

**Name:** Chin Kui Cheng  
**Address:** Faculty of Chemical & Natural Resources Engineering,  
Universiti Malaysia Pahang,  
Lebuhraya Tun Razak, Gambang, Kuantan, Pahang.  
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**Email:** [chinkui@ump.edu.my](mailto:chinkui@ump.edu.my)  
**Statistics:** 602 citations with h-index of 15 (WoS)



## Education

2011 **Ph.D The University of New South Wales**  
School of Chemical Engineering  
Sydney, NSW, AUSTRALIA

*Thesis: Steam Reforming of Glycerol over alumina supported Co-Ni catalyst*

*Achievements:* Extensive involvement in setting up and commissioning a lab-scale glycerol steam reforming unit for Chemical Reactor Laboratory in School of Chemical Engineering UNSW. Expert user of AutoChem unit (solid surface physicochemical properties), Quantachrome Autosorb (BET area and pore volume of solid), ThermoCahn unit (measuring gas-solid interaction), XRD analyzer (solid surface property) UV-Vis unit and GC analyzer. In addition, I also have successfully co-supervised 3 final year students and 1 master student in the area of glycerol steam reforming and also ethanol dehydration. From my work, I have published 8 articles in peer-reviewed journals. I have given 15 presentations (oral/poster) in internationally-acclaimed conferences, such as ISCRE, TOCAT, NASC. My work has been recognised as best presentation in 2010 TOCAT6 in Sapporo Japan.

2004 **M.Sc. University of Alberta**  
Department of Chemical and Materials Engineering  
Edmonton, Alberta, CANADA

*Thesis: Low Temperature Hydrocarbon Conversion PBI Fuel Cells*

*Achievements:* Working together with a visiting professor from China in designing and developing lab-scale low temperature polymeric fuel cell for hydrocarbon conversion. My research scopes also include preparation of polymer membrane and membrane-electrode assembly for the use in fuel cell. I am an experienced user of Gamry electrochemistry application. My work has been published in high-impact factor ACS journal with an overall citation of more than 10 in Scopus.

2002 **B. Eng. Universiti Teknologi Malaysia (1<sup>st</sup> Division)**  
Faculty of Chemical and Natural Resources Engineering, Skudai, Johor

## Employment History

- July 2015     **Associate Professor of Chemical Reaction Engineering**  
**Universiti Malaysia Pahang (UMP)**  
Faculty of Chemical and Natural Resources Engineering  
Kuantan, Pahang, MALAYSIA
- 2011– 2015   **Senior Lecturer, Universiti Malaysia Pahang (UMP)**  
Faculty of Chemical and Natural Resources Engineering  
Kuantan, Pahang, MALAYSIA
- 2009–2011   **Teaching Assistant, The University of New South Wales (UNSW)**
- Marker for CEIC2004, Industrial Chemistry for Chemical Engineers (150 students)
  - Marker for CEIC2002, Heat and Mass Transfer (150 students)
  - Marker for CEIC2000, Material and Energy Systems (150 students)
  - Tutor for CEIC1000, Product Engineering Design (150 students)
- 2004–2008   **Lecturer, Universiti Malaysia Pahang (UMP)**  
Faculty of Chemical and Natural Resources Engineering  
Kuantan, Pahang, MALAYSIA
- UMP's Academic advisor committee member (2007–2008)
  - Team leader of BTech. Program (new degree program) (2008)
  - Coordinator for final year Plant Design project (2005–2006)
  - Lecturer for Material & Energy Balances, Chemical Reaction Engineering and Chemical Engineering Thermodynamics (2005–2008)
  - Developed/ lecture Fuel Cell Technology course (2005–2006)
  - Supervised 2 design projects and 6 final year undergraduate projects
- 2004         **Process Engineer, MewahOleo Ind. Sdn. Bhd.**  
Pasir Gudang, Johore, MALAYSIA
- Maintaining and trouble-shooting 100 MT per annum throughput of a De-Smet palm oil refinery
- 2003–2004   **Teaching Assistant, University of Alberta**
- Tutor for Chemical Reaction Engineering and also Thermodynamics

