***PHONGPHAT PRAWANG***



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**PERSONAL PARTICULARS**

**Date of Birth**: Sep. 10, 1988

**Nationality:** Thai

**Religion:** Buddhism

**Military Status:** No military service obligation

**EDUCATION**

2012-2014 M.S. (Petroleum Technology): The Petroleum and Petrochemical Collage, Chulalongkorn University, Bangkok, Thailand

2007-2011 B.Sc. (Industrial Chemistry): King Mongkut’s University of Technology North Bangkok, Thailand

(2nd class honors)

**PROFESSIONAL EXPERIENCE**

2014-Present Researcher, Mahanakorn University of Technology, Bangkok, Thailand

2011-2012 DCS Operator, Paper Machine Unit, *Double A* (1991) Public Company Limited, Prachinburi, Thailand

2011 Operator, CO2-Seperator Unit, Praxair (Thailand) Company Limited, Rayong, Thailand

2010 Internship student, Simulation Steam Consumption for HDPE-I plant, PTT Public Company Limited, Rayong, Thailand

**RESEARCH INTERESTS**

* Ni-based alloy Catalysts
* Photocatalytic of VOCs on TiO2/(TiO2-V2O5)/polypyrole nanocomposites
* Thermochromics of Vanadium Oxide for Smart Glass Application
* H2 Production and Synthesis-Fuel for Alternative Energy

**RESEARCH PROJECTS**

**M.S. project:** Catalytic activity of Ni/Ce-Zr mixed oxide catalyst modified by Mg and Mn for methane dry reforming.

**Achievement:** The catalyst performance is related to the acid-base properties, high surface area of support and the interaction between nickel species and the support. This indicated the improvement of both activity and stability resulting from the incorporation of Mn and Mg into ceria-zirconia lattices.

**B.Sc. project:** The effect of promoter on Cobalt supported catalyst in Fischer-Tropsch reaction for synthesis of diesel.

**Achievement:** The addition of Ca promoter on the Co/M22 catalyst reduced at low temperature (~500°C) perform a high activity compared to Mn and K. However, the catalyst reduced at high temperature (750°C), it was found that the activity of promoted catalyst is in the order of Ca>K>Mn.

**INTERNATIONAL PUBLICATION**

* **Prawang, P.**, Rirksomboon, T., Meeyoo, V., *“Catalytic Activity of Ni/Ce-Zr mixed oxide catalysts modified by manganese and magnesium for CO2 reforming of CH4,”* (In-preparation), 2015.
* **Prawang, P.**, Rirksomboon, T., Meeyoo, V., Catalytic Activity of Ni/Ce-Zr Mixed Oxide Catalysts Modified by Mg and Mn for methane dry reforming, Proceedings of the 4th Research Symposium on Petrochemical and Materials Technology and the 20th PPC Symposium on Petroleum, Petrochemical, and Polymers, Ballroom, Queen Sirikit National Convention Center, Bangkok, Thailand (Proceeding, 2014, April 22; [www.ppcsym2015.com/wftp/Proceedings2014.pdf](http://www.ppcsym2015.com/wftp/Proceedings2014.pdf)).
* **Prawang. P.**, Rirksomboon, T., Meeyoo, V., " Catalytic Activity of Nickle over Ceria-Zirconia Mixed Oxide Catalysts Modified by Magnesium and Manganese for Methane Dry Reforming, the 3rd FineCat-Symposium on heterogeneous catalysis for fine chemicals, Palazzo Steri, Palermo, Italy (eBook, 2014, April 2-3; <http://www.qualitas1998.net/ismn/finecat_2014.htm>).

**CONFERENCE PRESENTATIONS**

* *“Catalytic Activity of Nickle over Ceria-Zirconia Mixed Oxide Catalysts Modified by Magnesium and Manganese for Methane Dry Reforming,”* The 3rd FineCat - Symposium on heterogeneous catalysis for fine chemicals, Palazzo Steri, Palermo, Italy, 2014, April 2-3 (<http://www.qualitas1998.net/ismn/finecat_2014.htm>).
* *“Catalytic Activity of Ni/Ce-Zr Mixed Oxide Catalysts Modified by Magnesium and Manganese for Methane Dry Reforming,”* The 5th Research Symposium on Petrochemical and Materials Technology and the 20th PPC Symposium on Petroleum, Petrochemicals, and Polymers, Queen Sirikit National Convention Center, Bangkok, Thailand, 2014, April 22.

**SHORT COURSE AND TRAINING**

2014 Short Course: Gas and LNG (TOTAL Professor Associates, France), Chulalongkorn University (June, 9-11th).

2013 Short Course: Project Management (TOTAL Professor Associates, France), PPC, Chulalongkorn University (May, 13-24th).

2010 Technical English for Communication in Careers, Institute for technical education development (ITED), King Mongkut’s University of Technology North Bangkok (KMUT’NB), Thailand (Oct., 11-21st).

**REWARDS**

2014 Poster Presentation Award: Center of Excellence on Petrochemical and Material Technology on the 5th Research Symposium on Petrochemical and Materials Technology and the 20th PPC Symposium on Petroleum, Petrochemicals, and Polymers.

2011 Scholarship student of Young Scientist and Technologist Program (YSTP), National Science and Technology Development Agency (NSTDA), Bangkok, Thailand.

**ANALYTIC TECHNICAL SKILL**

* BET Surface Area: Quanta chrome Autosorb-1 MP
* H2-Temperature Programmed Reduction (H2-TPR)
* Temperature programmed oxidation (TPO)
* Temperature-programmed desorption of NH3 (NH3-TPD)
* H2 Chemisorption
* X-ray diffraction (XRD): Model: Smartlab RINT 2000, Rigaku
* Scanning Electron Microscopy (SEM): Model: TM3000. Tabletop microscope, Hitachi
* X-Ray Fluorescence (XRF): Model: AXIOS/PW 4400, PANalytical
* Gas Chromatograph (GC): Model: GC-8A, TCD-Detector, Shimadzu GC
* Gas Chromatograph (GC): TraceTM GC Ultra, FID-Detector, Thermo Scientific

**COMPUTER PROGRAMING SKILL**

* Pro-II simulation program
* MATLAB
* Origin
* Auto-cad
* Chem Draw

**LANGUAGE SKILL**

* English: Good speaking and writing, IElTS: score 5.0 (March 15, 2014)
* Japanese: Fair speaking and writing, JLPT: Level 3 (N3) (January 31, 2009)

**REFERENCE**

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* Thirasak RIRKSOMBOON

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