



PERSONAL BACKGROUND

Name : Dr. Wan Hasnidah Binti Wan Osman
Date of Birth : 26 June 1985
Nationality : Malaysia
Corresponding Address : Faculty of Bioengineering & Technology
Universiti Malaysia Kelantan
Jeli Campus
17600 Jeli, Kelantan
MALAYSIA
Email : hasnidah.osman@umk.edu.my
Mobile phone : +60199854173

ACADEMIC QUALIFICATION

2015-2019 : **Kyoto University, Kyoto, JAPAN**
Doctor of Energy Science
(Research title: *Enzymatic and structural studies of glutathione S-transferases of white-rot fungus Ceriporiopsis subvermispota which is a selective degrader of lignin in woody biomass*)
2009- 2013 : **Universiti Kebangsaan Malaysia, Bangi, Selangor, MALAYSIA**
Master of Science (Chemical & Process Engineering)
(Research title: *Removal of COD & Adsorbable Organic Halides (AOX) From Recycled Paper Mill Wastewater Using Biological Process*)
2004-2008 : **Universiti Kebangsaan Malaysia, Bangi, Selangor, MALAYSIA**
Bachelor of Engineering with Honours (Chemical Engineering)
(Research title: *Software for Individual Risk Estimation Because Of Hazard BLEVE*)

WORKING EXPERIENCE

- Universiti Malaysia Kelantan**
Senior Lecturer
July 2019- Current
 - Responsible in teaching Bioindustrial Technology courses (Food Bioprocessing, Scale up Process, Biopharmaceuticals Technology, Bioproduct Safety and Quality Control, Molecular Biology) to Bachelor of Applied Science (Bioindustrial Technology) students
 - Supervised final year project
- Universiti Malaysia Kelantan**
Junior Lecturer
July 2015- June 2019
 - Responsible in teaching Bioindustrial Technology courses (Scale up Process) to Bachelor of Applied Science (Bioindustrial Technology) students

3. **Universiti Teknologi MARA (Johor)**
Lecturer
June 2014- May 2015
 - Responsible in teaching Chemical Engineering courses (Engineering Physics, Chemical Engineering Thermodynamics, Plant Safety & Occupational Health) to Diploma in Chemical Engineering students
 - Supervised final year project
4. **Universiti Teknologi MARA (Terengganu)**
Lecturer (Part-Time-Full-Time)
June 2012 - April 2014
 - Responsible in teaching Chemical Engineering courses (Engineering Physics & Chemical Engineering Thermodynamics, Plant Safety & Occupational Health) to Diploma in Chemical Engineering students
 - Supervised final year project
5. **Universiti Kebangsaan Malaysia**
Co-Researcher
August 2012 - April 2014
 - Involved in the *Treatment of Batik Industry Effluent with Recovery of Silicate & Wax and Compost Production* (Collaboration with HTC, MUWAREC & UKM) project
6. **Universiti Kebangsaan Malaysia**
Research Assistant
May 2008 - February 2012
 - Involved in the *Study on POME Polishing and Biogas Production a Lab Scale Fermentation Unit* (UKM-KUBOTA Cooperation, Japan) project
 - Involved in the *Industrial and Hazardous Waste Treatment and Management* (ARRPET II) project
7. **ECO-PRO Sdn Bhd**
Environmental Officer (Part-time)
April 2009 - December 2009
 - Involved in the '*Cadangan Pembinaan Paip Pembentungan Tambahan Dan Rasionalisasi Loji Rawatan Kumbahan Di Kawasan Tadahan Lobak Dan Kawasan Tadahan Sungai Simpo*' & '*Comprehensive Sewerage System Information and GIS Data Compilation for Jerantut District*' project

PUBLICATION

Thesis

1. **Wan Hasnidah Wan Osman.** 2019. *Enzymatic and structural studies of glutathione S-transferases of white-rot fungus Ceriporiopsis subvermisporea which is a selective degrader of lignin in woody biomass.* Kyoto University (Doctoral thesis).
2. **Wan Hasnidah Wan Osman.** 2013. *Removal of COD & adsorbable organic halides (AOX) from recycled paper mill wastewater using biological process.* Universiti Kebangsaan Malaysia (Master thesis).
3. **Wan Hasnidah Wan Osman.** 2007. *Software for individual risk estimation because of Hazard BLEVE.* Universiti Kebangsaan Malaysia (Bachelor thesis).

