Curriculum Vitae

Sanchai Kuboon, Ph.D.

Researcher

Catalyst Research Team,
Nanocatalysis and Molecular Simulation Research Group,
National Nanotechnology Center (NANOTEC),
National Science and Technology Development Agency (NSTDA),
Pathum Thani, Thailand

Profile

A confident, diligent, and proactive researcher with great communication and spirituality for social integration

Education and Career

2013 – 2017 Researcher, National Nanotechnology Center (NANOTEC), Pathum Thani, Thailand

2008 – 2013 Ph.D. Student in Materials Science and Engineering Department, Michigan Technological University (MTU), Michigan, USA

2003 – 2007 B.Sc. Student (2nd Class Honor) in Chemistry Department, Prince of Songkla University (PSU), Songkhla, Thailand

Grant and Scholarship

2017 – 2019 Grant for New Researcher in the topic of "Design and development of mixed metal oxides catalysts for production of gamma valerolactone from biomass derivatives" from Thailand Research Fund (TRF)

2008 – 2013 Royal Thai Government Scholarship in Science and Technology from Ministry of Science and Technology

2003 – 2007 Science Achievement Scholarship of Thailand, Ministry of Science and Technology

Publications

Journal article: International

(1) **Kuboon** S. and Hu. Y. H. "Study of NiO−CoO and Co_3O4−Ni_3O_4 Solid Solutions in Multiphase Ni−Co−O Systems," Industrial & Engineering Chemistry Research 2011; 50:2015-2020

(2) Tanwongwal W., **Kuboon S**., Kraithong W., and Eiad-ua A."Production of gamma-valerolactone from methyl levulinate via catalytic transfer hydrogenation on nickel-copper oxide catalyst," Material and Manufacturing Technology VII 2016; 872:187-190

(3) Bunterngsook B., Laothanachareon T., Chotirotsukon C., Inoue H., Fujii T., Hoshino T., Roongsawang N., **Kuboon S**., Kraithong W., Techanan W., Kraikul N., and Champreda V. "Development of tailor-made synergistic cellulolytic enzyme system for saccharification of steam exploded sugarcane bagasse," Journal of Bioscience and Bioengineering 2017; 125(4):390-396

(4) Luangthong C., **Kuboon S**., Ratanatawanate C., Nualpaeng W., Viriya-empikul N., Faungnawakij and Pavasant P. "Cu-based spinels for catalytic hydrogenolysis of glycerol to1,2-propanediol," Science of Advanced Materials 2017; 9(1):34-41

(5) Matsumura Y., Kokabu T., Inoue S., Charinpanitkul T., and **Kuboon S**. "Effect of single-walled carbon nanotube catalysts on hydrothermal pretreatment of cellulose," Journal of the Japan Petroleum Institute 2018; 61(3):199-204

(6) Termvidchakorn C., Faungnawakij K., **Kuboon S**., Butburee T., Sano N. and Charinpanitkul T."A novel catalyst of Ni hybridized with single-walled carbon nanohorns for converting methyl levulinate to gamma-valerolactone," Applied Surface Science 2019; 474:161-168

(7) Tanwongwan W., Eiad-ua A., Kraithong W., Viriya-empikul N., Suttisintong K., Klamchuen A., Kasamechonchung P., Khemthong P., Faungnawakij K., and **Kuboon S**. "Simultaneous activation of copper mixed metal oxide catalysts in alcohols for gamma-valerolactone production from methyl levulinate," Applied Catalysis A: General 2019, 579, 91-98

(8) Sattayarut V., Chanthad C., Khemthong P., **Kuboon S**., Wanchaem T., Phonyiem M., Obata M., Fujishige M., Takeuchi K, Wongwiriyapan W., Khanchaitit P., and Endo M. "Preparation and electrochemical performance of nitrogen-enriched activated carbon derived from silkworm pupae waste," RSC Advances 2019; 9(18): 9878-9886

(9) Yan L., Gu Y., Han L., Wang. P., Li H., Yan. T., **Kuboon S**., Shi L., and Zhang D., "Dual promotional effects of TiO_2 -decorated acid-treated MnO_x octahedral molecular sieve catalysts for alkali-resistant reduction of NO_x," ACS Applied Materials & Interfaces 2019; 11-12; 11507-11517

(10) Bu K., **Kuboon S**., Deng J., Li H., Yan T., Chen G., Shi L., and Zhang D., "Methane dry reforming over boron nitride interface-confined and LDHs-derived Ni catalysts," Applied Catalysis B: Environmental 2019; 252: 86-97

(11) Chen F., **Kuboon S**., Khemthong P., Butburee T., Chakthranont P., Itthibenchapong V., Kasamechonchung P., Witoon T., and Faungnawakij K. "Highly dispersed NiCu nanoparticles on SBA-15 for selective hydrogenation of methyl levulinate to gamma-valerolactone," International of Hydrogen Energy 2019; 10.1016/j.ijhydene.2019.03.272

(12) Kochaputi N., Kongmark C., Khemthong P., Butburee T., **Kuboon S**., Worayingyong A., and Faungnawakij K."Catalytic behaviors of supported Cu, Ni, and Co phosphide catalysts for deoxygenation of oleic acid," Catalysts 2019; 9(9): 1-12

