

**SAZLINDA KAMARUZAMAN**

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#### **CURRENT POSITION**

**Universiti Putra Malaysia**  
Senior Lecturer  
2014-Present

#### **EDUCATION**

**Universiti Teknologi Malaysia**  
Doctor of Philosophy (PhD.) in Chemistry (2014)  
Thesis: Miniaturized Sample Preparation Techniques Using MCM-41-Based Materials in the Analysis of Selected Non-Steroidal Anti-Inflammatory and Anti-Depressant Drugs.

**Universiti Teknologi Malaysia**  
Bachelor of Science (Hons) Pure Chemistry  
Thesis: Application of High Performance Liquid Chromatography for Analysing Vinpocetine in Urine Sample

#### **GRANTS AND AWARDS**

**Research Grant Scheme (FRGS), 2016-2018 (Project Leader)**  
Research Project: An Investigation of Adsorption Mechanism of Surface Modified Molecularly Imprinted Polymer Based on Graphene Oxide towards Neopterin

**Universiti Putra Malaysia-Putra Grant, 2015-2017 (Project Leader)**  
Research Project: Effervescence-Assisted Mesoporous Silica Tablet Dispersion for the New Approach on On-Site Dispersive Micro-Solid Phase Extraction.

**Research Grant Scheme (FRGS), 2015-2017 (Co-researcher)**

Research Project: A Study on Molecular Interactions of Magnetic Hollow Porous Molecularly Imprinted Polymer toward Sulfonamide Antibiotics.

**Research Grant Scheme (FRGS), 2016-2018 (Co-researcher)**

Research Project: Synthesis of polar hyper-crosslinked microspheres of poly(acrylonitrile-co-divinylbenzene-co-vinylbenzylchloride) as sorbents in solid phase extraction of pharmaceutical residues from domestic wastewater

**IRU-MRUN Collaborative Research Programme, 2015-2016 (Co-researcher)**

Research Project: Fabrication of Graphene-Based Flexible Supercapacitor from Electrospun Nanofibers.

**ANALIS award**

PhD thesis category 2014

**24<sup>th</sup> International Invention Innovation & Technology Exhibition (ITEX), Kuala Lumpur, Malaysia 2013**

Gold Medal

Invention: "TM4: Mixed Matrix Membrane Microextraction System for Drugs Analysis".

Inventors: Mohd Marsin Sanagi, Peter C. Hauser, See Hong Heng, Salasiah Endud, Wan Aini Wan Ibrahim, **Sazlinda Kamaruzaman**.

**14<sup>th</sup> Industrial Art and Technology Exhibition (INATEX), Johor Baharu, Malaysia, 2012**

Silver Medal

Invention: "TM4: Mixed Matrix Membrane Microextraction System for Drugs Analysis".

Inventors: Mohd Marsin Sanagi, Peter C. Hauser, See Hong Heng, Salasiah Endud, Wan Aini Wan Ibrahim, **Sazlinda Kamaruzaman**.

**Universiti Teknologi Malaysia, Johor Baharu, Malaysia, 2010**

Dean List Award, 45<sup>th</sup> Convocation Ceremony (Bachelor Degree)

**RESEARCH EXPERIENCE**

**Chemistry Department, University of Basel, Switzerland, 2012**

Attachment student under the supervision of Prof. Peter C. Hauser

- Development of mixed matrix membrane for microextraction
- Characterization of mixed matrix membrane using FESEM, XRD, FTIR

**TEACHING EXPERIENCE**

**Department of Chemistry, Faculty of Science, Universiti Putra Malaysia**

Undergraduate Subject

- Chemical Spectroscopy
- Physical and Inorganic Chemistry
- General Chemistry
- Chemical Technology Principles (Topic: Extraction, Adsorption and Separation)
- Analytical Chemistry

