＊A catalytic test reaction is performed.

OGU LAB.

［Nanospace for Environment, Resources, and Energy］

Department of Materials and Environmental Science

http://www.ogulab.iis.u-tokyo.ac.jp

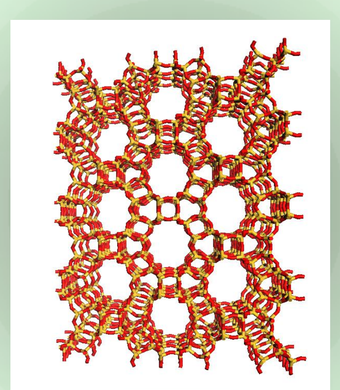
Laboratory for Environmental Catalyses and Materials Science

※Department of Applied Chemistry

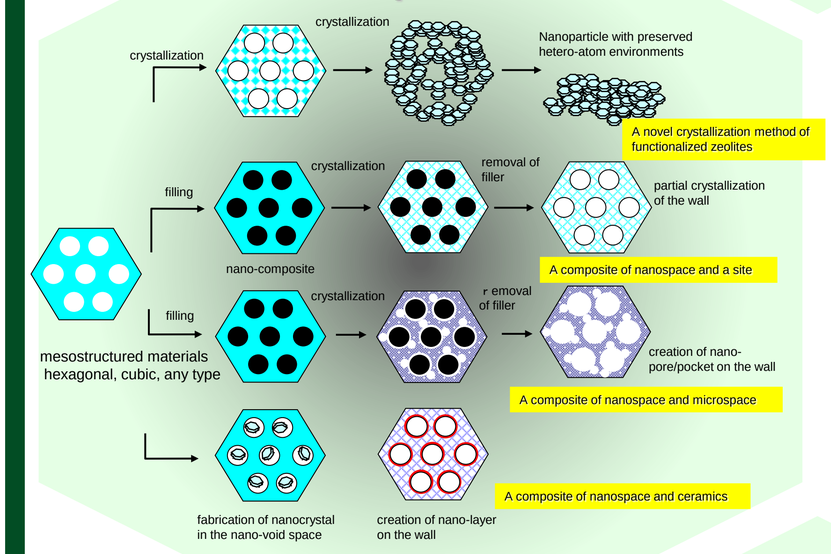
Zeolite ~ A Uniform Nanospace Material

Zeolite?

✓An inorganic crystal composed of O, Si, Al, and alkaline elements
✓Having a micropore in a molecular level
✓Stablizing metal ions or proton on the framework
✓A key material in the 20th century, being used in important, scientific processes



Hierarchical pore networks

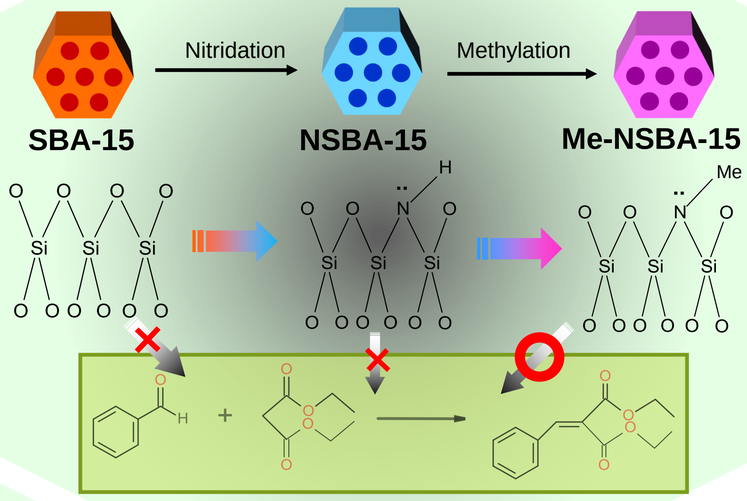


How to use pores in the current century

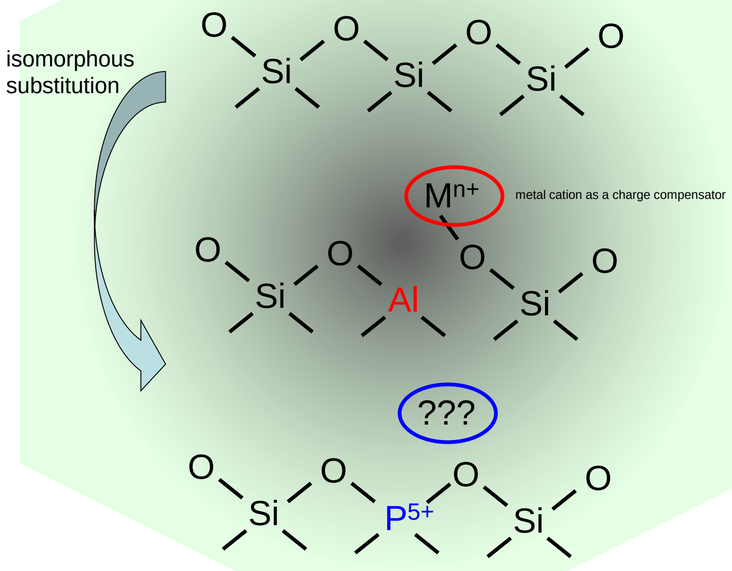
◆ Resource:
Design of hierarchical pore networks for petro/petchem processes as a higher efficient acid catalyst
Recovery of important sources in waste water
◆ Energy:
Preparation of nitrogen-doped zeolites as a base catalyst
Catalysis by the base for a new system of energy/resources
◆ Environment:
Catalysis for automobile exhaust without using Pt
Selective storage of low-concentration pollutants

For zero emission!

A solid base catalyst and its functionalization



Inorganic solid ion-exchanger



Catalysts for automobile exhaust