

## Hyun-Tae Hwang

### Education

Korea University, South Korea	Chemical Engineering	B.S. 1999
Korea University, South Korea	Chemical Engineering	M.S. 2001
University of Southern California	Chemical Engineering	Ph.D. 2009

### Appointments

University of Kentucky	Assistant Professor, Chemical & Mat. Eng.	2015 - present
Purdue University	Postdoc. Research Associate, Chemical Eng.	2009-2015

### Publications and Intellectual Property (10 Most Recent)

- S. R. Lone, V. Kumar, J. R. Seay, D. L. Englert, and H. T. Hwang, "Evaluation of Volumetric Mass Transfer Coefficient in a Stirred Tank Bioreactor Using Response Surface Methodology," *Environmental Progress & Sustainable Energy*, (doi:10.1002/ep.12973, in press).
- Hydrogen Purification Systems for PEM Fuel Cells, Patent No. US 9,975,768 B2, Issue Date: May 22, 2018
- Catalysts for Oxidative Coupling of Methane and Solution Combustion Method for the Production of the Same, Patent No. US 9,610,565 B2, Issue Date: April 4, 2017
- High and Rapid Hydrogen Release from Thermolysis of Ammonia Borane near PEM Fuel Cell Operating Temperatures, Patent No. US 9,493,349 B2, Issue Date: November 15, 2016
- H. T. Hwang, J. R. Martinelli, R. Gounder, and A. Varma, "Kinetic Study of Pd-Catalyzed Hydrogenation of N-Benzyl-4-Fluoroaniline," *Chemical Reaction Engineering*, **288** (2015), 758-769.
- H. T. Hwang, A. Varma, "Hydrogen Storage Methods for Fuel Cell Vehicles: Current Status," *Reference Module in Chemistry, Molecular Sciences and Chemical Engineering*, R. Jan and K. Bernt (Ed.), Elsevier, Waltham, MA, ISBN: 9780-12-409547-2.
- T. Tang, C. Yuan, H. T. Hwang, X. Zhao, D. Ramkrishina, D. Liu and A. Varma, "Engineering Surface Hydrophobicity Improves Activity of Bacillus Thermocatenulatus Lipase 2 Enzyme," *Biotechnology Journal*, **10** (2015), 1762-1769.
- D. Gao, C. Schweitzer, H. T. Hwang and A. Varma, "Hydrodeoxygenation of Guaiacol on Noble Metal Catalysts: Reaction Performance and Deactivation Studies," *Industrial and Engineering Chemistry Research*, **53** (2014), 18658-18667.
- H. T. Hwang, and A. Varma, "Hydrogen Storage for Fuel Cell Vehicle Applications," *Current Opinion in Chemical Engineering*, **5** (2014), 42-48.
- H. T. Hwang, X. Zhao, C. Yuan, D. Ramkrishina, D. Liu and A. Varma, "Review – Lipase-catalyzed Biodiesel Production," *Biotechnology and Bioengineering*, **111** (2014) 639-653.

### **Synergistic Activities**

Executive Committee of KIChE (Korean Institute of Chemical Engineers) US Chapter, 2015 - present

Committee of Sustainable Engineering Forum (SEF) of AIChE, 2017 – present

Travel Award Committee of KIChE-US Chapter, 2018 – present

Guest Editor of the Journal “Processes” – Catalytic Reaction Engineering Processes, 2018 – present

Member of American Institute of Chemical Engineers (AIChE), 2004 - present

Member of Korean Institute of Chemical Engineers (KIChE), 1999 - present

Member of Korean-American Scientists and Engineers Association (KSEA): 2014 – present

### **Collaborators**

Ahmad Al-Kukhun	Intel Co.
Danni Gao	Shell
Ranjita Ghose	ExxonMobil
Rajamani Gounder	Purdue University
Jihoon Jung	Kyonggi University, South Korea
Jinsoo Kim	Kyung Hee University, South Korea
Seung-Soo Kim	Kwangwon National University, South Korea
Dehua Liu	Tsinghua University, China
Joseph. R. Martinelli	Eli and Lilly Company
Feng Qi	Tsinghua University, China
Doraiswami Ramkrishna	Purdue University
Arvind Varma	Purdue University
Chonli Yuan	Purdue University
Xuebing Zhao	Tsinghua University, China

### **Graduate Advisor**

Muhammad Sahimi	Ph.D. advisor at University of Southern California
Theodore T. Tsotsis	Ph.D. co-advisor at University of Southern California
Dong-seop Doh	Master advisor at Korea University