## Research Grants

- International level grant
  - i. King Faisal University – RM16,000 funding for consumables, technical services. 2017. **Leader**
  - ii. Newton Fund Mobility Grant – University of Sheffield Hallam and Universiti Malaysia Pahang. 2016 to 2017. **Leader**
  - iii. RDU151501 Malaysia Toray Science Fund – Photocatalytic POME Degradation, RM20K from 2015 to 2017. **Leader**
- National level grant
  - iv. RDU151302 RACE – Kinetics Analysis of Catalytic Syngas Production from Glycerol, RM50K from 2015 to 2017. **Leader**
  - v. RDU150118 FRGS – The Mechanisms of Tailoring Catalysis Systems for Photoelectrochemical Reduction of CO<sub>2</sub>, RM126.5K from 2015 to 2017. **Member**
  - vi. RDU140112 FRGS – Kinetics and Spectroscopic Analyses of Syngas Production from Glycerol Steam Reforming over 15wt%Ni/85wt% Alumina Catalyst, RM106K from 2014 to 2016. **Leader**
  - vii. RDU140141 FRGS – Fundamental Studies of Rare Earth Separation, RM121K from 2014 to 2017. **Member**
  - viii. RDU140123 FRGS – Kinetic Modelling of The Synthesis of Sorbitol-Branched Polyester for The Production of Bio-based Polyurethane, RM120K from 2014 to 2016. **Member**
  - ix. RDU140138 FRGS – Fundamental Study of Fischer-Tropsch Reaction Mechanism over A Cobalt-based Catalyst, from 2014 to 2016. **Member**
  - x. RDU130501 Sciencefund – Biogasoline production from biogas over rare-earth promoted cobalt catalysts, RM220K from 2013 to 2015. **Leader**
  - xi. RDU130108 FRGS – Synthesis of Novel Catalysts for Carbon Dioxide (CO<sub>2</sub>) Dry Reforming of Glycerol For Syngas Production Using Noble Metal-Based Catalysts Supported on Oxides, RM92,300 from 2013 to 2015. **Member**
  - xii. RDU130136 FRGS – Elucidation of Thermal Degradation Kinetics of Polyphenols From Orthosiphon Stamineus, RM74,500 from 2013 to 2015. **Member**
  - xiii. RDU130101 FRGS – Reaction Mechanisms of Glycerol Oxidation to Produce Mesoxalic Acid From Biodiesel Waste, RM96,000 from 2013 to 2015. **Member**

- xiv. RDU120613 ERGS – A novel syngas production method via photoreforming of POME waste over TiO<sub>2</sub>-supported noble metal doped photocatalysts, RM50K from 2012 to 2014. **Leader**
- xv. RDU120613 ERGS – Direct catalytic conversion of natural gas into methanol via liquid phase room temperature oxidation, RM90K from 2012 to 2015. **Member**
- xvi. RDU120611 ERGS – Overcoming the barrier of lower generation in microbial fuel cells by introducing new electrogens in anode and nanoparticles loaded cathode, RM50K from 2012 to 2014. **Member**
- xvii. RDU120607 ERGS – The investigation of molecular solution chemistry linking to the thermodynamics properties of active pharmaceutical ingredient polymorph, RM90K from 2012 to 2015. **Member**
- xviii. RDU121001 KTP – Transfer of reactor modelling knowledge for intensifying the production in a petrochemical plant, RM138,375 from 2012 to 2014. **Member**
- xix. RDU121216 MTUN-CoE Grant – Catalyst synthesis from limestone catalyst for biodiesel and syngas production including the socio-economic assessment, RM150,930 from 2012 to 2014. **Member**
- xx. RDU120107 FRGS – Heterogeneous kinetic study and residue curve map (RCM) determination for the recovery of acrylic acid from the industrial wastewater via esterification, RM81,770 from 2012 to 2014. **Member**
- xxi. RDU120112 FRGS – Formulation mechanism of photocatalyst and its kinetic study for CO<sub>2</sub> reduction, RM86,180 from 2012 to 2014. **Member**