Journal Article

1. **Wan Hasnidah Wan Osman**, N. L. Badri, A. T. Chong, M. Mohamad, A. Z. Sulaiman, 2021. *Comparison of ultrasound assisted extraction and conventional extraction technique on recovery of phenolic and flavonoid compounds from Aloe barbadensis Miller*. IOP Conference Series: Earth and Environmental Science 765(1), 012073
2. **Wan Hasnidah Wan Osman** M. M. Tan, A. A. A. Rashid, N. Mohd and R. Mohammad. 2021. *Removal of Reactive Orange 16 Dye using Casuarina equisetifolia seeds as Packing Media for Microbial Biofilm Formation*. IOP Conference Series: Materials Science and Engineering 1176, 012009
3. R. Taufik, M. Mohamad, R. Wannahari, **Wan Hasnidah Wan Osman**, P. T. Teo, M. N. Masri. 2021. *Spent coffee ground as low-cost adsorbent for congo red dye removal from aqueous solution*. IOP Conference Series: Earth and Environmental Science, 765(1), 012089
4. N. L. Badri, S. Hisham, A.T. Chong, M. Mohamad, **Wan Hasnidah Wan Osman**. 2021. *Extraction of Total Phenolic And Total Flavonoid Compounds From Aloe Barbadensis Miller Using Ultrasound Assisted Extraction* Malaysian Journal of Biochemistry and Molecular Biology, 24, 97–101
5. S. N. A. Sanusi, S. H. A. Muhamad, S. I. S Jamaludin, M. Z. Sukor, **Wan Hasnidah Wan Osman**. 2021. Risk Assessment in Chemistry Laboratory, Faculty of Chemical Engineering, UiTM Pasir Gudang Campus International Journal of Advanced Research in Engineering Innovation. 3(1), 27-33
6. M. Mohamad, S. W. Ting, M. B. A. Bakar, **Wan Hasnidah Wan Osman**. 2020. *The Effect of Alkaline Treatment on Mechanical Properties of Polylactic Acid Reinforced with Kenaf Fiber Mat Biocomposite*. IOP Conference Series Earth and Environmental Science. 596, 012002.
7. **Wan Hasnidah Wan Osman**, B. Mikami, N. Saka, K. Kondo, M. Lin, T. Nagata, M. Katahira. 2019. *Identification of key residues for activities of atypical glutathione S-transferase of Ceriporiopsis subvermispora, a selective degrader of lignin in woody biomass, by crystallography and functional mutagenesis*. International Journal of Biological Macromolecules (IF: 3.909). 132 (2019) 222-229.
8. **Wan Hasnidah Wan Osman**, B. Mikami, N. Saka, K. Kondo, T. Nagata, M. Katahira. 2019. *Structure of a serine-type glutathione S-transferase of Ceriporiopsis subvermispora and identification of the enzymatically important non-canonical residues by functional mutagenesis*. Biochemical and Biophysical Research Communications (IF: 2.559). 510 (2019) 177-183.
9. **Wan Hasnidah Wan Osman**, M. Lin, K. Kondo, T. Nagata, M. Katahira. 2018. *Characterization of the glutathione S-transferases that belong to the GSTFuA class in Ceriporiopsis subvermispora: Implications in intracellular detoxification and metabolism of wood-derived compounds*. International Journal of Biological Macromolecules (IF: 3.909). 113 (2018) 1158-1166.
10. N. Mohd, **Wan Hasnidah Wan Osman**, M.S.N. Salleh, S.F.S. Draman. 2015. *Application of Response Surface Methodology for optimization of methylene blue removal by Casuarina equitifolia leaves powder*. Advanced Materials Research. 1113 (2015) 745-750.
11. **Wan Hasnidah Wan Osman**, S.R.S. Abdullah, A.B. Mohamad, A.A.H. Kadhum, R.A. Rahman. 2012. *Simultaneous removal of AOX and COD from real recycled paper wastewater using GAC-SBBR*. Journal of Environmental Management (IF: 4.005). 121 (2013) 80-86.

