



ADIANA GHAZALI
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QUALIFICATIONS

- Doctor of Philosophy (Chemical Oceanography), Universiti Malaysia Terengganu.
- Master of Science (Marine Science - Marine Chemistry), Universiti Malaysia Terengganu.
- Bachelor of Science (Analytical and Environmental Science), Universiti Malaysia Terengganu.

FIELD OF RESEARCH

- Chemical Oceanography
- Marine Environmetrics
- Metals & Rare Earth Elements
- Water Quality
- Marine geochemistry

RESEARCH INTEREST

My research interest is focusing on the understanding of metals and rare earth elements with the application of spectrometric and chemometrics techniques in the aquatic ecosystem. As a pre-doctoral student in Institute of Oceanography and Environment, Universiti Malaysia Terengganu, Malaysia, I was trained in the fundamental methodologies of metals speciation in the marine ecosystem of Brunei Bay, Borneo; as well as in tracing the sources of pollutants by using stable lead isotopes. Additionally, during my post-doctoral training, I have been involved with water quality analysis of freshwater system in Malaysia and tracing the sources of pollutant by using chemometrics techniques. I was trained with various multivariate analyses to trace and define the contributor of pollutants toward the freshwater system. Through this research work, I managed to publish few scientific articles into indexed and high impact journals. In addition to my research, I am a chartered chemist under Malaysian Institute of Chemistry. Besides that, I have had the rewarding experience of teaching and mentoring high school, undergraduate and post graduate students, participating in the consultation research-based work as well as in research and innovation competition.

RESEARCH PROJECTS

- Total mercury and methyl-mercury determination in economically important marine fishes from Malaysian waters: A human health risk assessment approaches | November 2020 - Present.
- Paleoclimates change study on the Peninsular Malaysia natural lakes | Research collaboration with Ningbo University, China | August 2019 - Present.
- Geochemical study on surface and core sample in the South China Sea off Terengganu waters – collaboration between UMT & East Carolina University (ECU), USA: tracing the ancient channel from Kuala Terengganu estuary towards the South China Sea, closed to Resak and Dulang A area | June 2014 - June 2016.
- Geochemistry of metals and rare earth elements in Brunei Bay, Borneo sediment core | November 2012 - January 2016.
- Young Scientist: 'Scientific Research Expedition (EPSP 2009)' – collaboration between Ministry of Science, Technology and Innovation Malaysia, National Directorate, Royal Malaysian Navy, Malaysian universities (UMT, UKM, UM, USM, UPM) and Malaysian government agencies (MINT and JMM) at Sulu and Sulawesi Seas | June 2009 – September 2010.
- Nutrient analysis in the sediment of Svalbard, Arctic: Malaysia Antarctic Research Program, Universiti Malaysia Terengganu, Malaysia & sediment analysis on West Belumut samples | October 2010 - October 2011.
- Research on dissolved and particulate trace metal distribution in the South China Sea off the Southern Terengganu coast: seasonal and monsoon effects | February 2007 - September 2009.

EXPERT LINKAGES

- Department of Geography and Spatial Techniques, Ningbo University.
- Malaysian Nuclear Agency

PROFFESIONAL MEMBERSHIP

- Malaysian Institute of Chemistry

GRANTS

Project : Total mercury and methyl-mercury determination in economically important marine fishes from Malaysian waters: A human health risk assessment approaches

Position : Co-researcher

Grant Name : Fundamental Research Grant Scheme (FRGS)

Status : Active

Amount : RM124,000.00

Project : "MARE: Marine coastal and delta sustainability for Southeast Asia"
Position : Co-researcher
Grant Name :
Status : Active
Amount : EUR 80, 000.00

Project : Water treatment system for Pasir Akar Farm, UniSZA, Besut
Position : Co-researcher
Grant Name : UniSZA
Status : Completed
Amount : RM170,000.00

Project : Integrated Lake Basin Management Plan (ILBM) and Development of Intelligent Lake Pollution Management System (i-LAMP) for Kenyir and Hulu Terengganu Reservoirs
Position : Assistant consultant
Grant Name : TNBR Sdn. Bhd.
Status : Completed
Amount : RM419,800.00

