

CURRICULUM VITAE

PERSONAL DETAILS



ChM. DR. AEMI SYAZWANI ABDUL KEYONDepartment of Chemistry Faculty of Science

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<u>aemi@utm.my</u>

ACADEMIC QUALIFICATION

Qualification (Field), Institution, Year

PhD. (Physical Science (Chemistry)), University of Tasmania, Australia, 2014.

MSc. (Chemistry), Universiti Teknologi Malaysia, 2011

BSc. (Industrial Chemistry), Universiti Teknologi Malaysia, 2008

PROFESSIONAL MEMBERSHIP

Institut Kimia Malaysia (IKM), Membership No.: M/3060/5875/10

Malaysian Analytical Sciences Society (ANALIS), Membership No: Life Member L305

EXPERTISE

Separation Science (capillary electrophoresis, chromatography, off-line and on-line micro sample preconcentration)

ADMINISTRATIVE EXPERIENCE

(Including Program Coordinator and Head of Panel) (Position, Year)

Head of Panel (Analytical Chemistry), 2020-2023

Deputy Quality Manager Pusat Perkhidmatan Analisis Fakulti Sains UTM, 2019-current

TEACHING EXPERIENCE

Undergraduate Course

Analytical Chemistry – Principles of Analytical Chemistry

Analytical Chemistry - Instrumental Analysis

Analytical Chemistry - Separation Methods

Analytical Chemistry - Quality Management Systems

Postgraduate Course

Advanced Analytical Chemistry
Forensic Chemistry
Forensic Analytical Instrumentation

POSTGRADUATE SUPERVISION

PhD Student

Name	Thesis Title	Year
	Intervening Toxic Metals Contamination In	2018-
Timothy Ali Gandu	Perna Viridis Mussels Reared In Pasir Gudang	current
	Coast A Crosssectional Study	
Gimba Joshua Dagil	Magnetic Nanoparticles Surface Modifications	2018-
_	As Effective Adsorbents For Heavy Metal	current
	Removal From Real And Wastewater	
	Environment Review Paper	

Master Student (By Research)

Name	Thesis Title	Year
Nur Shahz Ereena Binti Zulkifli	New Magnetic Hollow Porous Molecularly	18 Apr
	Imprinted Polymer As Sorbent For Magnetic	2019 -
	Micro Solid Phase Extraction Of Anticancer	current
	Drug	
Anis Nur Shasha Bt Abdul Halim	Development Of An Automated Portable	03 Mar
	Photometer Based On Arduino Microcontroller	2020 -
	System For Heavy Metals Analysis	current

Master Student (By Mixed Mode)

Name	Dissertation Title	Year
Siti Fatimah Osman	Extraction And Analysis Of Cypermethrin	2022-
	Pesticide In Forensic Blowfly C.Megacephala	current
	Larvae	
Farah Zafirah Binti Mohd	Development of DLLME-GC-FID method for	22 Jan
Badaruzaman	the analysis of BTEX in food and beverage	2019
	samples	
Nurul Syameem Binti Zainal	Investigation of acetaminophen in Brand X	1/2/2018
	Collected in Johor Bahru, Johor.	
Anusia A/P Selvaraju	Investigation of heavy metals in Unregulated	1/2/2018
	Face Whitening Cream Products Collected in	
	Johor Bahru, Johor.	
Amirah Farhan Binti Kamaruddin	Polypyrole-magnetic sorbent for MSPE of dyes	1/2/2017

POSTGRADUATE EXAMINER

(PhD/Master Thesis/Dissertation)

Name	Thesis/Dissertation Title	Year
Master Thesis and Dissertation		
Nuridayu Yusmaidi	Ultrasound-Assisted Extraction Of	2019
	Phytochemical Compounds From Moringa	
	Oleifera Lam Leaves	

Ling Sheau Jin	Effects Of Drying Methods On The Proximate Composition Of Chrysomya Larvae Reared On Trash Fish	2017
Marina Musa	Graphene-Magnetite as magnetic solid phase extraction absorbent for protocatechuic and 4-hydroxybenzoic acids in stingless bee honey	2017
Ayuba Markus	Magnetite-sporopollenin- graphene oxide as magnetic solid phase extraction adsorbent for determination of selected polar organophosphorus pesticides in selected vegetables	2017
Nurul Asma Salsabila bt Mohamad Alias	Chemometric discrimination of bleached and dye human scalp hair using ATR-FTIR	2017
Nurul Nadhirah Nasir	Analysis Of Cuticular Hydrocarbon Of Pupal Cases Of Chrysomya Megachepala (Fabricius) And Its Possible Use For Estimating Post- Mortem Interval	2017
Mohamed Inas Abdul Latheff	Analysis of cocaine from saliva using GCMS via liquid-liquid extraction	2019
Siti Noratika Ahmad	Counterfeit brand X 500 mg paracetamol tablet and its discrimination using FTIR and chemometric techniques	2018