Universiti Malaysia Pahang Short-Term Grant

- xxii. RDU160335 – Ethylene Production from Ethanol Dehydration over Zeolite-Y Catalyst. **Leader**
- xxiii. RDU1603152 – Hair-derived Hollow Carbon Microfiber as catalyst in Microfluidics Photocatalytic Reactor for The Removal of Organic Materials in Water. **Member**
- xxiv. PGRS160371 – Preparation and Characterization of Facile Light Rare Earth Oxide Catalysts for Ethylene Production from Ethanol Dehydration. **Leader**
- xxv. PGRS160370 – Ethylene Production from Ethanol Dehydration over Fly Ash Zeolite Catalyst. **Leader**
- xxvi. GRS1503140 – Kinetic Study of Synthesized Perovskite Type Oxides (SmCoO<sub>3</sub>)

- for the Dry (CO<sub>2</sub>) Reforming of CH<sub>4</sub>. **Leader**
- xxvii. RDU150314 – Assessment of Pollution Dispersion from Gebeng Industrial Area. **Member**
- xxviii. GRS150330 – Photocatalysis Treatment of Organic Waste from POME over Metal-Doped TiO<sub>2</sub> Photocatalyst. **Leader**
- xxix. RDU140315 – Synthesis and Characterization of EFB-Cliker Supported Nickel Catalyst for Syngas Production from Reactive Fluid Mixture of CO<sub>2</sub>-CH<sub>4</sub>. **Leader**
- xxx. RDU140368 – Seawater Corrosion Resistant Heat Transfer Agent (HTA) to Improve Water Evaporation in Solar Still. **Member**
- xxxi. RDU140374 – Fundamental Investigation of Methane Dry Reforming Over Lanthanide-Group Promoted Co/Al<sub>2</sub>O<sub>3</sub> Catalysts. **Member**
- xxxii. RDU140313 – Kinetics and Mass Transfer of Esterification Diluted Acrylic Acid with 2-Ethyl Hexanol in A Tubular Packed Bed Reactor. **Member**
- xxxiii. RDU140322 – Development of Electrocatalyst for Air Cathode Microbial Fuel Cell for Power Generation and Simultaneous Treatment of POME. **Member**
- xxxiv. RDU140328 – Simulating The Drug Delivery in Human Blood Streams by Investigating The Solid-Liquid Flow Behaviour in Micro-Channels: An Experimental Approach. **Member**
- xxxv. GRS1403174 – Kinetics of Syngas Production from Glycerol Steam Reforming over Ni/Alumina Catalyst. **Leader**
- xxxvi. GRS1403173 – Synthesis of Cobalt-based Promoted by Rare Earth Metals Catalysts for Kinetics Study of Biogas Reforming-Fischer Tropsch Coupled Reactions. **Leader**
- xxxvii. GRS140333 – Photo Treatment of Organic Waste over Modified Titania Photocatalyst. **Leader**
- xxxviii. RDU140369 – Simulation Studies of Rare Extraction System. **Member**
- xxxix. RDU140316 – Investigation the Effect of Polymers-Surfactant Complexes on the Multiphase Flow in Microfluidics Applications. **Member**
- xl. GRS120357 – Dry Reforming of Methane Over Alumina-Supported Ni Catalyst. **Leader**
- xli. GRS120377 - Glycerol Dry Reforming using Limestone Catalyst. **Leader**
- xlii. GRS120355 - Photo-Catalyst Treatment of Organic Waste from POME over metal-doped TiO<sub>2</sub> photocatalyst. **Leader**