Project : Data analysis on water quality report for water quality monitoring under Water Quality Control Program
Position : Assistant consultant
Grant Name : Engineering Division, Malaysian Ministry of Health
Status : Completed
Amount : RM19,950.00

Project : Data analysis & report writing on current status on the Setiu Wetland water quality 2012, under World Wildlife Fund (WWF) Setiu Wetland water quality monitoring project
Position : Principal consultant
Grant Name : World Wildlife Fund
Status : Completed
Amount : RM5,000.00

AWARDS

- Silver Medal | Project/Product: Puyu Egg as Bioindicator of River Turbidity | Competition: Research and Innovation Week 2020 | Level: National | 2020

- Gold Medal | Project/Product: Integrated On-line Kenyir Lake Water Quality Management System | Competition: Research and Innovation Week 2018 | Level: National | 2018
- Gold Medal | Project/Product: Cajuputi for Backyard Agricultural Economical Activity | Competition: Research and Innovation Week 2018 | Level: National | 2018
- Silver Medal | Project/Product: Cajuhealer “Healing from the Green” | Competition: Research and Innovation Week 2018 | Level: National | 2018
- Best Paper Award | International Conference on Environmental, Sport and Recreation & Technology and Applications for Disaster Management International Conference 2017 (ICESR & TADMIC 2018) | Level: International | 2017

PUBLICATIONS

Journal Article

2020 (WoS Indexed) – Joseph Bidai, ***Adiana Ghazali**, Ong Meng Chuan, Noor Azhar Mohamed Shazili, Hasrizal Shaari. Scrutinizing the anthropogenic metals in the Brunei Bay sediment cores off the Malaysian waters. *Environmental Earth Sciences*: 79:452.

2020 (WoS Indexed) – Norhazirah Abdul Aziz, **Adiana Ghazali**, Kamaruzzaman Yunus, Zurahanim Fasha Annual, Ali Ahmad, Ong Meng Chuan. Longtail tuna (*Thunnus tonggol*) consumption frequency in Terengganu, Malaysia. *Open Journal of Marine Science*: 10:141-148.

2020 (WoS Indexed) – Mohd Yusoff Nurulnadia, Abu Bakar Noradila, **Ghazali Adiana**. Turbidity effects of suspended bauxite in embryonic stage of climbing perch (*Anabas testudineus*) post fertilization. *Egyptian Journal of Aquatic Research*: 46:181-186.

2020 (WoS Indexed) – Hasrizal Shaari, Jia Xin Tan, **Adiana Ghazali**, Nor Bakhiah Baharim, Sher Rine Kong. Data on monthly physicochemical variation of tropical island groundwater of Pulau Bidong, South China Sea. *Data in Brief*: 30:105527.

2020 (WoS Indexed) – Jia Xin Tan, Hasrizal Shaari, **Adiana Ghazali**, Nor Bakhiah Baharim. Monthly physicochemical variation of tropical island groundwater of Pulau Bidong, South China Sea. *Groundwater for Sustainable Development*: 10:100358.

2019 (SCOPUS Indexed) – Noor Azhar Mohamed Shazili, ***Adiana Ghazali**, Joseph Bidai. Rare earth elements distribution characteristics in dissolved and particulate fraction, and in sediment of Brunei Bay, Borneo. *Malaysian Journal of Analytical Sciences*: 23(6):1054-1066.

