

Zeolite synthesis by microwave, Thermal design of cooling system by snow

Assistant Professor, Takeshi Higuchi

Thermal design of cooling system by snow

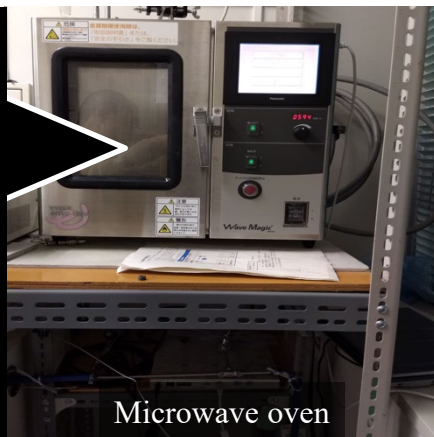
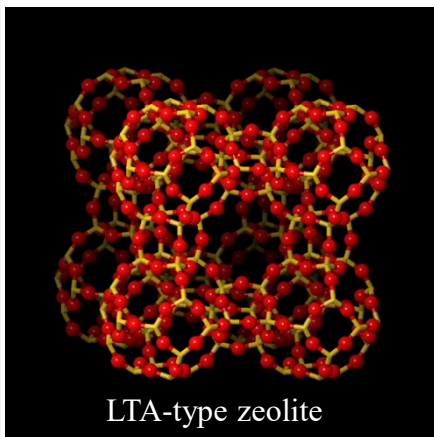
Mounding snow on insulator



Snow mound as a cold energy source



Zeolite synthesis by microwave



Content:

Thermal design of cooling system by snow

Utilization of snow as a cold source is a promising way to reduce energy consumption in cold region while few cooling system by snow have been installed in houses or apartment buildings. Our group is pursuing economical cooling system by snow as well as reduction of labor on snow removal during winter.

Zeolite synthesis by microwave

Zeolite is one of the crystalline material with regular micropore, which have been applied to adsorptive removal of toxic substance or dehydration of organic solvent. Our group is applying microwave heating on synthesis of zeolite aiming for rapid synthesis and controll crystal face of zeolite for higher selectivity of molecules.

Appealing point:

Our groups are seeking optimization of material processing as well as energy transfer through analyzing kinetics and mechanisms of the target process both experimentally and computationally.

Yamagata University Graduate School of Science and Engineering
Research Interest : Material Process Engineering

E-mail : higuchi@yz.yamagata-u.ac.jp

Tel : +81-238-26-3147

Fax : +81-238-26-3147

HP : <http://higuchi-lab.yz.yamagata-u.ac.jp/>

