

TAY CHIA CHAY

Name :	Tay Chia Chay
Faculty :	Faculty of Applied Sciences
Staff number:	305556
Grade of Position (VK7/DM54/DM52 etc)	DM51
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BASIC PROFILE

Lecturer DM45/DM46/DM51/DM52/DM53/DM54

Appointments	Date/Year of Appointment
Lecturer DM52/DM51	2013
Year of Birth :	1978
Ph.D Qualification (Year Obtained)	2012

POSTGRADUATE SUPERVISION*(Only those within last five years, Please indicate if it is at other institutions)***ON-GOING POSTGRADUATE (RESEARCH) SUPERVISION (Includes Co-supervision)**

	Students Name	Institutions	Year Enrolled	Year End
1	Adibah Nur Zainol Abidin	Universiti Teknologi MARA	Sept 2016	2018
2	Nasrul Nafis Ibrahim	Universiti Teknologi MARA	Sept 2016	2018
3	Najihah Mohamad Nasir	Universiti Teknologi MARA	Sept 2016	2018
4	Roslinda binti Ismail	Universiti Teknologi MARA	2013	2018
5	Nur Zuliyana binti Mohd Shukri	Universiti Teknologi MARA	2012	2018

On-Going PhD SUPERVISION (Includes Co-supervision)

	Students Name	Institutions	Year Enrolled	Year End
1	Ain Nihla binti Kamarudzaman	Universiti Teknologi MARA	2012	2018

RESEARCH FUNDINGS (State whether Principal/Co-Researcher)**NATIONAL LEVEL ACTIVE RESEARCH FUNDING (MOSTI/FRGS & Others) (Last Five Years)**

No.	Research Project	Source	Total Funds	Begin Year	End Year
1	Co-Researcher , Stabilization mechanism of Pb in shooting range soil using pyrolyzed composites of blood cockle shell and oil palm shell	FRGS, MOHE	RM93,200	2016	2019
2	Co-Researcher , Permeability of hybrid alum sludge and non-biodegradable plastic waste as landfill liner materials	FRGS, MOHE	RM100,000	2016	2019
3	Project leader , Bioremediation mechanism and kinetic of petrogenic hydrocarbon using indigenous and non-indigenous fungal <i>Pleurotus</i>	FRGS, MOHE	RM165,800	2015	2018
4	Co-Researcher , Adsorptive mechanisms of heavy metal on natural adsorbent surface in groundwater	RAGS, MOHE	RM80,000	2014	2016 completed
5	Project leader , Nickel and methylene blue removal using spent mushroom farming waste (SMFW) activated carbon for industrial waste stream	RAGS, MOHE	RM80,000	2013	2016 completed
6	Co-Researcher , Single and carbonization of <i>Cyrtosperma chamissomis</i> (keladi liar) petioles using microwave irradiation techniques	RAGS, MOHE	RM80,000	2013	2016 completed
7	Co-Researcher , Structural and electronic structure of the ligand-metal complexes in the formation of cerate-zirconate	RAGS, MOHE	RM69,000	2013	2016 completed
8	Co-Researcher , Growth kinetics of <i>Pleurotus ostreatus</i> fungal biomass biosorption characteristics of heavy metals in aqueous solutions	FRGS, MOHE	RM30,000	2007	2009 completed

Dana Kecemerlangan UiTM (Last Five Years)

	Research Project	Total Funds	Begin Year	End Year
1	Project Leader , Decolourization of Remazol Brilliant R By Using Fungi (GIP)	RM20,000	2017	2018 completed
2	Co-Researcher , Feasibility of using turnitin for managing and grading at the Faculty of Applied Sciences (FSG), Universiti Teknologi MARA (UiTM) (ARAS)	RM20,000	2016	2018
3	Co-Researcher , Removal of heavy metal by iron bearing soil mineral from soil and groundwater (LESTARI)	RM20,000	2016	2018
4	Co-Researcher , Kinetic growth oral bacteria characteristics of yeast extract compound from local tissue culture <i>Orthosiphon stamineus</i> (iRAGS)	RM20,000	2015	2018 completed
5	Co-Researcher , Bioprocess for the secondary metabolites production in callus suspension cultures of <i>Clinacanthus nutans</i> (iRAGS)	RM20,000	2015	2017 completed
6	Co-Researcher , Bioremediation kinetic of waste engine oil hydrocarbon using indigeneous and non-indigenous fungal	RM20,000	2015	2017 completed