RESEARCH PROJECT

Project Title, Project Leader/Member	Grant	Amount	Year
Synthesis Of Smart Magnetic Hollow	FRGS	45,000	01/01/2019
Porous Molecularly Imprinted Polymer			
Nanosphere For Molecular Recognition			
And Interaction With Anti-Cancer Drugs.			
Development Of An Automated Portable	UTM	40,000	01/03/2020
Photometer Based On Arduino	Shine		
Microcontroller System For Chemical			
Analysis			
Synthesis And Mechanistic Study Of	UTMFR	63,000	01/01/2020
Calcium Oxide-Based Catalyst On The			
Chelation Of Toxic Heavy Metals In Perna			
Viridis Mussel			
Development Of Synthetic Organic-	RUG TIER 1	50,000	01/05/2015
Inorganic Polymeric			
Composite/Nanocomposite Adsorbents			
For Removal Of Hazardous			
Environmental Pollutants From Textile			
Industry Wastewater			
Cross-Sectional Evaluation Of Heavy	RUG TIER 1	40,000	01/07/2017
Metals Contaminations In Mussels,			
Sediments And Seawater In Relation To			
Johor Port 2017 Oil Spill In Pasir Gudang			
Coast: Its Possible Health Implications.			
Electrokinetic Supercharging For On-Line	PAS	20,000	01/09/2015
Preconcentration Of Endocrine-Disrupting			
Chemicals In Water Samples			

Traceability Of Food Safety Hazards And Critical Point Along The Supply Chain Of	MRUN	248,504	01/01/2019
Seafood Industry In Malaysia Synthesis And Investigation Of Highly Efficient Magnetite- Sporopollenin-	FRGS	128,000	01/09/2019
Graphene Oxide Sorbent For Hydroxymethyl Furfural As Quality Parameter Indicator Of Stingless Bee			
Honey			
Highly Sensitive And Selective Tannic Acid-Silica Coated Magnetite Solid Phase Extraction Sorbent For Metal Ions And Phenolic Acids In Stingless Bee Honey	UTMFR	63,000	01/01/2020
Synthesis, Characterization And Mechanistic Studies Of Bifuntional Alkaline Modified Chromium Catalysts For Biodiesel Production Of Waste Cooking Oil	UTMFR	70,000	01/01/2020
Emerging Contaminants Analysis From Aqueous Samples Using New Magnetic Composite Based On Sporopollenin Modified Cyanopropyl-Triethoxysilane	RUG TIER 1	50,000	01/02/2018
Program Kem Kecemerlangan Akademik Dan Pemantapan Sahsiah Murid Sek Men Keb Seri Pulai Perdana	NG	13,000	01/06/2018
Student's Attitude, Interest And Motivation Towards Chemistry Results From Active Learning Activities	NG	10,000	01/06/2019
Effect Of Interactive Learning Activities On Student's Interest, Motivation And Attitude Towards Chemistry	NG	10,000	04/06/2018
Women In STEM, Scientists Back To School	NG	200	14/06/2017
Synthesis Of Titania Inverse Opal Containing Single Gold Nanoparticle Per Void As Active Photocatalyst Under Visible Light Irradiation For The Degradation Of Organic Pollutant	FRGS	78,697.58	15/08/2017
Crude B-Glucosidase From Antagonist Trichoderma Harzianum As Green Fungicide Against Charcoal Rot Disease	RUG TIER 1	40,000	01/07/2017
Influence Of Citronella And Chlorpyrifos On Oviposition And Development Of Necrophagous Insects Infesting Rabbit Carcasses: Its Implications On Postmortem Interval	RUG TIER 1	40,000	30/06/2019
Science Innovation Challenge	NG	3,900	25/07/2016
Polypyrrole-Based Nanocomposite As Magnetic Solid Phase Extraction Sorbents For Rapid And Efficient Separation Of Polar Neonicotinoid Pesticides	FRGS	139,900	02/11/2015
Sol-Gel Silica Hybrid Organic-Inorganic Coating For Stir Bar Sorptive Extraction Of Pharmaceutically Active Compounds	RUG TIER 1	165,000	01/04/2011

Development Of Blood And Protein Stains	RUG TIER 2	20,000	01/07/2017
Detergent Using Biotechnology Based			
Cleaning Agents.			