(13) Zha K., Feng C., Han L., Li H., Yan T., **Kuboon S**., Shi L., and Zhang D. "Promotional effects of Fe on manganese oxide octahedral molecular sieves for alkali-resistant catalytic reduction of NOx: XAFS and in situ DRIFTs study," Chemical Engineering Journal 2020; 38:1-10

(14) Wang P., Yan L., Gu Y., **Kuboon** S., Li H., Yan T., Shi L., and Zhang D. "Poisoning-resistant NOx Reduction in the presence of alkaline and heavy metals over H-SAPO-34-supported Ce-promoted Cu-based catalysts," Environmental Science and Technology 2020; 54:6396-6405

(15) Bu K., Deng J., Zhang X., **Kuboon** S., Yan T., Li H., Shi L., and Zhang D. "Promotional effects of B-terminated defective edges of Ni/boron nitride catalysts for coking- and sintering-resistant dry reforming of methane," Applied Catalysis B: Environmental 2020; 267:1-11

(16) Lu M., Zhang X., Deng J., **Kuboon S**., Faungnawakij K., Xiao S., and Zhang D. "Coking-resistant dry reforming of methane over BN-nanoceria interface-confined Ni catalysts, " Catalysis Science & Technology 2020; 10:4237-4244

Journal article: National

(1) Sriwarit W., Thongthep P., Prapakrangkun P., Munmangmi S., **Kuboon S**., and Ponchio C."Photoelectrocatalytic activity development of copper oxide electrode for hydrogen production under visible light irradiation," Science and Technology RMUTT Journal 2016; 6(1):77-82

(2) Jomhataikool B., **Kuboon S**., Kraithong W., and Eiad-ua A. "Humic substance extraction from leonardite, lignite Mae Mho Mine by base-acid treatment process," The Journal of Applied Science 2017; 16:26-32

(3) Jomhataikool B., Faungnawakij K., **Kuboon S**., and Eiad-ua A. "Porous carbon adsorbent from humin derived from thai leonardite for methylene blue dye adsorption," Current Applied Science and Technology 2019; 19(1); 1-8

(4) Jomhataikool B., Faungnawakij K., **Kuboon S**., Kraithong W., Chutipaichit S., Fuji M., and Eiad-ua A. "Effect of humic acid extracted from Thailand's leonardite on rice growth," Journal of Metals, Materials and Minerals 2019; 29(1): 1-7

Book Chapter

Kuboon S., Kraithong W., Damaurai J., and Faungnawakij K. "Hydro-Fractionation for Biomass Upgrading," IntechOpen 2019: DOI: 10.5772/intechopen.79396

Patent/petty patent

2015 "Waste water containing starch derivatives and concentrated acid pretreatment process"

2016 "Synthesis of bimetal oxide catalysts for fuel additive production"

"Preparation of adsorbent from tea seed shell waste for tea seed oil decolorizaiton"

"High density CuO nanowires synthesis via thermal oxidation process"

"Biomass pretreatment via alkali soaking-assisted steam explosion"

Prototype

2016 "Synthesis of CuO-based mixed oxide catalysts for fuel additive production"

2017 "Preparation of adsorbent from tea seed shell waste for tea seed oil decolorization"

Experiences in other activities

Faculty of Science at Prince of Songkla University (Thailand)

2003 – 2004 President of freshman students

2003 – 2007 President of Science Achievement Scholarship of Thailand 'students @PSU

Michigan Technological University, Houghton, MI (USA)

2009 Member of volunteering group to assist international students during their orientation

2011 Member of volunteering group to assist international students during their orientation

Team leader of a fundraising project by cooking Thai food and obtaining donation from international friends and transferring the fund to Thai Red Cross Society during the big flood in Thailand

2012 Team leader of a project for cooking and entertaining the elderly at Little Brothers

2011 – 2013 President of Thai Student Association (TSA)

National Science and Technology Development Agency (Thailand)

2015 – 2017 NSTDA Employees' Representative (from election)

2015 Member of a volunteering project to prepare and lead activities for primary school students in science film festival at Sirindhorn Science Home

2016 Judge for Science Project Competition at Rajamangala University of Technology Thanyaburi

Member of a volunteering project to prepare and lead activities for primary school students in science film festival at Sirindhorn Science Home

Project coordinator for Sakura Project at AIST, Japan

2017 Panelist as NSTDA researcher's representative in a national seminar, "Strategy in research development and management for building new economic system in Thailand"

Member of NANOTEC Internal Communication Group

Coach and judge for Final Round of Young Scientist Competition

Coach and judge for Nanotechnology Project Competition at Prince of Songkla University

	Coach and judge for Science Communication (Nano Talk) Competition
	Team leader for preparing and leading activities for primary school students during Science Week at AIT International School
	Member of organizing committee of the 6th Joint Conference on Renewable Energy and Nanotechnology (JCREN 2017)
2018	NSTDA Internal Auditor
	Laboratory's Administer of Equipment Reservation System
	Laboratory's Administer of Meeting Management System
2019	NSTDA Employees' Representative (from election)

Reference

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