- xliii. GRS120384 - Glycerol Dry Reforming using Nickel Based Catalyst Doped with Rare Earth. **Leader**
- xliv. RDU120323 – An ultimate green route in harnessing H<sub>2</sub> fuel employing sunlight and water as reactants, RM39K from 2012 to 2014. **Leader**
- xlv. RDU120395 – Hydrodynamics of reactive liquid-liquid system: Extractive biodiesel synthesis column, RM38,400 from 2012 to 2014. **Member**
- xlvi. RDU100395 – Development of multicomponent catalytic system for the conversion of non-edible oil feedstock to biodiesel, RM36.5K from 2010 to 2012. **Member**
- xlvii. RDU070369 – Zeolite as an additive in enhancing the performance of absorption refrigeration system. 2007 to 2009. **Member**
- xlviii. RDU070302 – Essential oil production from patchouli (pogostemon cablin) and waste recovery, RM104K from 2007 to 2009. **Member**
- xlix. RDU050121 - Extraction of essential oil from jasmine flower using supercritical CO<sub>2</sub> method, RM20K from 2005 to 2007. **Leader**
- l. Enzymatic production of hydrogen from biomass, RM20K from 2007 to 2009. **Member**
  - li. Biopetrol production from vegetable oil, RM20K from 2007 to 2009. **Member**

### Consultation/ Technical work

- Malchem (M) Sdn. Bhd. (2014)
- Scale-up study of a batch pilot scale esterification process with Petronas Research Sdn. Bhd. (2012).
- Experimental and CFD analysis of pressure drop across Johnson screen filter, a report submitted to Petronas MTBE Sdn. Bhd. (2012).
- Physicochemical analyses of used Amberlyst-15 catalyst, a report submitted to Petronas MTBE Sdn. Bhd. (2012).

### Scholarly Activities

\* Full profile is available at : <https://publons.com/author/1197035/chin-kui-cheng#profile>

#### Reviewer for the following journals:

- *Environmental Processes* by Springer
- *Journal of Analytical and Applied Pyrolysis* by Elsevier
- *Arabian Journal of Chemistry* by Elsevier

- *Powder Technology* by Elsevier
- *Resources, Conservation and Recycling* by Elsevier
- *Journal of the Taiwan Institute of Chemical Engineers* by Elsevier
- *Journal of Thermal Analysis and Calorimetry* by Springer
- *Renewable Energy Focus* by Elsevier
- *Neural Computing and Applications* by Springer
- *Biofuels* by Taylor and Francis
- *Catalysis Today* by Elsevier
- *Journal of the Association of Arab Universities for Basic and Applied Sciences* by Elsevier
- *Journal of The American Chemical Society* by ACS
- *Industrial & Engineering Chemistry Research* by ACS
- *Journal of Food Science and Technology* by Springer
- *Materials Chemistry and Physics* by Elsevier
- *Renewable Energy* by Elsevier
- *Journal of Power Sources* by Elsevier
- *Energy Conversion and Management* by Elsevier
- *Journal of Natural Gas Science and Engineering* by Elsevier
- *Chemical Engineering Research and Design* by Elsevier
- *Water, Air and Soil Pollution* by Springer
- *Research on Chemical Intermediates* by Springer
- *Applied Catalysis B: Environment* by Elsevier
- *Chemical Engineering Journal* by Elsevier
- *Biomass and Bioenergy* by Elsevier
- *Fuel* by Elsevier
- *RSC Advances* by Royal Society of Chemistry
- *Journal of Cleaner Production* by Elsevier
- *Journal of Environmental Chemical Engineering* by Elsevier
- *Journal of Water Process Engineering* by Elsevier
- *Engineering Science and Technology: An International Journal* by Elsevier
- *Journal of Energy Chemistry* by Elsevier
- *Journal of the Energy Institute* by Elsevier
- *International Journal of Hydrogen Energy* by Elsevier

- *Renewable and Sustainable Energy Reviews* by Elsevier
- *Journal of Industrial & Engineering Chemistry* by Elsevier
- *International Biodeterioration & Biodegradation Journal* by Elsevier
- *Materials & Design* by Elsevier
- *Materials Science & Engineering B* by Elsevier
- *Journal of Chemical Technology and Biotechnology* by John Wiley & Sons
- *Bulletin of Chemical Reaction Engineering and Catalysis* by UDN
- *International Journal of Chemical Reactor Engineering* by De Gruyter