	<i>Pleurotus</i> (iRAGS)			
7	Co-Researcher , Green technology for heavy metals removal: Advanced material characterization of mushroom compost waste biosorbent – A collaboration with Germany institute (VCSP Strategic Alliances with Top Notch Research Centre and Top Notch Researchers)	RM25,000	2011	2012 completed

CONSULTATION WORK

Year	Project title	Amount of project	Client
2013	Menguji zeta potential bagi sampel tanah	RM4000.00	Universiti Tun Hussein Onn Malaysia (UTHM)
2014 - 2016	Conversion of <i>Pleurotus</i> waste into activated carbon	-	C & C Mushroom Cultivation Farm Sdn. Bhd.
2016-2017	The 3 rd I-iDEA 2016	RM76,931.00	UiTM Perlis
2017-2019	Publication of Materials Mind	RM14,000.00	Institute of Materials, Malaysia

PUBLICATIONS (Only those indexed in IEEE/ISI/SCOPUS JOURNALS)

(Please ensure that you indicate whether papers are indexed in IEEE/ISI/Scopus, also indicate the impact factor if available)

H – index: 7

i10-index: 3

Total citation: 126

PUBLICATIONS FOR 2018

- [1] Soon Kong Yong, Jesielyna Leyom, **Chia Chay Tay**, Suhaimi Abdul-Talib, “Sorption of lead from aqueous system using cocoa pod husk biochar: kinetic and isotherm studies”. International Journal of Engineering and Technology, 7(3.11), 241-244. (SCOPUS indexed)
- [2] N. Mohamad-Nasir, S. Abdul-Talib, N. F. Lokman, S. N. Hashim, **C. C. Tay**, “Effective and low cost extraction method for pharmaceutical compounds of carbamazepine and caffeine”. Journal of Fundamental and Applied Sciences, (submitted).
- [3] **Chia-Chay Tay**, Najihah Mohamad-Nasir, Nur-Liyana Jamaluddin, Wan-Nurul-Hidayah Wan-Annuar, “Sustainable approach using *Carica papaya* stem for in vitro propagation of *Clinacanthus nutans*”. GTSD conference 2018, (submitted).
- [4] N. N. Ibrahim, S. Abdul-Talib, H. N. Ismail, **C. C. Tay**, “Mycoremediation for decolourization of dye in wastewater by using fungi consortium culture: A review” GTSD conference 2018, (submitted).
- [5] Zainab Razali, Muhammad Faris Abd Wahab, Roejhan Md Kawi, Megawati Omar, **Chia Chay Tay**, “Sunflower *Helianthus annuus* for phytoremediation of zinc in hydroponic system”. Journal of Environmental Chemical Engineering, (submitted).

PUBLICATIONS FOR 2017

- [1] **C. C. Tay**, N. Jamaluddin, N. M. Nasir, W. N. H. W. Annuar, S. N. Hashim, “Zea mays agricultural waste for in-vitro shoot propagation of *Clininatus nutans*”. Journal of Fundamental and Applied Sciences, 9(5S), 673-683. (ISI indexed)
- [2] A. N. Z. Abidin, S. A. Talib, S. Alias, **C. C. Tay**, “Effective and reliable method for extraction of anthracene”. Journal of Fundamental and Applied Sciences, 9(5S), 695-705. (ISI indexed)
- [3] Z. Razali, S. Z. Zakaria, S. Mohamad, W. N. H. W. Annuar, **T. C. Chay**. “Correlation between antibacterial activity and yeast extract of *Orthosiphon stamineus* extract”. Journal of Fundamental and Applied Sciences, 9(5S), 706-718. (ISI indexed)