PUBLICATION

(Journal Article, Book Chapter, Edited Book and Others)

Indexed Journal

Authors. Title (Year), Journal, Vol.: page number.

Ali, T.G., Abdul Keyon, A.S., Mahat, N.A. (2022). Occurrence of heavy metals and their removal in Perna viridis mussels using chemical methods: a review, Environmental Science and Pollution Research, 2022, 29(4), pp. 4803–4821

Semail, N.-F., Abdul Keyon, A.S., Saad, B., Yahaya, N., Chen, D.D.Y (2022). Simultaneous preconcentration and determination of sulfonamide antibiotics in milk and yoghurt by dynamic pH junction focusing coupled with capillary electrophoresis, Talanta, 2022, 236, 122833

Semail, N.-F., Noordin, S.S., Abdul Keyon, A.S., Aziz, M.Y., Yahaya, N (2021). A simple and efficient sequential electrokinetic and hydrodynamic injections in micellar electrokinetic chromatography method for quantification of anticancer drug 5-fluorouracil and its metabolite in human plasma Biomedical Chromatography, 2021, 35(5), e5050

Yee, L.Y., Asrul, N.M., Kamarulzaman, F.F., Huri, M.A.M., Abdul Keyon, A.S. (2017). Recent advances in agricultural waste-based adsorbents for the removal of pollutants in water (2017-2020), Malaysian Journal of Analytical Sciences, 2021, 25(3), pp. 415–431.

Nor Izzati Fikrah Aris, Norizah Abdul Rahman, Mohd Haniff Wahid, Noorfatimah Yahaya, Aemi Syazwani Abdul Keyon and Sazlinda Kamaruzaman (2020). Superhydrophilic graphene oxide/electrospun cellulose nanofibre for efficient adsorption of organophosphorus pesticides from environmental samples, Royal Society of Science, 7 (3), 1-19.

Anusia Selvaraju, Anis Nur Shasha Abdul Halim and Aemi Syazwani Abdul Keyon (2020), Determination of Selected Heavy Metals Concentration In Unregistered Face Whitening Creams Sold In Johor Bahru, Johor, Malaysia Using Inductively Coupled Plasma-Optical Emission Spectroscopy And Their Health Risk Assessment, Malaysian Journal of Analytical Science, 24(5), 670-681.

Nur Shahz Ereena Zulkifli, Nur Idayu Mat Ghani, Khairil Juhanni Abd Karim and Aemi Syazwani Abdul Keyon (2020), Field-Amplified Sample Injection-Capillary Zone Electrophoresis Method For The Analysis Of 5-Fluorouracil Anticancer Drug, Malaysian Journal of Analytical Science, 24(6), 1-9.

Nadhiratul-Farihin Semail Siti Salmah Noordin Aemi Syazwani Abdul Keyon Maisarah Nasution Waras Bahruddin Saad Sazlinda Kamaruzaman Nur Nadhirah Mohamad Zain Juzaili Azizi Mohd Yusmaidie Aziz Noorfatimah Yahaya, (2020), A simple and efficient sequential electrokinetic and hydrodynamic injections in micellar electrokinetic chromatography method for quantification of anticancer drug 5-fluorouracil and its metabolite in human plasma, Biomedical Chromatography, e5050.

Naji Arafat Mahat, Nor Kamilah Muktar, Razali Ismail, Fazira Ilyana Abdul Razak, Roswanira Abdul Wahab, Aemi Syazwani Abdul Keyon. 2018. Toxic metals in *Perna viridis* mussel and surface seawater in Pasir Gudang coastal area, Malaysia and its health implications, Environmental Science and Pollution Research, accepted 24 Aug 2018. **(Q2, Impact factor: 2.7, ISI and Scopus-indexed)**

Musa, M., Wan Ibrahim, W.A., Mohd Marsin, F., Abdul Keyon, A.S., Rashidi Nodeh, H. 2018. Graphene-Magnetite as Adsorbent for Magnetic Solid Phase Extraction Of 4-Hydroxybenzoic Acid And 3,4-Dihydroxybenzoic Acid in Stingless Bee Honey. Food Chemistry, 265, pp. 165-172. (Q1, Impact factor: 4.956, ISI and Scopus-indexed)

