wataru Ueda – *J. Electrochem. Soc.* 158 B448 (2011). ISSN: 0013-4651. (Q1)

15. "Investigation of grain boundary formation in PtRu/C catalyst obtained in a polyol process with post-treatment", Guoxiong Wang, Tatsuya Takeguchi, **Ernee Noryana Muhamad**, Toshiro Yamanaka, Wataru Ueda – *International Journal of Hydrogen Energy*, 36 (5) 3322 (2011). ISSN: 0360-3199. (Q1)

16. "Effect of preparation atmosphere of Pt–SnOx/C catalysts on the catalytic activity for H_2/CO electro-oxidation" Guoxiong Wang, Tatsuya Takeguchi, Toshiro Yamanaka, **Ernee Noryana Muhamad**, Motofumi Matsuda and Wataru Ueda – *Applied Catalysis B – Environmental*, 98 (1-2) 86 (2010). ISSN: 0926-3373. (Q1)

17. "Particle size dependence of CO tolerance of anode PtRu catalysts for polymer electrolyte fuel cells", Toshiro Yamanaka**,** Tatsuya Takeguchi, Guoxiong Wang, **Ernee Noryana Muhamad** and Wataru Ueda, *J. Power Sources*, 195 (19) 6398 (2010). ISSN: 0378-7753. (Q1)

18. "A Comparative Study of Variously prepared Carbon-Supported Pt/MoO_x Anode Catalysts for a Polymer Electrolyte Fuel Cell"; **Ernee Noryana Muhamad**, Tatsuya Takeguchi, Feng Wang, Guoxiong Wang, Toshiro Yamanaka, Wataru Ueda, *Journal of The Electrochemical Society*, 156 (11) B1361 (2009). ISSN: 0013-4651. (Q1)

19. "Preparation of Well-Alloyed PtRu/C Catalyst by Sequential Mixing of the Precursors in a Polyol Method"; Guoxiong Wang, Tatsuya Takeguchi, **Ernee Noryana Muhamad**, Toshiro Yamanaka, Masahiro Sadakane, Wataru Ueda, *Journal of The Electrochemical Society*, 156 (11) B1348 (2009). ISSN: 0013-4651. (Q1)

20. "Effect of SnO_2 Deposition Sequence in SnO_2-Modified PtRu/C Catalyst Preparation on Catalytic Activity for Methanol Electro-Oxidation"; Guoxiong Wang, Tatsuya Takeguchi, Yi Zhang, **Ernee Noryana Muhamad**, Masahiro Sadakane, Shen Ye, Wataru Ueda, *Journal of The Electrochemical Society*, 156 (7) B862 (2009). ISSN: 0013-4651. (Q1)