2019 (WoS Indexed) – Marinah Mohd Ariffin, ***Ghazali Adiana**, Joseph Bidai, Lee Siang Hing, Mohd Yusoff Nurulnadia, Meng Chuan Ong, Hasrizal Shaari, Siriporn Pradit. Data on dissolved metals in Terengganu waters of South China Sea during pre-, post-, and Northeast Monsoon season. *Data in Brief*: <https://doi.org/10.1016/j.dib.2019.104806>

2019 (Scopus Indexed) – Hafizan Juahir, ***Adiana Ghazali**, Azimah Ismail, Mahadzirah Mohamad, Firdaus Mohamad Hamzah, Sunardi Sudianto, Mohd Lokman Mohd Lasim, Mohamed Aidi Shahriz. The assessment of Danau Kota Lake water quality using chemometrics approach. *IOP*

Conference Series: Materials Science and Engineering: <https://doi.org/10.1088.1757-899X/621/1/2019>

2019 (WoS Indexed) – Noorjima Abd Wahab, Mohd Khairul Amri Kamarudin, Mohd Ekhwan Toriman, Hafizan Juahir, Muhammad Hafiz Md Saad, Frankie Marcus Ata, **Adiana Ghazali**, Abdul Rahman Hassan, Hanif Abdullah, Khairul Nizam Maulud, Marlia Mohd Hanafiah and Hazamri Harith. Sedimentation and water quality deterioration problems at Terengganu River Basin, Terengganu, Malaysia. *Desalination and Water Treatment*: 149:228-241.

2018 (SCOPUS Indexed) – Fazillah A., Juahir H., Toriman E., Mohamad N., Kamarudin M.K.A., Fairuz A., Omar S.M.H.S., **Adiana G.** and Mohamad M. Family support indices for substance abuser in Terengganu. *International Journal of Engineering and Technology*: 7(4):2655-2662.

2018 (SCOPUS Indexed) – Hafizan Juahir ***Adiana Ghazali**, Azimah Ismail, Mahadzirah Mohamad, Firdaus Mohamad Hamzah, Sunardi Sudianto, Mohd Lokman Mohd Lasim, Mohamed Aidi Shahriz and Rahmah Elfithri. Spatial and temporal assessment of Titiwangsa Lake water quality using chemometrics analysis. *International Journal of Engineering and Technology*: 7(3.14):20-25.

2018 (SCOPUS Indexed) – Noorjima Abd Wahab, Mohd Khairul Amri Kamarudin, Mohd Ekhwan Toriman, Frankie Marcus Ata, Hafizan Juahir, **Adiana Ghazali** and Atikah Anuar. The evaluation of dissolved oxygen (DO), total suspended solid (TSS) and suspended sediment concentration (SSC) in Terengganu River, Malaysia. *International Journal of Engineering and Technology*: 7(3.14):44-48.

2018 (SCOPUS Indexed) – Mohd Khairul Amri Kamarudin, Noorjima Abd Wahab, Ahmad Fadhli Mamat, Hafizan Juahir, Mohd Ekhwan Toriman, Nik Firdaus Nik Wan, Frankie Marcus Ata, **Adiana Ghazali**, Atikah Anuar, Muhammad Hafiz Md Saad. Evaluation of annual sediment load production in Kenyir Lake Reservoir, Malaysia. *International Journal of Engineering and Technology*: 7(3.14):55-60.

2018 (SCOPUS Indexed) – Mohd Khairul Amri Kamarudin, Noorjima Abd Wahab, Hafizan Juahir, Nik Mohd Firdaus Nik Wan, Muhammad Barzani Gasim, Mohd Ekhwan Toriman, Frankie Marcus Ata, **Adiana Ghazali**, Atikah Anuar, Hanif Abdullah, Nur Izzati Hussain, Syahril Hirman Azmee, Muhammad Hafiz Md Saad, Muhammad Saupi, Mir Sujaul Islam and Rahmah Elfithri. The potential impacts of anthropogenic and climate changes factors on surface water ecosystem deterioration at Kenyir Lake, Malaysia. *International Journal of Engineering and Technology*: 7(3.14):67-74.

2018 (SCOPUS Indexed) – Zuriati Khairuddin, Hafizan Juahir, Azizah Endut, Azimah Ismail, Mohd Khairul Amri Kamarudin, **Adiana Ghazali**, Mazlin Mokhtar, Mohd Ekhwan Toriman, Mir Sujaul Islam, Fathurrahman Lananan and Abdul Rahman Hassan. Moringa Oleifera dosage clustering for remediation process of batik effluents using chemometric technique. *International Journal of Engineering and Technology*: 7(3.14):85-89.