- [4] S. N. Hashim, W. N. H. W. Annuar, **C. C. Tay**, S. H. R. S. Mahmud, "Evaluation on the effect of *P. ostreatus* spent mushroom compost and BAP hormone towards *C. nutans* in vitro culture". *Journal of Fundamental and Applied Sciences*, 9(4S), 920-936. (ISI indexed)
- [5] N. M. Nasir, S. A. Talib, S. N. Hashim, **C. C. Tay**, "Biodegradation of carbamazepine using fungi and bacteria". *Journal of Fundamental and Applied Sciences*, 9(6S), 124-146. (ISI indexed)
- [6] A. N. Z. Abidin, A. A. Talib, S. Alias, **C. C. Tay**, "Occurance and bioremediation of anthracene in the environment". *Journal of Fundamental and Applied Sciences*, 9(6S), 214-226. (ISI indexed)
- [7] N. N. Ibrahim, S. A. Talib, H. N. Ismail, **C. C. Tay**, "Decolourization of reactive red 120 by using macrofungus and microfungus". *Journal of Fundamental and Applied Sciences*, 9(6S), 954-964. (ISI indexed)
- [8] S. F. Halim, S. K. Yong, **C. C. Tay**, "Ammonia nitrogen Adsorption using Spent Mushroom Substrate Biochar (SMSB)". *PERTANIKA Journal of Science and Technology*, 25, 9-20. (ISI indexed)

PUBLICATIONS FOR 2016

- [1] **Tay, C. C.**, Muda, A.M., Abdul-Talib, S, Ab-Jalil, M. F., Othman, N., "The half saturation removal approach and mechanism of Lead (II) removal using eco-friendly industrial fish bone meal waste biosorbent". *Clean Technologies and Environmental Policy*, 18(2), 541-551. (Q2, IF 1.1934)
- [2] Nurul-Shuhada, Md-Desa, Zaidi Ab-Ghani, Suhaimi Abdul-Talib, **Chia Chay Tay**, "Optimization of activated carbon preparation from spent mushroom farming waste (SMFW) via Box Behnken design of Response Surface Methodology". *Malaysian Journal of Analytical Science* 2(3), 461-468. (SCOPUS indexed)
- [3] **Tay, C. C.**, Liew, H. H., Abdul-Talib, S., Redzwan, G., "Bi-metal biosorption using *Pleurotus ostreatus* spent mushroom substrate (PSMS) as a biosorbent – Isotherm, kinetic, thermodynamic and mechanism". *Desalination and Water Treatment* 57(20), 9325-9331. (Q3, IF 1.272-2015)

PUBLICATIONS FOR 2015

- [1] **C. C. Tay**, M.I. A. Khoshar-Khan, N. S. Md-Desa, Z. Ab-Ghani, S. Abdul-Talib, "Sustainable optimization of spent mushroom compost activated carbon preparation method using central composite rotatable design response surface methodology. *Journal of Engineering Science and Technology*, Special Issue on ACEE 2015 Conference August, 2015, 40-51. (SCOPUS indexed)
- [2] Aina Mardhiyah Jalilluddin, **Tay Chia-Chay**, Suhaimi Abdul-Talib, "Performance of twochambered microbial fuel cell (MFC) at different pH anode microenvironment using palm oil mill effluent (POME) as substrate". *Applied Mechanics and Materials*, 2015, 773-774, 511-519. (ISI indexed)