## SUPERVISION EXPERIENCE

| Program Level |   | Name of Students and Title of Thesis/Project   | Main Supervisor/Co-supervisor | Status (Completed/Ongoing) |
|---------------|---|--|-------------------------------|----------------------------|
| <b>Master</b> | 1 | <b>Noor A'shiqin bt Jaafar @ Mustafa</b><br>Effervescence-assisted mesoporous silica tablet dispersion for the new approach on on-site dispersive micro-solid phase extraction                                   | Main Supervisor               | On-going                   |
|               | 2 | <b>Khoo Wai Chat</b><br>Synthesis and characterization of a graphene oxide-molecularly imprinted polymer (GO-MIP) for the detection of neopterin   | Main Supervisor               | On-going                   |
|               | 3 | <b>Nayma Mohamed Asalmi Alamin</b><br>The removal of Cu,Ni,Pb ions from water using Amberlyst15 ion exchanger resin as adsorbent.  | Co-Supervisor                 | Completed                  |
|               | 4 | <b>Nur Nida Syamimi Subri</b><br>Synthesis of Poly(Acrylonitrile (An)-Co-Divinylbenzene (Dvb)-Co-Vinylbenzylchloride (Vbc))Hypercrosslinked Terpolymer, and Its Preliminary Analysis to Capture Pharmaceuticlas. | Co-Supervisor                 | On-going                   |
|               | 5 | <b>Farhana Syakirah Ismail</b><br>Synthesis and Chemical Modification of Acrylonitrile Based on Porous Polymer as Potential Adsorbent to Capture Polar Analytes  | Co-Supervisor                 | On-going                   |
|               | 6 | <b>Muhammad Nur'Hafiz Rozaini</b><br>Electromembrane extraction combined with high performance liquid chromatography of acidic and basic drugs in biological fluids  | Co-Supevisor (USM)            | On-going                   |
| <b>PhD</b>    | 1 | <b>Aisha Nawaf Al Biawi</b><br>Synthesis and characterization of new polymer as sorbent in DNA microextraction approach  | Co-Supervisor                 | On-going                   |
|               | 2 | <b>Hamra Assyaima</b><br>Synthesis and characterization of solid state single fiber supercapacitor.  | Co-Supervisor                 | On-going                   |
|               | 3 | <b>Nusiba Mohammed Modawe</b><br>Detection of Uric Acid and Heavy Metals by Using Carbon Nanofiber/Reduced Graphene Oxide/Conducting Polymer Nnanocomposite Modified Galassy Carbon Electrode                    | Co-Supervisor                 | On-going                   |

|                 |   |  |                 |           |
|-----------------|---|--|-----------------|-----------|
| <b>Bachelor</b> | 1 | <b>Shalini A/P Manian</b><br>Application of Multiwalled Carbon Nanotubes as Dispersive Solid Phase Extraction Sorbent for Preconcentration of Trace Copper in Water Samples  | Main supervisor | Completed |
|                 | 2 | <b>Nik Nur Shafiqka Ilyani Rumaizi</b><br>Trace monitoring of copper and cadmium ions in food and water samples by AAS after preconcentration with solvent assisted dispersive solid phase extraction  | Main supervisor | Completed |
|                 | 3 | <b>Izzati Fikrah</b><br>Cellulose membrane based microextraction combined with AAS for the determination of trace amounts of copper and cadmium ions in environmental samples  | Main supervisor | Completed |
|                 | 4 | <b>Nurul Shafika bt. Mohd Sukri</b><br>Application of Mesoporous Silica Tablet as Micro Solid Phase Extraction Sorbent for Preconcentration of Trace Copper in Environmental Samples   | Main supervisor | Completed |
|                 | 5 | <b>Wan Aida Nabilah Wan Azman</b><br>Agarose film using micro solid phase extraction for polyaromatic hydrocarbons in water samples  | Main supervisor | Graduated |
|                 | 6 | <b>Khoo Wai Chat</b><br>Dispersive micro solid-phase extraction (DMSPE) using multi-walled carbon nanotubes (MWCNTs) for determination of selected non-steroidal anti-inflammatory drugs (NSAIDs) in biological and environmental samples      | Main supervisor | Graduated |
|                 | 7 | <b>Nurfaziana Binti Azmi</b><br>Sonication-assisted dispersive liquid-liquid microextraction based on the solidification of floating organic droplet by using gas chromatography for determination of polyaromatic hydrocarbon in water sample | Main supervisor | Completed |
|                 | 8 | <b>Mohd Haziq Bin Redhuan</b><br>New liquid-based microextraction method for the determination of triazine herbicides in fruits and vegetables samples   | Main supervisor | Completed |

## CONFERENCE/SEMINAR/WORKSHOP PRESENTATIONS

1. Poster presentation at the 28<sup>th</sup> Regional Symposium of Malaysian Analytical Sciences (SKAM26), Ipoh, Perak, 17-20 August 2015. Title New Liquid-Based Microextraction Technique for the Determination of Triazine Herbicides in Fruit Samples