2018 (SCOPUS Indexed) – Joseph B., ***Adiana G.**, Shazili N.A.M., Ong M.C., Shaari H., Yii M.W., Kamarudin M.K.A., Gasim M.B., Maulud K.N.A. and Mir Sujaul Islam. The evaluation of Brunei Bay sediment cores sedimentation rate using ^{210}Pb radiometric dating technique. *International Journal of Engineering and Technology*: 7(3.14):104-114.

2018 (SCOPUS Indexed) – H.M. Zolkipli, H. Juahir, ***G. Adiana**, N. Zainuddin, A. Ismail, A.B.H.M. Maliki, N.I. Hussain, M.K.A. Kamarudin, M.E. Toriman and M. Mokhtar. Spatial assessment and the most significant parameters for drinking water quality using chemometric technique: A case study at Malaysia water treatment plants. *International Journal of Engineering and Technology*: 7(3.14):115-122.

2018 (SCOPUS Indexed) – Nurul Afiqah Mohamad Tahir, Hafizan Juahir, Mohamad Pauzi Zakaria, Sharifuddin Md Zain, Ananthi Retnam, Tan Sin Sing, Norazida Manan, Mohd Ekhwan Toriman, Azimah Ismail, Mohad Khairul Amri Kamarudin, **Adiana Ghazali** and Noorjima Abd Wahab. Environmental forensic techniques in identifying the sources of 16 USEPA priority pollutants polycyclic aromatic hydrocarbon (PAHs) at the Langat River, Selangor, Malaysia. *International Journal of Engineering and Technology*: 7(3.14):123-131.

2018 (SCOPUS Indexed) – Mohd Hanif Abdullah, Hafizan Juahir, Fathurrahman Lananan, Mohd Khairul Amri Kamarudin, **Adiana Ghazali**, Azierah Azemin, Noorjima Abd Wahab, Siti Musliha Mat Rasid, Muhammad Hafiz Md Saad and Mohd Talib Latif. Pattern recognition of Melaleuca Cajuputi Powell essential oils fingerprint in Terengganu, Malaysia using chemometric approach. *International Journal of Engineering and Technology*: 7(3.14):132-138.

2018 (SCOPUS Indexed) – H.M. Zolkipli, H. Juahir, ***G. Adiana**, N. Zainuddin, A.B.H.M. Maliki, M.E. Toriman, M. Mokhtar and R. Elfithri. Spatial assessment of Selangor, Malaysia water treatment plan performance using chemometric technique. *International Journal of Engineering and Technology*: 7(3.14):139-146.

2018 (SCOPUS Indexed) – Md Firoz Khan, Mohd Talib Latif, Mazrura Sahani, Mohd Shahrul Mohd Nadzir, Lin Chin Yik, Hossain Mohammad Syedul Hoque, Haris Hafizal Abd Hamid, Muhammad Ikram A. Wahab, Fahia Tarannum Munna, Nowshad Amin, Halina Misran, Md Akhtaruzzaman, Khairul Nizam Abdul Maulud, Hafizan Juahir, **Adiana Ghazali** and Azimah Ismail. Volatile organic compound analysis by sorbent tube-thermal desorption-gas chromatography: A review. *International Journal of Engineering and Technology*: 7(3.14):165-175.

2018 (SCOPUS Indexed) – Rahmah Elfithri, Mazlin Mokhtar, Mat Pauzi Abdullah, Mohd Raihan Taha, Mohd Ekhwan Toriman, Ruhizan Mohamad Yasin, Jasni Yaakub, Rd. Puteri Khairani Khirotdin, Mohamad Mahathir Amir Sultan, Ishak S.A., Ramzan N.M., Mohd Khairul Amri Kamarudin, Hafizan Juahir, **Adiana Ghazali**, Azimah Ismail and Muhammad Barzani Gasim. Watershed sustainability index for Langat UNESCO HELP river basin, Malaysia. *International Journal of Engineering and Technology*: 7(3.14):187-190.