PUBLICATIONS FOR 2014

- [1] Suhaimi Abdul-Talib, **Chia-Chay Tay**, Nor-Azazi Zakaria, Aminuddin Ab-Ghani, Lariyah Mohd Sidek, Ngai-Weng Chan, "Water and environmental engineering: embracing multi-disciplinary approach through advanced and integrated technologies for sustainability", *Journal of Asian Scientific Research* 4(4), 2014. Pages: 194-206.
- [2] Kamarudzaman, A. N., **Tay, C. C.**, Amir, A., Abdul-Talib, S. "Study of biosorption using *Pleurotus* Spent Mushroom Compost in a Fix Bed Column", *Applied Mechanics and Materials* 664, 2014. Pages: 392-396.(SCOPUS indexed)
- [3] Kamarudzaman, A. N., **Tay, C. C.**, Amir, A., Liew, H. H. Abdul-Talib, S, "Characterization of *Pleurotus* spent mushroom compost as a potential biosorbent for Fe(II) ions removal", *Advances in Environmental Biology* 8(15), 2014. Pages 1-6. (SCOPUS indexed)
- [4] Mohd Shukri, N. Z., Ismail, H. N., **Tay, C. C.**, Md Jani, A. M. "The Growth Performance of Freshwater *Chlorella* sp. and *Scenedesmus* sp. in Different Media", *Journal of Applied Science and Agriculture* 9(11), 2014. Pages: 119-125. (ISI Indexed)
- [5] Ismail, H. N., Ahmad-Dini, U. W., **Tay, C.** "Biological Responses of Tropical Cladoceran, *Ceriodaphnia cornuta* to Different Algae Diets", *Journal of Life Sciences and Technologies* 2(2), 2014. Pages: 48-54. (ERA indexed)
- [6] Ain Nihla Kamarudzaman, **Tay Chia Chay**, Amnorzahira Amir, Suhaimi Abdul Talib, "Fe(II) biosorption using *Pleurotus* spent mushroom compost as biosorbent under batch experiment". *Applied Mechanics and Materials* 695, 2015, 314-318. (ISI indexed)

PUBLICATIONS FOR 2013

- [1] **C.C. Tay**, A. Abdullah-Suhaimi, H.H. Liew and S. Abdul-Talib, "Fungal *Pleurotus ostreatus* biosorbent for Cadmium (II) Removal in Industrial Wastewater", *Journal of Life Sciences and Technologies* (1), 2013. Pages: 65-68. (ERA indexed)
- [2] Ain Nihla Kamarudzaman, **Chia Chay Tay**, Mohd Faizal Ab Jalil, Suhaimi Abdul Talib, "Biosorption of Iron (III) from Aqueous Solution using *Pleurotus ostreatus* Spent Mushroom Compost as Biosorbent", *Advanced Materials Research* (781-784), 2013. Pages: 636-642. (SCOPUS indexed)

PUBLICATIONS FOR 2012

- [1] **Chia-Chay Tay**, Ghufuran Redzwan, Hong-Hooi Liew, Soon-Kong Yong, Salmijah Surif, Suhaimi Abdul-Talib, "Fundamental Behavior for Biosorption of Divalence Cations by *Pleurotus* Mushroom Spent-Substrate", *Malaysian Journal of Science* 31(1), 2012. Pages: 40-44. (SCOPUS indexed)
- [2] **Chia-Chay Tay**, Hong-Hooi Liew, Soon-Kong Yong, Salmijah Surif, Ghufuran Redzwan, Suhaimi Abdul-Talib, "Cu(II) Removal onto Fungal Derived Biosorbents: Biosorption performance and the half saturation constant concentration approach", *International Journal of Research Chemistry and Environment* 2(3), 2012. Pages: 138-143.

PUBLICATIONS FOR 2011

- [1] **Chia-Chay Tay**, Hong-Hooi Liew, Ghufuran Redzwan, Soon-Kong Yong, Salmijah Surif, Suhaimi Abdul-Talib, "*Pleurotus ostreatus* spent mushroom compost as green biosorbent for nickel (II) biosorption", *Water Science and Technology* 64(12), 2011. Pages: 2425-2432. (Q3, IF 1.064-2015)
- [2] **Chia Chay Tay**, Hong Hooi Liew, Chun-Yang Yin, Suhaimi Abdul-Talib, Salmijah Surif, Afiza Abdullah Suhaimi, Soon Kong Yong, "Biosorption of cadmium ions using *Pleurotus ostreatus*: Growth kinetics, isotherm study and biosorption mechanism", *The Korean Journal of Chemical Engineering* 28(3), 2011. Pages: 825-830. (Q3, IF 1.408-2015)