2. Participation in 18<sup>th</sup> Industrial Chemistry Seminar (SKI XVIII), 9<sup>th</sup> June 2015, Putrajaya International Convention Centre (PICC).
3. Participation in 17<sup>th</sup> Industrial Chemistry Seminar (SKI XVII), 24<sup>th</sup> June 2014, Putrajaya International Convention Centre (PICC).
4. Participation in “Kursus Outcome Based Education Series 1”, 27<sup>th</sup> February 2014, Bilik Seminar Al-Farabi, FEM, UPM.
5. Participation in “Kursus Mind Mapping for Teaching”, 25<sup>th</sup> February 2014, Makmal Komputer, IPSAS, UPM.
6. Participation in “Kursus Make Learning Fun: Teaching with Putra LMS, 12-13<sup>th</sup> February 2014, Makmal Exa & Zeta, iDEc, UPM.
7. Participation in “Kursus Innovative Teaching with Technology An Introduction to What Why and How”, 11<sup>th</sup> February 2014, Bilik Seminar Ibnu Sina, Pusat Islam, UPM.
8. Participation at the 15<sup>th</sup> Industrial Art and Technology Exhibition (INATEX) 2013, 2-4<sup>th</sup> October 2013, Dewan Sultan Iskandar, UTM.
9. Oral presentation at the 26<sup>th</sup> Regional Symposium of Malaysian Analytical Sciences (SKAM26), Hilton Hotel, Kuching, Sarawak, 4-5 December 2013. Title: Sonication-assisted emulsification microextraction followed by magnetic solid phase extraction for rapid and efficient determination of anti depressant drugs in water and urine samples.
10. Paper presented at the 26<sup>th</sup> Regional Symposium of Malaysia Analytical Sciences (SKAM26), Hilton Hotel, Kuching, Sarawak, 4-5 December 2013. Title: Nanomaterial-based microextraction techniques in the analysis of pollutants in aqueous samples.
11. Participation at the 24<sup>th</sup> International Invention, Innovation & Technology Exhibition (ITEX2013), 9-11<sup>th</sup> May 2013, Kuala Lumpur, Malaysia.
12. Participation at 1-Day Course on Gas Chromatography Method Development and Troubleshooting, 5<sup>th</sup> March 2013, Department of Chemistry, Faculty of Science, Universiti Teknologi Malaysia.
13. Oral presentation at the 4<sup>th</sup> International Conference for Young Chemists (ICYC 2013), Bayview Hotel, Georgetown, Penang, 30 January-01 February 2013. Title: Magnetite solid phase extraction based on magnetite-mesoporous material for the determination of anti-depressant drugs in biological fluids.
14. Participation at 4<sup>th</sup> Successful Liquid Chromatography Separation Strategies (CSLCSS 2012), 10-11<sup>th</sup> October 2012, Department of Chemistry, Faculty of Science, Universiti Teknologi Malaysia.
15. Oral presentation at the 17<sup>th</sup> Malaysian Chemical Congress (17 MCC), Putra World Trade Centre, Kuala Lumpur, 15-17 October 2012. Title: Thiol-MCM-41-mixed matrix membrane: Preparation, characterization and microextraction application.
16. Keynote presentation, 17<sup>th</sup> Malaysian Chemical Congress, (17MCC) 15-17 October 2012, Putra World Trade Centre (PWTC), Kuala Lumpur, Malaysia. Title: Nanomaterial-based microextraction techniques in the analysis of aqueous samples.
17. Participation at 1-Day Course on HPLC Method Development and Troubleshooting, 23<sup>rd</sup> February 2012, Ibnu Sina Institute for Fundamental Studies, Universiti Teknologi Malaysia.
18. Oral presentation at the 24<sup>th</sup> Regional Symposium of Malaysian Analytical Sciences (SKAM), One Hotel Helang, Langkawi, 21-23<sup>th</sup> November 2011. Title: Analysis of non-steroidal anti-inflammatory drugs in aqueous sample by high performance liquid chromatography.
19. Participation at 3<sup>rd</sup> Successful Liquid Chromatographic Separation Strategies, 13<sup>th</sup> October 2011, Department of Chemistry, Faculty of Science, Universiti Teknologi

Malaysia.