2018 (SCOPUS Indexed) – ***G. Adiana**, B. Joseph, N.A.M. Shazili, M. Mohamad and H. Juahir. Spectrometry and chemometrics interpretation of metals in the Sulu and Celebes Seas of

Malaysian waters during PMSE 09' Expedition. *Journal of Engineering and Applied Sciences*: 13(7):1745-1756.

2018 (SCOPUS Indexed) – A. Hanif, H. Juahir, F. Lananan, M. K. A. Kamarudin, **G. Adiana**, A. Azemin and A. F. Ireana Yusra. Spatial variation of *Melaleuca Cajuputti Powell* essential oils. *Journal of Fundamental and Applied Sciences*: 10(1S):139-155.

2018 (SCOPUS Indexed) – N. A. Wahab, M. K. A. Kamarudin, M. E. Toriman, H. Juahir, M. B. Gasim, Z. I Rizman, **G. Adiana**, A. S. M. Saudi, Sukono, B. Subartini, P. P. Damayanti, S. Supian, Y. Hidayat, T. Purwandari and F. M. Ata. Climate changes impacts towards sedimentation rate at Terengganu River, Terengganu, Malaysia. *Journal of Fundamental and Applied Sciences*: 10(1S):33-51.

2018 (SCOPUS Indexed) - N. Z. A. Wahab, N. Ibrahim, M. K. A. Kamarudin, F. Lananan, H. Juahir, **A. Ghazali** and A. F. Ireana Yusra. Cytotoxicity and antiviral activity of *annona muricata* aqueous leaves extract against dengue virus type 2. *Journal of Fundamental and Applied Sciences*: 10(1S):580-589.

2018 (SCOPUS Indexed) – R. Partasasmita, S. Supian, **G. Adiana**, H. Juahir, A. F. Ireana Yusra and R. Umar. Status of population, occupation and seasonal habitat displacement of alien bird species in West Java tropical forest, Indonesia. *Journal of Fundamental and Applied Sciences*: 10(1S):552-564.

2018 (SCOPUS Indexed) - N. Z. A. Wahab, N. Ibrahim, M. K. A. Kamarudin, F. Lananan, H. Juahir and **A. Ghazali**. In vitro antiviral activity of orthosiphon stamineus extract against dengue virus type 2. *Journal of Fundamental and Applied Sciences*: 10(1S):541-551.

2018 (SCOPUS Indexed) – S. Supian, K. T. B. Achmad, I. Riyadhhi, Subiyanto, **G. Adiana**, A. F. Ireana Yusra and M. Mamat. Mathematical model for dissolved oxygen prediction in Cirata reservoir, West Java by using artificial neural network. *Journal of Fundamental and Applied Sciences*: 10(1S):66-78.

2018 (SCOPUS Indexed) – A. F. Ireana Yusra, H. Juahir, N. W. Nik Ahmad Firdaus, A. H. Bhat, A. Endut, H. P. S. Abdul Khalil and **G. Adiana**. Controlling of green nanocellulose fiber properties produced by chemo-mechanical treatment process via SEM, TEM, AFM and Image Analyzer characterization. *Journal of Fundamental and Applied Sciences*: 10(1S):1-17.

2018 (SCOPUS Indexed) – Sukono, B. Subartini, P. P. Damayanti, S. Supian, R. Budiono, M. K. A. Kamarudin, **A. Ghazali** and M. B. Gasim. Fuzzy inference system of Tsukamoto method in decision making on determination of insurance premium amount for due damages of flood natural disaster. *Journal of Fundamental and Applied Sciences*: 10(1S):79-94.

