



## Biography

Kiyotaka Nakajima (Dr.)

Associate Professor

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Kiyotaka Nakajima received his PhD in Chemistry from Tokyo Institute of Technology (TokyoTech) in 2006 under supervision of Professor Takashi Tatsumi. After working with Dr. Shinji Inagaki at TOYOTA R&D Labs., Inc. (2006-2007) for the development of solar hydrogen production with the combination of novel metal nanoparticles and periodic mesoporous organosilicas, he joined Materials and Structures Laboratory, Tokyo Institute of Technology as assistant professor to work with Professor Michikazu Hara (2007-2015). His primary focus was the development of sulfonated carbon and mesoporous transition metal oxides as stable and highly active solid Brønsted acid catalysts for biomass conversion. He extended his research interests to Lewis acid catalysis of metal oxides for sugar conversion, and started one project focusing on the development of heterogeneous Lewis acid catalysts for biomass conversion in JST (Japan Science & Technology) Agency, PRESTO. He was appointed in 2015 as associate professor at Catalysis Research Center, Hokkaido University and started working with Professor Atsushi Fukuoka. He is now a project leader of Advanced Low Carbon Technology Research and Development Program (ALCA) supported by Japan Science & Technology agency (JST), targeting on the production of carboxylic acids and alcohols from biomass-derived sugars. He received young researcher awards in 2012 (the Japan Petroleum Institute) and in 2015 (Catalysis Society of Japan).

## Selected publication

1. Minjune Kim, Yaqiong Su, Atsushi Fukuoka, Emiel J.M. Hensen, **Kiyotaka Nakajima**, "Aerobic Oxidation of HMF-Cyclic Acetal Enables Selective FDCA Formation with CeO<sub>2</sub>-Supported Au Catalyst", *Angewandte Chemie International Edition*, **2018**, *57*, 8235-8239.
2. **Kiyotaka Nakajima**, Jun Hirata, Minjune Kim, Navneet Kumar Gupta, Toru Murayama, Akihiro Yoshida, Norihito Hiyoshi, Atsushi Fukuoka, Wataru Ueda, "Facile Formation of Lactic Acid from a Triose Sugar in Water over Niobium Oxide with a Deformed Orthorhombic Phase", *ACS Catalysis*, **2018**, *8*, 283-290.
3. Navneet Kumar Gupta, Atsushi Fukuoka, **Kiyotaka Nakajima**, "Amorphous Nb<sub>2</sub>O<sub>5</sub> as a Selective and Reusable Catalyst for Furfural Production from Xylose in Biphasic Water and Toluene", *ACS Catalysis*, **2017**, *7*, 2430-2436.