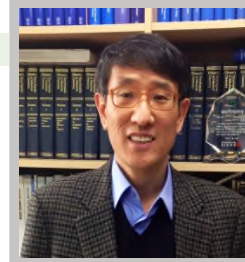


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Key Words Nanocatalyst, Nanoporous Material, Metal-Organic Framework, Green Chemistry

Research Area Prof. Jong-San Chang has been engaged in the development of nanocatalysts and nanoporous materials including metal-organic frameworks (MOFs) and zeolites, and energy-related catalysis as well as green and sustainable chemistry including catalysis for biorefinery. Besides these areas, his present interests cover microwave synthesis, characterization, and applications of nanoporous materials and inorganic-organic hybrid materials. He has first realized the microwave synthesis of MOFs and proposed a new way for the selective surface functionalization of MOFs. Recently, he has also worked on heterogeneous catalysis for biorefinery through the defunctionalization of biomass-derived chemicals to produce bioplastics monomers. He has published about 250 scientific research papers in peer-reviewed journals, contributed to edition of 4 books, and attended as an inventor about 80 patents (including 20 US patents) in the fields of nanoporous materials as well as heterogeneous catalysis.

Biorefinery

- Education**
- 1992. 9.-1996. 8. PhD Department of Chemistry, KAIST, Korea
 - 1986. 3.-1988. 2. MSc Department of Chemistry, KAIST, Korea
 - 1982. 3.-1986. 2. BSc Department of Chemical Education, Seoul National University, Korea

- Experience**
- 2014. 3.-Present Professor, Sungkyunkwan University, Korea
 - 1988. 2.-Present Principal Investigator, Korea Research Institute of Chemical Technology (KRICT), Korea
 - 1999. 2.-2000. 1. Visiting Scholar, University of California, Santa Barbara, USA
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- Position**
- 2007. 1.-Present Head of Research Center for Nanocatalysts, KRICT, Korea
 - 2016. 1.-Present Vice President, Korea Zeolite Association (KZA)
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- Selected Publication**
- Design of Hydrophilic Metal Organic Framework Water Adsorbents for Heat Reallocation, *Advanced Materials*, **27**, 4775 (2015). (Inside Cover Issue)
 - Separation of *p*-Divinylbenzene by Selective Room-Temperature Adsorption Inside Mg-CUK-1 Prepared by Aqueous Microwave Synthesis, *Angew. Chem. Int. Ed.*, **54**, 5394 (2015).
 - Chemical Conversion of Biomass-Derived Platform Chemicals over Copper-Silica Nanocomposite Catalysts, *ChemSusChem*, **8**, 2345 (2015).
 - Energy-Efficient Dehumidification over Hierarchically Porous Metal-Organic Frameworks as Advanced Water Adsorbents, *Adv. Mater.*, **24**, 806 (2012). (Inside Cover Issue)
 - Porous Metal-Organic-Frameworks Nanocarriers: a Platform for Drug Targeting and Imaging, *Nature Mater.*, **9**(2), 172 (2010).
 - Controlled Reducibility of a Metal-Organic Framework with Coordinatively Unsaturated Sites for Preferential Gas Sorption, *Angew. Chem. Int. Ed.*, **49**, 5949 (2010). (Inside Cover Issue)
 - Amine-Grafting on Coordinatively Unsaturated Metal Centers of MOFs: Catalytic and Metal Encapsulation Consequences, *Angew. Chem. Int. Ed.*, **47**(22), 4144 (2008) (Cover Issue).
 - Gas-Sorption Selectivity of CUK-1: A Porous Coordination Solid Made of Cobalt(II) and Pyridine-2,4-Dicarboxylic Acid, *Advanced Materials*, **19**, 1830, (2007).

- Others**
- 2007-Present, Associate Member, Division of Natural Sciences, Korea Academy of Science and Technology (KAST)