Proceeding

1. **Wan Hasnidah Wan Osman**, S.N.A. Sanusi, N. Mohd, M.M. Yassin, S.R.S. Abdullah. *Application of Response Surface Methodology (RSM) for optimization of COD Removal*

- from paper mill wastewater using Granular Activated Carbon Sequencing Batch Biofilm Reactor. UniKL MITEC Research Colloquium 2014 (MRC 2014).
2. R.A. Rahman, **Wan Hasnidah Wan Osman**, A.A.H. Khadhum, O. Jaafar. *Biofilm process for high organics and AOX removal from recycled paper mill (RPM) effluent*. Green Technology & Ecosystem for Global Sustainable Development 2012 (ICGTEC 2012), Bosnia and Herzegovina.
 3. **Wan Hasnidah Wan Osman**, A.B. Mohamad, A.A.H. Kadhum, R.A. Rahman, S.R.S. Abdullah. 2010. *Treatment of COD and AOX from paper mill wastewater using GAC-SBBR: Effect of operational conditions and nutrient ratio*. International Conference on Environment 2010 (ICENV 2010).
 4. A.B. Mohamad, R.A. Rahman, S.R.S. Abdullah, **Wan Hasnidah Wan Osman**. 2010. *A Granular Activated Carbon Sequencing Batch Biofilm Reactor with EMM media for paper mill effluent treatment: Treatment efficiency and kinetic growth*. Engineering Postgraduate Conference 2010 (EPC 2010).

Other

1. A.B. Mohamad, A.A.H. Kadhum, R.A. Rahman, S.R.S. Abdullah, N. Anuar, A.A. Bakar, M.H. Muhamad, **Wan Hasnidah Wan Osman**. 2008. *Project on industrial and hazardous waste treatment and management: Removal of AOX and heavy metals by biofilm processes*. Universiti Kebangsaan Malaysia (ARRPET II Final Report).
2. L.W. Jia, T.S.Lian, K. S. Feng, N.H. Husin, M.H.Z. Abidin, **Wan Hasnidah Wan Osman**. 2008. *Production of ethylene & diethyl ether from dehydration of ethanol using Tungstophosphoric acid*. Universiti Kebangsaan Malaysia (Chemical Process Plant Design Project).

CONFERENCE/SEMINAR ATTENDED

1. **Wan Hasnidah Wan Osman**, A.A.A. Rashid, M.M. Tan, N. Mohd, M. Mohamad, *Optimization of Methylene Blue Removal by Casuarina equisetifolia using Response Surface Methodology (RSM) and the Application of the Optimal Condition on Batik Wastewater*. International Conference on Bioengineering and Technology, May 24-25, 2021, Malaysia (E-Poster Presenter)
2. **Wan Hasnidah Wan Osman**, M.M. Tan, A.A.A. Rashid, N. Mohd, R. Mohammad, *Removal of Reactive Orange 16 Dye using Casuarina equisetifolia seeds as Packing Media for Microbial Biofilm Formation*. 3rd International Conference of Emerging Challenges in Engineering and Current Technology, March 30-31, 2021, Malaysia (Oral presentation).
3. **Wan Hasnidah Wan Osman**, N.L. Badri, A.T. Chong, M. Mohamad, and A.Z. Sulaiman. *Comparison of Ultrasound Assisted Extraction and Conventional Extraction Technique on Recovery of Phenolic and Flavonoid Compounds from Aloe barbadensis Miller*. 1st International Conference on Biomass Utilization and Sustainable Energy 2020, December 15-16, 2020 (Poster presentation).
4. N. Hamad, **Wan Hasnidah Wan Osman**, P. Song, Z. Zhengxiao, W. Zhang, S. Tajima. *Study of plastic waste recycling and its impact on the environment*. 9th International of Symposium of Advance Energy Science, September 3-5, 2018, Kyoto, Japan (Poster presentation).
5. **Wan Hasnidah Wan Osman**, M. Lin, K. Kondo, T. Nagata, M. Katahira. *Distinct roles in wood-derived compound metabolism of GSTFuA class proteins of Ceriporiopsis subvermispora*. Zhejiang-Kyoto-Ajou Joint Symposium on Energy Science, November 29-30, 2017, Hangzhou, China (Oral presentation).
6. **Wan Hasnidah Wan Osman**, M. Lin, K. Kondo, T. Nagata, M. Katahira. *Kinetic studies of the two fungal glutathione-dependent enzymes and their potential roles in the intracellular detoxification and wood-derived compound metabolism*. 62nd Lignin

- Symposium, October 26-27, 2017, Nagoya, Japan (Oral presentation).
7. M.T. Nguyen, **Wan Hasnidah Wan Osman**, S. Peng, F. Yang, S. Krainara. *Perspectives of the Eco-friendly emission for future Megacity*. 8th International of Symposium of Advance Energy Science, September 5-7, 2017, Kyoto, Japan (Poster presentation).
 8. **Wan Hasnidah Wan Osman**, M. Lin, K. Kondo, T. Nagata, M. Katahira. *Characterization of glutathione-dependent enzymes of white rot fungi*. 29th Japan Society for Bioscience, Biotechnology, and Agrochemistry, March 18-20, 2017, Kyoto, Japan (Oral presentation).
 9. 7th International of Symposium of Advance Energy Science, September 5-7, 2016, Kyoto, Japan (Participant).