### **Appointments:**

#### **International**

- *Grant reviewer for Cancéropôle Grand Ouest, France 2016*
- *Guest Editor for Bulletin of Chemical Reaction Engineering and Catalysis in conjunction with FluidsChE 2015*
- *International reviewer for 22<sup>nd</sup> RSCE 2015 Conference, 24<sup>th</sup>-25<sup>th</sup> September 2015, Bangkok, Thailand*
- *International reviewer for 2016 3<sup>rd</sup> International Conference on Chemical and Food Engineering, April 8-9<sup>th</sup> 2016, Tokyo Japan*
- *Technical Program Committee member for 2016 International Conference on New Material and Chemical Industry (NMCI2016), Aug. 13<sup>th</sup>-15<sup>th</sup>, 2016, Suzhou, China*
- *International Conference on Chemical Engineering (ICCE'16) committee member. San Francisco, USA, 19-21 October, 2016*  
(<http://www.iaeng.org/WCECS2016/ICCE2016.html>)

#### **National**

- *FRGS grant evaluator for Ministry of Education Malaysia since 2016*
- *Reviewer for 9<sup>th</sup> Regional Conference on Chemical Engineering*
- *Judge for MUCET 2015 Conference, Johor Bahru*
- *PhD thesis examiner for Monash University, Malaysia Campus*

#### **Universiti Malaysia Pahang**

- *Editorial Board member for JCEIB*
- *Thesis examiner (Viva-voce, pre-viva and proposal defense)*



## Awards/ Scholarships

- Outstanding Reviewers by 5 different Elsevier journals (since 2016)
- Anugerah Cendekia Bitara (Publication Category), Universiti Malaysia Pahang (2016)
- Anugerah Sanjungan, (Publication Category), Universiti Malaysia Pahang (2016)
- Bronze medal (3 bronze medals), CITReX 2016 Universiti Malaysia Pahang (2016)
- Special Award and Gold Award at Kaoshiung International Exhibition, Kaoshiung Taiwan (2016)
- Gold Medal, i-Envex-UniMAP (2015)
- Anugerah Cendekia Bitara (Publication Category), Universiti Malaysia Pahang (2015)
- Anugerah Sanjungan, (Publication Category), Universiti Malaysia Pahang (2015)
- Anugerah Sanjungan, (Exhibition Category), Universiti Malaysia Pahang (2015)
- Best Paper Award, 27<sup>th</sup> International Symposium of Chemical Engineering, KL (2014)
- Best Paper Award (Chemical Category), MUCET 2014, Melaka (2014)
- Excellent Award for the categories “Patent & Exhibition”, “Research Grant”, “Publication” and “Teaching & Learning”, FKKSA UMP (2014)
- Silver Medal, MTE 2014, PWTC KL Malaysia (2014)
- Third Prize Best Paper Award (Energy Category), ICCEIB 2013, Kuantan (2013)
- Grand Prize for Shell-Inter Paper Presentation, UTM-SPEC, Skudai (2013)
- Grand Prize Winner for IEM Chemical Engineering Research Paper Competition, Chemical Engineering Technical Division IEM, KL (2013)
- Bronze Medal, PECIPTA 2013, KL Malaysia (2013)
- MUCET 2012 Gold Award (Research Paper), MUCET 2012, Perlis Malaysia (2012)
- University International Postgraduate Award, UNSW (2008–2011)
- Best poster presentation, TOCAT6 Sapporo Japan (2010)
- Young Researcher Travel Award, ISCRE Philadelphia (2010)
- PRSS Travel Bursary, UNSW (2010)
- Excellent Service Award, Universiti Malaysia Pahang (2006 & 2007)
- Postgraduate Scholarship, University of Alberta (2002–2004)
- Captain Thomas Farrell Greenhalgh Memorial Graduate Award, University of Alberta (2002 & 2003)
- KLK Scholarship, KLK Corporation Malaysia (1998–2002)
- Dean’s List, Universiti Teknologi Malaysia (1998–2002)

## Professional Membership

- Member of AIChE (9900124086)
- Associate member of IChemE, UK (99949867)
- Associate member of Energy Institute, UK
- Member of Board of Engineers, Malaysia
- Member of Institution of Engineers, Malaysia