Mohd Marsin, F., Wan Ibrahim, W.A., Abdul Keyon, A.S., Sanagi, M.M. 2018. Box–Behnken Experimental Design for the Synthesis of Magnetite–Polypyrrole Composite for the Magnetic Solid Phase Extraction of Non-Steroidal Anti-inflammatory Drug Residues, Analytical Letters, 51(14), pp. 2221-2239 (Q3, Impact factor: 1.206, ISI and Scopus-indexed)

Abd Wahib, S.M., Wan Ibrahim, W.A., Sanagi, M.M., Kamboh, M.A., Abdul Keyon, A.S. 2018. Magnetic Sporopollenin-Cyanopropyltriethoxysilane-Dispersive Micro-Solid Phase Extraction Coupled with High Performance Liquid Chromatography for The Determination of Selected Non-Steroidal Anti-Inflammatory Drugs in Water Samples. Journal of Chromatography A, 1532, pp. 50-57 (Q1, Impact factor: 3.716, ISI and Scopus-indexed)

Rahman, I.N.A., Attan, N., Mahat, N.A., Jamalis, J., Keyon, A.S.A., Kurniawan, C. and Wahab, R.A., 2018. Statistical Optimization and Operational Stability of *Rhizomucor Miehei* Lipase Supported on Magnetic Chitosan/Chitin Nanoparticles for Synthesis of Pentyl Valerate. International Journal of Biological Macromolecules. 115, 680-695. ISSN: 0141-8130 (Q1, Impact factor: 3.671, ISI and Scopus-indexed)

Nyuk-Ting Ng, Amirah Farhan Kamaruddin, Wan Aini Wan Ibrahim, Mohd Marsin Sanagi, **Aemi S. Abdul Keyon** (2018) "Advances in Organic-Inorganic Hybrid-Sorbents for the Extraction of Organic and Inorganic Pollutants in Different Types of Food and Environmental Samples", Journal of Separation Science, 41(1), 195-208 (Q2, Impact factor: 2.56, ISI and Scopus-indexed)

Amirah Farhan Kamaruddin, Wan Aini Wan Ibrahim, Mohd Marsin Sanagi, **Aemi S. Abdul Keyon** (2017) "Polypyrrole-Magnetite Dispersive Micro-Solid-Phase Extraction Combined with Ultraviolet-Visible Spectrophotometry for The Determination of Rhodamine 6G And Crystal Violet in Textile Wastewater", Journal of Separation Science, 40(21), 4256-4263 **(Q2, Impact factor: 2.56, ISI and Scopus-indexed)**

Michael C. Breadmore, Alain Wuethrich, Feng Li, Sui Ching Phung, Umme Kalsoom, Joan M. Cabot, Masoomeh Tehranirokh, Aliaa I. Shallan, **Aemi S. Abdul Keyon**, Hong Heng See, Mohamed Dawod, Joselito P. Quirino (2017) "Recent advances in enhancing the sensitivity of electrophoresis and electrochromatography in capillaries and microchips (2014–2016)" *Electrophoresis*, 38, 33–59 33 (**Q2**, **Impact factor: 2.48**, **ISI and Scopus-indexed).**

Abdul Karim NI, Wan Ibrahim WA, Sanagi MM, **Abdul Keyon AS** (2016), "Online preconcentration by electrokinetic supercharging for separation of endocrine disrupting chemical and phenolic pollutants in water samples", Electrophoresis, 37(20), 2649-2656. **(Q2, Impact factor: 2.48, ISI and Scopus-indexed)**

Abdulganiyu Umar, Mohd Marsin Sanagi, Ahmed Salisu, Wan Aini Wan Ibrahim, Khairil Juhanni Abd Karim, **Aemi Syazwani Abdul Keyon** (2016), "Preparation and characterization of starch grafted with methacrylamide using ammonium persulphate initiator", Materials Letters, 185, 173–176. **(Q2, Impact factor: 2.44, ISI and Scopus-indexed**