PUBLICATIONS FOR 2010

- [1] **Chia-Chay Tay**, Ghufuran Redzwan, Hong-Hooi Liew, Soon-Kong Yong, Salmijah Surif and Suhaimi Abdul-Talib, "Copper (II) biosorption characterization of *Pleurotus ostreatus* spent mushroom compost", *The 2010 International Conference on Science and Social Research (CSSR 2010)*, pages: 6-10. 5-7 Dec 2010, Kuala Lumpur, Malaysia. (IEEE indexed)
- [2] Hong-Hooi Liew, **Chia-Chay Tay**, Soon-Kong Yong, Salmijah Surif, Suhaimi Abdul-Talib, "Biosorption Characteristics of lead [Pb(II)] by *Pleurotus ostreatus* biomass", *The 2010 International Conference on Science and Social Research (CSSR 2010)*, pages: 1-5. 5-7 Dec 2010, Kuala Lumpur, Malaysia. (IEEE indexed)
- [3] **Chia-Chay Tay**, Hong-Hooi Liew, Ghufuran Redzwan, Soon-Kong Yong, Salmijah Surif and Suhaimi Abdul-Talib, "*Pleurotus ostreatus* spent mushroom compost as green biosorbent for nickel (II) biosorption", *Proceeding of The 3rd IWA Asia Pacific Regional Young Water Professionals Conference 2010, T4A YWP105-FPV*, pages: 1-8. 21-24 Nov 2010, Singapore. Selected for journal publication, *Water Science and Technology*.

PUBLICATIONS FOR 2009

- [1] **Tay Chia Chay**, Salmijah Surif and Lee Yook Heng, "The behaviour of immobilized cyanobacteris *Anabaena torulosa* as an electrochemical toxicity biosensor", *Asian Journal of Biological Sciences* 2(1), 2009. Pages: 14-20.
- [2] **T. Chia-Chay**, L. Hong-Hooi, Y. Soon Kong, S. Surif, S. Abdul Talib, "Biosorption of lead(II) from aqueous solutions by *Pleurotus* as a toxicity biosorbent", *Proceeding of Environmental Science and Technology Conference (ESTEC)*, pages: 229-237. 7-8 Dec 2009, Kuala Terengganu, Malaysia.

PUBLICATIONS FOR 2008

- [1] Lee Yook Heng, Salmijah Surif, Izumi Mori, Wong Ling Shing, **Tay Chia Chay**, Mazlin Mokhtar, Musa Ahmad, Isao Aoyama, "Toxicity biosensors based on living bacteria cells". Editor: Mazlin Mokhtar, Lee Yook Heng and Goh Choo Ta, Glimpses of environmental risk management in Malaysia: Solution the eminent researchers and on forming the public. Lestari Occasional Publication, pages: 11-17. (1 chapter in book).

PUBLICATIONS FOR 2005

- [1] **Tay Chia Chay**, Salmijah Surif and Lee Yook Heng, "A copper toxicity biosensor using immobilized cyanobacteria, *Anabaena torulosa*", Sensor Letters 3, 2005. Pages: 49-54. (ISI indexed)

AWARDS

- **RESEARCH:**
DAAD RISE Worldwide Research Internship Program, 15 Jun – 29 August 2015, Mentee: Lucas Louistissed, University of Freiburg, Germany.
- **PUBLICATION:**
Best Paper Award in International Conference on Advances in Civil and Environmental Engineering (ACEE), 28-30 July 2015, G Hotel Penang, Malaysia.
- **INNOVATION:**
Bronze Medal: Ni(II) and methylene blue removal using spent mushroom farming waste activated carbon. Invention, Innovations and Design Exposition 2015 (iidex 2015), UiTM, 27-30 April 2015, Dewan Agung Tuanku Canselor (DATC).
- **INDUSTRY TRAINING PROGRAM:**
Alice Daniel, University of Magdeburg, Germany, 11 July 2016 – 30 Sept 2016
Leonie Feiertag, Kassel University, Germany, 1 Aug 2016 – 21 Oct 2016
An Nuur Suraya bt Zamri, UniMAS, 3 July – 8 Sept 2017