



Hara-Kamata Lab

Creation of Advanced Inorganic Catalyst Materials Construction of Environment-Friendly Chemical Processes

Laboratory for Materials and Structures
Sustainable Chemical Resource Production Units

<http://www.msl.titech.ac.jp/~hara/index.html>

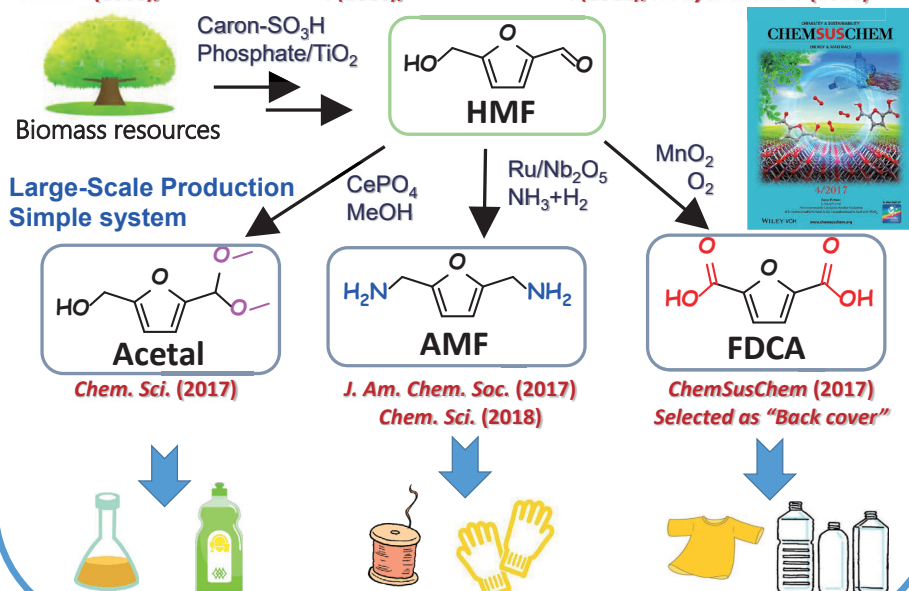
- Efficient Utilization of Biomass Resources
- Low-energy Ammonia Synthesis
- Development of Difficult Selective Oxidation

Hara-Kamata Lab is investigating catalysis and material science.

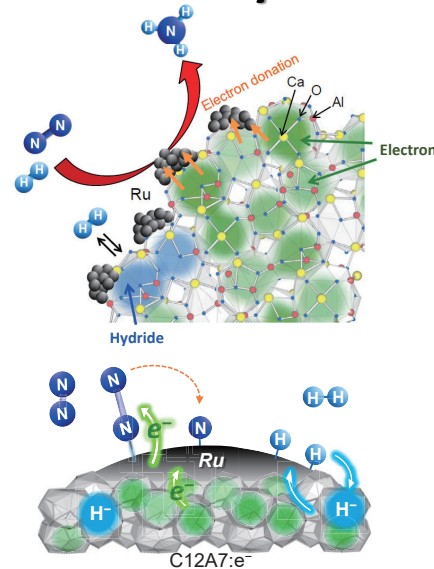
Our aims are creation of innovative catalyst materials to produce chemical resources and energy without environmental burden. Our ongoing projects are as follows.

Utilization of Biomass Resources

Nature (2005); *J. Am. Chem. Soc.* (2008); *J. Am. Chem. Soc.* (2011); *J. Phys. Chem. C* (2013)



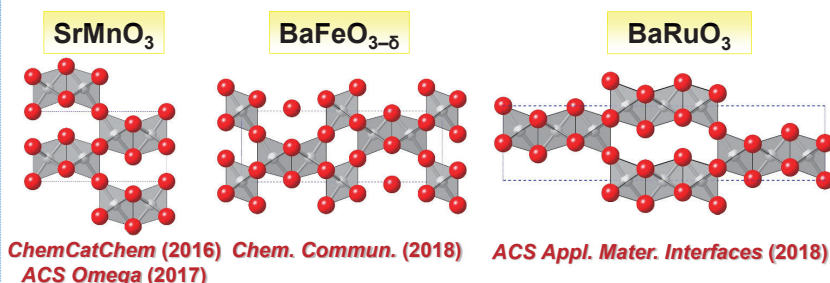
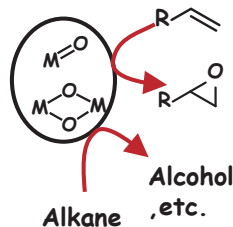
Low-energy Ammonia Synthesis



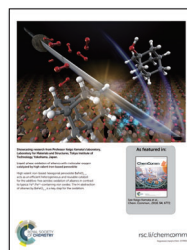
Angew. Chem. Int. Ed. (2018); *ACS Catal.* (2016);
Chem. Sci. (2016); *Nat. Commun.* (2015);
ACS Catal. (2014); *Nat. Chem.* (2012)

Development of Difficult Selective Oxidation

Electrophilic oxidant



"Back Cover"



"Inside back cover"