Michael C. Breadmore, Ria Marni Tubaon, Aliaa I. Shallan, Sui Ching Phung, **Aemi S. Abdul Keyon**, Daniel Gstoettenmayr, Pornpan Prapatpong, Ala Alhusban, Leila Ranjbar, Hong Heng See, Mohamed Dawod, Joselito P. Quirino (2015), "Recent advances in enhancing the sensitivity of electrophoresis and electrochromatography in capillaries and microchips (2012–2014)", *Electrophoresis*, 36 (1), 36-61, **(Q2, Impact factor: 3.03, ISI and Scopus-indexed)**

Aemi S. Abdul Keyon, Rosanne Guijt, Chris Bolch, Michael C. Breadmore (2014) "Transient Isotachophoresis-Capillary Zone Electrophoresis for The Analysis of Paralytic Shellfish Toxins" Journal of Chromatography A, 1364, 295-302 (Q1, Impact factor: 4.2, ISI and Scopus-indexed)

Aemi S. Abdul Keyon, Rosanne Guijt, Chris Bolch, Michael C. Breadmore (2014) "Capillary Electrophoresis for The Analysis of Paralytic Shellfish Toxins: Comparison of Detection Methods" Electrophoresis, 35, 1496-1503, (Q2, Impact factor: 3.2, ISI and Scopus-indexed)

Non-Indexed Journal

Authors. Title (Year), Journal, Vol.: page number.

Book

Authors (Year). Title. Edition

Mohd Marsin Sanagi, Wan Aini Wan Ibrahim Azli Sulaiman, **Aemi Syazwani Abdul Keyon** (2017), "Principles of Chemical Analysis", Johor Bahru: Penerbit UTM.

Book Chapter

Other Publication

Aemi Syazwani Abdul Keyon and Nor Hidayah Abdullah (2017). Choice of Support Matrices for Immobilizing Enzymes in Roswanira Abdul Wahab (Ed), *Protocols and Methods for Developing Green Immobilized Nanobiocatalysts for Esterification Reactions: Volume 2*, Johor Bahru: Penerbit UTM.

Mohd Marsin Sanagi, Wan Aini Wan Ibrahim, **Aemi Syazwani Abdul Keyon** (2016), "Advance Solid Phase Extraction", Johor Bahru: Penerbit UTM.

Roswanira Abdul Wahab, Fahrol Zaman Huyop, Naji Arafat Mahat, Joazaizulfazli Jamalis, **Aemi Syazwani Abdul Keyon**, Nursyafreena Attan (2016), "Response Surface Methodology for Optimizing Enzyme Reactions: Design, Analysis and Interpretation", Johor Bahru: Penerbit UTM.

Roswanira Abdul Wahab, Fahrol Zaman Huyop, Naji Arafat Mahat, Joazaizulfazli Jamalis, **Aemi Syazwani Abdul Keyon**, Nursyafreena Attan (2016), "Protocols And Methods For Developing Green Immobilized Nanobiocatalysts For Esterification Reactions", Johor Bahru: Penerbit UTM.

JOURNAL EDITOR / EDITORIAL BOARD /ADVISORY PANEL	
Section editor, Malaysian Journal of Analytical Sciences (ANALIS)	

AWARDS AND RECOGNITION

(Name of Award, Institution, Year/Academic Session)

Faculty of Science Excellent Service Award 2018/Anugerah Perkhidmatan Cemerlang 2018
Citra Karisma 2015- Excellent Service Award 2014/Anugerah Perkhidmatan Cemerlang 2014

CONSULTATION

Consultation for Pusat Perkhidmatan Analisis Jabkimia FS UTM JB, 2019-current

Consultation on Sample Analysis: Polymer GC MS Pyrolysis UPMU, 2018
Consultation on Sample Analysis from Siegwerk (M) Sdn Bhd, 2019

COMMUNITY SOCIAL RESPONSIBILITY

 $(Contribution/Program,\ Year,\ Level-University/State/National/International)$

Felo Kolej Tun Dr Ismail 2015-2020
Development and Knowledge Culture Bureau in Institusi Pembangunan Felo (IPF) UTM JB
Advisor for Beach Clean Programme, KTDI
Mental Health Programme IPF 2018
Visiting Scientist To Maldives Police Services
STEM Carnival at SMK Semerah Batu Pahat
ACS-UTM Student Chapter Faculty Advisor
Jerayarawa Science Innovation Challenge 2016 (Organized by Pesat Organization) FS UTM JB
Program Insan Khidmat Dinamik
"Program Kasih" Organized by Alumni Lambaian Masyarakat UTM JB