RESEARCH GRANT

1. Title : Optimization of Dye Removal Using Casuarina Equisetifolia as Packing Media for Biofilm Process
 Role : **Lead Researcher**
 Source : UMK-FUND
 Amount : RM20,000
 Duration : 1 year (24/12/2019-23/12/2020)
2. Title : Mass Production of Pleurotus Grain Spawn (Oyster Mushroom Seed) Preparation for Commercialization: Up-scaling Approach
 Role : **Co-Researcher**
 Source : UMK-PRO
 Amount : RM20,000
 Duration : 2 years (1/12/2020-30/11/2021)
3. Title : Upscaling Bioplastic Prototype Development from Microalgae Residue
 Role : **Co-Researcher**
 Source : UMK-PRO
 Amount : RM20,000
 Duration : 2 years (24/12/2019-23/12/2021)

SOCIAL SERVICES

1. Editor International Conference on Bioengineering and Technology 2021
2. Reviewer International Conference on Bioengineering and Technology 2021
3. Jury International Conference on Bioengineering and Technology 2021
4. Reviewer 3rd Symposium on Industrial Science and Technology 2021
5. Jury 4th Digitalised International Invention, Innovation and Design Johor 2021
6. Project Director Delima Minecraft Edu Challenge – Raya Edition 2021
7. Project Director You Are FBKT Gems 2021
8. Project Director Road to UMK FBKT 2021
9. Secretary Road to Entrepreneur FBKT 2021
10. Facilitator Program Intervensi Semangat dan Motivasi FBKT 2021
11. Moderator Industry @ FBKT Live 2021
12. Jury 3rd Digitalised International Invention, Innovation and Design Johor 2020
13. Jury International Conference on Science and Technology 2020
14. Ahli Jawatankuasa Program 1st International Summer School 2019
15. Group Mentor, Global Innovation Challenges, Universiti Teknologi Malaysia 2014

ACADEMIC AWARDS

1. Bronze Medal. Project title: Extraction of Bioactive Compounds from Hibiscus Sabdariffa L. using Soxhlet Extraction Method
eCarnival Research and Innovation 2020
1st September – 22nd November 2020, UMK
2. Bronze Medal. Project title: Extraction of Active Components from Aloe Barbadensis Miller using Ultrasound Assisted Extraction
eCarnival Research and Innovation 2020
1st September – 22nd November 2020, UMK
3. Bronze Medal. Project title: Removal of COD from Batik Wastewater using Casuarina Fruit as a Media for Biofilm Process
Terengganu Invention & Innovation Design 2013
12th September 2013, Kuala Terengganu
4. MOSTI National Science Fellowship Holder 2009-2011
5. JPA Scholarship Holder 2004-2008
6. Dean's List - Bachelor of Engineering with Honours (Chemical Engineering)
Semester 1 Session 2007/2008
Universiti Kebangsaan Malaysia
7. Excellent Performance Terengganu Students Association 2002 (SPM)
8. Anugerah Pelajar Cemerlang (SPM 2002)
Sekolah Menengah Sains Dungun
9. Olahragawati Sekolah (2002)
Sekolah Menengah Sains Dungun

PROFESSIONAL MEMBERSHIP

1. Graduate Engineer (Chemical)
Board of Engineer (BEM) (Registration No.101584A)
2. Graduate Technologist (Chemical Technology)
Malaysia Board of Technologist (MBOT) (Registration No. GT20110520)

REFERENCES

1. **Prof Ir Dr Siti Rozaimah Sheikh Abdullah**
Professor
Chemical Engineering Programme
Faculty of Engineering & Built Environment
Universiti Kebangsaan Malaysia
43600 UKM Bangi, Selangor, MALAYSIA
Phone: +603 8911 8035 / +603 8921 6407, fax: +603 8911 8345
Email: rozaimah@eng.ukm.my
2. **Prof Dr Masato Katahira**
Professor
Institute of Advanced Energy, Kyoto University
Gokasho, Uji, Kyoto 611-0011, JAPAN
Phone: +81 774 38 3517, fax: +81 774 38 3524
E-mail: katahira@iae.kyoto-u.ac.jp