21. "Electrochemical Characteristics of Pd Anode Catalyst Modified

	22. with TiO_2 Nanoparticles in Polymer Electrolyte Fuel Cell"; **Ernee Noryana Muhamad**, Tatsuya Takeguchi, Guoxiong Wang, Yuri Anzai, Wataru Ueda, *Journal of The Electrochemical Society*, 156 (1) B32 (2009). ISSN: 0013-4651. (Q1) 23. "Comparative Study Of Cu/Zno Catalysts Derived From Different Precursors As A Function Of Aging", **E. N. Muhamad**, R. Irmawati, Y.H. Taufiq-Yap, A.H. Abdullah, B.L. Kniep, F. Girgsdies and T. Ressler, *Catalysis Today*, 131, 118 (2008). ISSN: 09205861. (Q2) 24. "Effect of Number of Washing on the Characteristics of Copper Oxide Nanopowders," **E. N. Muhamad**, R. Irmawati, A.H. Abdullah, Y.H. Taufiq-Yap and S.B. Abdul Hamid, *Malays. J. Analy. Sc*., 11(1) (2007) 294-301. ISSN: 1394-2506.
Books/Monographs	
Chapter in book	1. **Ernee Noryana Muhamad**, Khairunisa Mokhtar, Dian Wahyuni Md Bahrin (2018). Transesterification of palm oil catalyzed by various types of waste eggshells in different alcohol medium. *Emerging Themes In Fundamental and Applied Science Volume 2* (pg: 30-38). Selangor; UPM Press. eISBN 978-967-344-826-5. 2. **Ernee Noryana Muhamad**, Lee Zhien Huey, Nurazizah Othman. Preparation and characterization of platinum and palladium modified with metal oxide catalysts for polymer electrolyte membrane fuel cell (PEMFC). *Emerging Themes In Fundamental and Applied Science Volume 2* (pg: 146-153). Selangor; UPM Press. eISBN 978-967-344-826-5.
Proceedings	1. "Prospective of Pd/MO_x as Alternative Pt Anode Catalyst for Polymer Electrolyte Fuel Cell", **Ernee Noryana Muhamad**, Tatsuya Takeguchi, Guoxiong Wang, Toshiro Yamanaka, Wataru Ueda – *ECS Transaction*, 28(23) 253 (2010). ISSN: 1938-6737. 2. "In Situ Observation of CO Oxidation by Anode PtRu/C Catalysts for Polymer Electrolyte Fuel Cells" Toshiro Yamanaka, Tatsuya Takeguchi, Guo-Xiong Wang, **Ernee Noryana Muhamad** and Wataru Ueda – *ECS Transaction*, 28(23) 283 (2010). ISSN: 1938-6737. 3. "Improving CO Tolerance of Pt_2Ru_3/C Catalyst by the Addition of Tin Oxide", Guoxiong Wang, Tatsuya Takeguchi, Toshiro Yamanaka, **Ernee Noryana Muhamad** and Wataru Ueda –*ECS Transaction*, 28(23) 307 (2010). ISSN: 1938-6737. 4. "Structures and CO Tolerance of Anode PtRu Catalysts for Polymer Electrolyte Fuel Cells"; Tatsuya Takeguchi, Toshiro Yamanaka, Guoxiong Wang, **Ernee Noryana Muhamad**, Wataru Ueda, *ECS Transaction*, 25(1) 1319 (2009). ISSN: 1938-6737.

	5. "The Effect of Modification of PtRu Anode Catalyst with SnO_2 on CO Tolerance"; Tatsuya Takeguchi, Guoxiong Wang, **Ernee Noryana Muhamad**, Wataru Ueda, *ECS Transaction*, 16 (2) 713 (2008). ISSN: 1938-6737. 6. "Influence of number of washing on the characteristic of nanocrystalline copper oxide powders", I. Ramli, **E.N. Muhamad**, A.H. Abdullah, Y.H. Taufiq-Yap and S.B. Abdul Hamid, *Nanotech 2004*, vol. 3, (2004) 99-102, ISBN: 0-9728422-9-2.
Other publications	
Computer software	

H. PROJEK PENYELIDIKAN TERDAHULU*(Past Research Project)*

Project No.	*Project Title*	*Role*	*Year*	*Source of fund*	*Status*
05-05-10-1067RU	Transesterification of Microalgae Oil over Metal Oxide Catalysts for Biodiesel Fuel Production	Project leader	2010-2012	RUGS	Completed
01-02-13-1343FR	Electrochemical Characteristics and Performance of Carbon Supported Pd-Containing Catalysts as Anode for PEMFCs	Project leader	2013-2015	FRGS	Completed
02-01-15-1706FR	Effects of Dopants on the Oxygen Mobility of Molybdenum Vanadium –Based Oxide Catalysts	Co-researcher	2015-2017	FRGS	Completed
GP-IPB/2016/9490402	Preparation and Characterization of Novel Solid Acid Catalysts from Agricultural Wastes via Hydrothermal Techniques	Co-researcher	2016-2018	Putra Fund (IPB, UPM)	Completed
GP-PI/2016/9476700	Applications of Metal Oxides with Orthorhombic Structure for Value-Added Natural Gas Utilisation	Co-researcher	2016-2018	Innovative Fund (UPM)	Completed
GP-IPS/2017/9548100	Facile Synthesis of Nitrogen-Doped Graphene as Efficient Non-Precious Metal Electrocatalysts for Oxygen ereduction Reaction (ORR) in Fuel Cells	Project Leader	2017-2019	GP-IPS (UPM)	Completed

UPM/800-3/3/1/9629300	Synthesis of Visible-Light Driven Ag_3PO_4/Nb_2O_5 Heterojuction Photocatalyst for the Degradation of Dyes	Co-researcher	2018-2020	GP-Impak	Ongoing