## Postgraduate Supervision (Graduated as Main SV)

1. Ayodele Bamidele Victor, “Catalyst Development for Dry Reforming of Natural Gas for The Production of Gasoline” (PhD Chem Eng)
2. Ng Kim Hoong, “Photopolishing of POME over Titania and ZnO Photocatalysts” (PhD. Chem Eng)
3. Nor Shahirah Mohd Nasir, “Kinetics of Syngas Production from Glycerol Pyrolysis over Ni/Al<sub>2</sub>O<sub>3</sub> Catalyst” (PhD Chem Eng)
4. Chong Soo Ling, “Ethanol Dehydration over H<sub>3</sub>PO<sub>4</sub>-Promoted CeO<sub>2</sub> Catalyst” (MSc)
5. Soh Jiah Chee, “Ethanol Dehydration over H<sub>3</sub>PO<sub>4</sub>-modified Zeolite Y” (MSc)
6. Kong Zi Ying, “Application of CuFe<sub>2</sub>O<sub>4</sub> For Photocatalytic Fenton Degradation of Glycerol” (MEng. Chem Eng)
7. Mohd Rizaiddin Deraman, “Synthesis and Characterization of Pt/TiO<sub>2</sub> and Ag/TiO<sub>2</sub> for Photo-catalytic Degradation of Pre-treated Palm Oil Mill Effluent” (MEng. Chem Eng)
8. Nor Shahirah Bt Mohd Nasir, “Scale-Up and Optimization of Bioethanol Production from Palm Oil Sap” (MEng. Chem Eng)
9. Siew Kah Weng, “Synthesis and Characterization of La-Ni/Al<sub>2</sub>O<sub>3</sub> Catalysts for Glycerol Dry Reforming” (MEng. Chem Eng)
10. Lee Hua Chyn, “Synthesis and Characterization of Cement Clinker-Supported Nickel Catalyst for Glycerol Dry Reforming” (MEng. Chem Eng)

## Postgraduate Supervision (Graduated as Co-SV)

11. Md. Rahim Uddin, “Photocatalysis Development for CO<sub>2</sub> Conversion” (MEng. Chem Eng)

## Postgraduate Supervision (On-Going as Main SV)

12. Osazuwa Osarieme Uyi, “Syngas from Methane Dry Reforming” (PhD Chem Eng) –

Expected Dec 2017

13. Ashwin Charles Benedict, "Photocatalytic treatment of POME" (PhD. Chem Eng)

### **Postgraduate Supervision (On-Going as Co-SV)**

14. Mohammed Anwar Hossain, "Synthesis and Characterization of rare earth metal-doped Catalysts for the Production of Biogasoline from POME" (PhD Chem Eng)
15. Mohammed Amirul Islam, "Electricity Generation from POME using Microbial Fuel Cell Technology" (PhD Chem Eng)

