

Catalysis Center for Energy Innovation
GUEST SEMINAR SPEAKER

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3:00 PM ▪ 322 ISE Lab



Kenta Iyoki, Ph.D.

Assistant Professor

Department of Chemical System Engineering

The University of Tokyo

k_iyoki@chemsys.t.u-tokyo.ac.jp

Biography: K. I. got his Ph.D. from The University of Tokyo in 2014 under supervision of Prof. Tatsuya Okubo. He worked as a postdoctoral fellow in Prof. Yuriy Roman's group, MIT from 2014 to 2016. Now he returned to Japan and is an assistant professor in Okubo-Wakihara Laboratory, The University of Tokyo from 2016. His research interest is synthesis of zeolites and their catalytic applications.

“Low Cost, Environmentally Friendly Synthesis of Zeolites”

Abstract: Zeolites are crystalline microporous silicates, aluminosilicates, and other metallocates. They have been widely utilized in practical applications as adsorbents, ion exchangers, and catalysts, because of their well-defined channels, high surface areas, and solid acidities of their H-forms. Many types of zeolite structures have been synthesized by using template-like organic molecules called organic structure-directing agent (OSDA). Although complex and bulky OSDAs are necessary to synthesize recently developed zeolites, the cost of OSDAs accounts for a larger part of the total cost of the starting materials. Three different strategies for reducing the cost of OSDA will be presented in the talk; namely OSDA-free, OSDA replacement, and OSDA-recycle.

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