20. Participation at Kursus Peralaksanaan Pengajian Siswazah, 13-16<sup>th</sup> June 2011, Fakulti Ekologi Malaysia, UPM.
21. Participation at Bengkel Penggubalan Master Sains Forensik, 23-24<sup>th</sup> May 2011, Hotel Residence Uniten, Bangi.
22. Oral presentation at the 3<sup>rd</sup> Junior Chemists Colloquium, Ibnu Sina Institute for Fundamental Sciences Studies, UTM, 18-19<sup>th</sup> January 2011.

#### SELECTED PUBLICATIONS (JOURNALS AND BOOK CHAPTER)

1. **Kamaruzaman, S.**, Sanagi, M.M., Wan Ibrahim, W.A., Endud, S. and Yahaya, N. (2013). MCM-41 solid phase membrane tip extraction combined with liquid chromatography for the determination of non-steroidal anti-inflammatory drugs in human urine. *J. Chromatogr. B.* 940, 59-65. (Impact factor: 2.694)
2. **Kamaruzaman, S.**, Hauser, P.C., Sanagi, M.M., Wan Ibrahim, W.A., Endud, S. and See, H.H. (2013). A simple microextraction and preconcentration approach based on a mixed matrix membrane. *Anal. Chim. Acta.* 783, 24-30. (Impact factor: 4.517)
3. Yahaya, N., Sanagi, M.M., Hadi, N., Wan Ibrahim, W.A. and **Kamaruzaman, S.** (2014). Solid-phase membrane tip extraction combined with liquid chromatography for the determination of azole antifungal drugs in human plasma. *Anal. Methods.* 6 (10), 3375-3381. (Impact factor: 1.938)
4. Sanagi, M. M., Hussain, I., Wan Ibrahim, W.A., Yahaya, N., **Kamaruzaman, S.**, Abidin, N. N. Z. and Ali, I. (2014). Microextraction of Xenobiotics and biomolecules from different matrices on nanostructures. *Sep. Purif. Rev.* (Impact factor: 3.316)
5. Mohd Marsin Sanagi, Mohamad Nazirul Muzakkir Mat Jais, **Sazlinda Kamaruzaman**, Wan Aini Wan Ibrahim, Umair Baig, (2015). Multi-walled carbon nanotubes-agarose gel micro-solid phase extraction for the determination of triazine herbicides in water samples, *Anal. Methods.* (Impact factor: 1.938)
6. Noorfatimah Yahaya, Mohd Marsin Sanagi, Noorizan Abd Aziz, Wan Aini Wan Ibrahim, Hadi Nur, Loh Saw Hong and **Sazlinda Kamaruzaman**. (2016) A rapid MCM-41 dispersive micro-solid phase extraction coupled with LC/MS/MS for quantification of ketoconazole and voriconazole in biological fluids, *Biomedical Chromatography.* 1-8. (Impact factor: 1.723).
7. **Sazlinda Kamaruzaman**, Norfazilah Muhamad, Aemi Syazwani Abdul Keyon and Mohd Marsin Sanagi, Book Title: *Advances in Solid Phase Extraction*, 2016.
8. Hamra Assyaima Abdul Bashid, Hong Ngee Lim, **Sazlinda Kamaruzaman**, Suraya Abdul Rashid, Robiah Yunus, Nay Ming Huang, Chun Yang Yin, Mohammad Mahbubur Rahman, Mohammednoor Altarawneh, Zhong Tao Jiang and Pandikumar Alagarsamy, Electrodeposition of Polypyrrole and Reduced Graphene Oxide onto Carbon Bundle Fibre as Electrode for Supercapacitor, *Nanoscale Research Letters* 12(1) · December 2017.
9. Muhammad Nur' Hafiz Rozaini, Noorfatimah Yahaya, Bahruddin Saad, **Sazlinda Kamaruzaman**, Nor Suhaila Mohamad Hanapi Rapid ultrasound assisted emulsification micro-solid phase extraction based on molecularly imprinted polymer for HPLC-DAD determination of bisphenol A in aqueous matrices, *Talanta* 171:242-249 · August 2017.
10. **Sazlinda Kamaruzaman**, Mohd Marsin Sanagi, Noorfatimah Yahaya Wan Aini Wan Ibrahim, Salasiah Endud, Wan Nazihah Wan Ibrahim, Magnetic Micro-Solid Phase Extraction Based On Magnetite-Mcm-41 Combined With Gas Chromatography-Mass

Spectrometry For The Determination Of Anti-Depressant Drugs In Biological Fluids,  
Journal of Separation Science, 2017, *Accepted for publication*