**Undergraduate Supervision**

1. Cheng Yoke Wang, "Application of  $\text{WO}_3$  in Photocatalytic treatment of POME" (2016/2017).
2. Chang Ying Shi, "Application of  $\text{SrCoO}_3$  Perovskite in Methane Dry Reforming" (2016/2017).
3. Jagathees Kumar s/o Sanna Moorthy, "Methane Dry Reforming over  $\text{La}_2\text{O}_3$  supported Cobalt Catalyst (2015/2016)
4. Dhijeedthiran Naidu s/o Chandren, "Production of  $\text{H}_2$ -rich Syngas via Catalytic Pyrolysis of Glycerol using  $\text{La-Ni/Al}_2\text{O}_3$  Catalyst" (2015)
5. Lim Lit Woon, "Light Hydrocarbon Production from Ethanol over 20wt%Co/80wt% $\text{CeO}_2$  and 20wt%Co/80wt% $\text{La}_2\text{O}_3$  Catalysts (2015).
6. Lee Chea Hui, "Photocatalytic Degradation of Palm Oil Mill Effluent (POME) over  $\text{Ag/TiO}_2$  Catalyst (2015).
7. Fayizah binti Yasin, "Ethylene Production from Ethanol over Lanthanum Promoted Nickel Magnesium Oxide Catalyst" (2014/2015).
8. Geet Govind A/L Asokumar, "Hydrogen from Glycerol Pyrolysis" (2014/2015).
9. Wong Nyap Xiang, "Synthesis and Characterization of  $\text{MgFe}_2\text{O}_4$  Photocatalyst" (2014/2015).
10. Chan Han Jie, "Synthesis and Characterization of EFB Clinker supported Nickel and Cobalt Catalysts for Methane Dry Reforming" (2014/2015).
11. Tan Sze Yee, "Evaluative Study of Glycerol Photocatalytic Degradation over  $\text{CuFe}_2\text{O}_4$  and  $\text{La-CuFe}_2\text{O}_4$  Photocatalysts (2014/2015).
12. Lum Sin Wan, "Photodegradation of Methylene Blue and Glycerol Solution over  $\text{CuFe}_2\text{O}_4$ " (2014/2015).
13. Shaik Ismail Mohd Ali, "Cerium and Lathanum Promoted  $\text{Ni/MgO}$  Catalyst for Methane Dry Reforming" (2013/2014).
14. Tan Wei Jian, "Cerium Promoted  $\text{Ni/MgO}$  Catalyst for Glycerol Reforming" (2013/2014).
15. Tee Chin Chow, "Cerium Promoted  $\text{Ni/MgO}$  Catalyst for Biogas Dry Reforming" (2013/2014).
16. Ang Chun How, "Photocatalysis of glycerol solution" (2013/2014).
17. Chong Soo Kee, "A study into the roles of  $\text{Cu/TiO}_2$  photocatalysts in the methylene blue photodecomposition and water photo-splitting" (2013/2014).

18. Ng Kim Hoong, "Synthesis and characterization of Cu/TiO<sub>2</sub> for phototreatment of POME" (2013/2014).
19. Ong Chen Loong, "Synthesis and characterization of Co/MgO catalyst of methane dry reforming" (2013/2014).
20. Ho Kah Sing, "Characterization of Pt-Sn/Al<sub>2</sub>O<sub>3</sub> catalyst and coke formation during propane dehydrogenation" (2012/2013).
21. Joanna Chye Jo Ean, "Physicochemical characterization and carbon gasification analysis of used propane dehydrogenation catalyst" (2012/2013).
22. Latifah Sakinah bt Ismail, "Thermodynamic analysis of glycerol dry reforming" (2012/2013).
23. Kong Zi Ying, "Thermodynamic analysis of methane dry reforming" (2012/2013).
24. Nuraini Nurazaman, "Photocatalysis of glycerol at ambient condition over Pt/TiO<sub>2</sub> catalyst" (2012/2013).
25. Quratuaini Hassanusi, "Thermodynamic study of propane dehydrogenation into propylene" (2012/2013).
26. Norzaini bin Abd. Rahim "Physicochemical characterization of Ni/Al<sub>2</sub>O<sub>3</sub> and La promoted Ni/Al<sub>2</sub>O<sub>3</sub> catalyst for methane dry reforming" (2012/2013).
27. Leong Nguk Foong, "A study on microwave-assisted extraction of patchouli essential oil: effect of hexane as solvent" (2008).
28. Munirah binti Abdul Latif, "Extraction of jasmine essential oil using microwave extraction method" (2008).
29. Muhd Zahiruddin bin Shukor, "Extraction of essential oils from patchouli leaves using ultrasonic-assisted solvent extraction method" (2008).
30. Ahmad Kamal Masrur, "Microwave assisted extraction of patchouli essential oil using ethanol as solvent" (2008).
31. Muhamad Faizal Ahmad Fuad, "Synthesis of biodiesel from triglyceride" (2006).
32. Mohd Faisal Sulong @ A Rashid, "Extraction of essential oils from jasmine flower using solvent extraction method" (2006).
33. Jessica bt Federick Lamhai, "Extraction of essential oils from jasmine flower using supercritical CO<sub>2</sub> method" (2006).
34. Norulshahida binto Che Din, "Extraction of essential oils from jasmine flower using supercritical CO<sub>2</sub> co-solvent extraction" (2006).