2017 (WoS Indexed) – ***Adiana Ghazali**, Hafizan Juahir, Joseph Bidai and Noor Azhar Mohamed Shazili. Tracing the sources of lead (Pb) in Brunei Bay, Borneo using integrated spectrometry

ICP-MS and chemometric techniques. *Marine Pollution Bulletin*:
<http://dx.doi.org/10.1016/j.marpolbul.2017.08.055>

2017 (ISI Indexed) – ***Adiana Ghazali**, Hafizan Juahir, Noor Azhar Mohamed Shazili, Joseph Bidai and Ireana Yusra Abdul Fatah. Variation of rare earth elements (REEs) in the Sulu and Celebes Seas of Malaysian waters during PMSE 09' Expedition using analytical and chemometric techniques. *Journal of Fundamental and Applied Sciences*: 9(2S):413-429.

2016 (Book Chapter) – ***Adiana Ghazali**, Noor Azhar Mohamed Shazili and Joseph Bidai. The geochemistry of rare earth elements in Brunei Bay, Borneo. *Scientific Expedition to Brunei Bay* pp 39-66.

2016 (WoS Indexed) - ***Adiana Ghazali**, Noor Azhar Mohamed Shazili, Joseph Bidai and Hasrizal Shaari. The spatial distribution of Al, Fe, Cu, Cd and Pb in the surface sediment of Brunei Bay, Borneo during the Southwest and Northeast monsoons. *Journal of Sustainability Science and Management Special Issue: The International Seminar on the Straits of Malacca and the South China Sea*: Volume 11, No. 2:94-107.

2016 (WoS Indexed) - Joseph Bidai, ***Adiana Ghazali** and Noor Azhar Mohamed Shazili. Particle sizes effect on the elements in the South China Sea sediment off Pahang coastal during the Northeast monsoon (pre-) and Southwest monsoon (post-) periods - *Environmental Earth Sciences*: Volume 75, Page 614-625.

2015 (WoS Indexed) - M. C. Ong, B. Joseph, N.A.M. Shazili, **A. Ghazali** and M.N. Mohamad. Heavy metals concentration in surficial sediments of Bidong Island, South China Sea off the East Coast of Peninsular Malaysia - *Asian Journal of Earth Sciences*: Volume 8(3), Page 74-82.

2014 (WoS Indexed) - ***G. Adiana**, N. A. M. Shazili, M. A. Marinah and J. Bidai. Effects of northeast monsoon on trace metal distribution in the South China Sea off Peninsular Malaysia - *Environmental Monitoring and Assessment*: Volume 186, Issue 1, Page 421-431.

2011 (WoS Indexed) - ***G. Adiana**, N. A. M. Shazili and M. A. Marinah. Cadmium, manganese and lead distribution in the South China Sea off the South Terengganu coast, Malaysia during post-monsoon and pre-monsoon – *Journal of Sustainability Science and Management*. Volume 6, No. 2:181-192.

Conference Publication

- 1.
- 2.
- 3.

Other Outputs

[Thesis, manuscript, books, reports, etc.]

2016 (Ph.D. Thesis) - Geochemistry of metals and rare earth elements in Brunei Bay, Borneo.

2011 (MSc. Thesis) - Dissolved, leachable and particulate trace metals in the Southern Terengganu coastal water, South China Sea.

2005 (BSc. Thesis) - Determination of heavy metals in the groundwater of Terengganu, East Coast of Peninsular Malaysia.

SUPERVISION

Doctor of Philosophy Degree

Thesis Title : Metals accumulation in tuna fish off Peninsular Malaysia waters
Student Name : Norhazirah binti Abdul Aziz
Role : Co-supervisor
Status : On-going

Thesis Title : Geochemistry of elements in the sediment core of Brunei Bay, Borneo
Student Name : Joseph anak Bidai
Role : Co-supervisor
Status : On-going

Master Degree

Thesis Title : -
Student Name :
Role :
Status :

COURSE TAUGHT

- Marine Science Field Trip (MMS3001)
- Chemical Oceanography (MMS3200)
- Environmental Science (MMS3000)

LINKS

- SCOPUS : 55241809200 (Adiana, G.)
- WoS : Adiana Ghazali
- Researchgate : Adiana Ghazali

- Academia.edu : -
- LinkedIn : -
- LiveDNA : -
- ORCID : 0000-0001-9732-1676
- Google Scholar: Adiana Ghazali
- Facebook : -

OTHERS

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