**Plant Design Supervision**

1. Production of 50,000 MT/annum of formalin (2015/2016)
2. Production of 50,000 MT/annum of maleic anhydride (2014/2015)
3. Production of 100,000 MT/annum of ethylbenzene (2013/2014)
4. Production of 25,000 MT/annum of chlorine gas (2012/2013)
5. Production of 200,000 MT/annum of phenol (2012)
6. Production of ammonia (2007)
7. Production of methanol (2006)

**List of Publications (2005–present)**Book:

C.K. Cheng, Karl T. Chuang, J. Luo, “PBI Fuel Cells for Hydrocarbon Conversion: Concepts and Applications”, Lambert Academic Publishing (2012), [ISBN-10: 3659213802](#).

Journal Publications:

1. B. V. Ayodele, M. R. Khan, C. K. Cheng, “Greenhouse Gases Abatement by Catalytic Dry Reforming of Methane to Syngas over Samarium Oxide-supported Cobalt Catalyst”, *International Journal of Environmental Science and Technology*, **In press**, (2017).
2. M. A. Islam, B. Ethiraj, C. K. Cheng, A. Yousuf, Md M. R. Khan, “Electrogenic Power Generation in Anaerobic Sludge-Driven Microbial Fuel Cells”, *Energy & Fuels*, **31(6)**, pp. 6132 – 6139 (2017).
3. Y. W. Cheng, Y. S. Chang, K. H. Ng, T. Y. Wu, C. K. Cheng, “Photocatalytic Restoration of Liquid Effluent from Oil Palm Agroindustry in Malaysia using Tungsten Oxides Catalyst”, *Journal of Cleaner Production*, **162**, pp. 205 – 219 (2017).
4. O. U. Osazuwa, H. D. Setiabudi, S. Abdullah, C. K. Cheng, “Syngas Production from Methane Dry Reforming over SmCoO<sub>3</sub> Perovskite Catalyst: Kinetics and Mechanistic Studies”, *International Journal of Hydrogen Energy*, **42(15)**, pp. 9707 –9721 (2017).
5. K. H. Ng, M. R. Khan, Y. H. Ng, Sk. S. Hossain, C. K. Cheng, “Restoration of Liquid Effluent from oil Palm Agroindustry in Malaysia using UV/TiO<sub>2</sub> and UV/ZnO Photocatalytic Systems: A Comparative Study”, *Journal of Environmental Management*, **196**, pp. 674 – 680 (2017).
6. M.N. N. Shahirah, J. Gimbun, A. Ideris, M. R. Khan, C. K. Cheng, “Catalytic Pyrolysis of Glycerol into Syngas over Ceria-promoted Ni/ $\alpha$ -Al<sub>2</sub>O<sub>3</sub> catalyst”, *Renewable Energy*, **107**, pp. 223 – 234 (2017).
7. O. U. Osazuwa, C. K. Cheng, “Catalytic Conversion of Methane and Carbon Dioxide (Greenhouse Gases) into Syngas over Samarium-Cobalt-Trioxides Perovskite Catalyst”, *Journal of Cleaner Production*, **148**, pp. 202 – 211 (2017).
8. M. A. Islam, A. Karim, C. W. Woon, B. Ethiraj, C. K. Cheng, A. Yousuf, M. R. Khan, “Augmentation of air cathode microbial fuel cell performance using wild type *Klebsiella variicola*”, *RSC Advances*, **7(8)**, pp. 4798 – 4805 (2017).
9. J. C. Soh, S. L. Chong, S. S. Hossain, C. K. Cheng, “Catalytic Ethylene Production from Ethanol Dehydration over Non-Modified and Phosphoric Acid Modified Zeolite H-Y (80)

- Catalysts”, *Fuel Processing Technology*, **158**, pp. 85 – 95 (2017).
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