

# SCIAZKO LAB.

## Energy and Porous Materials

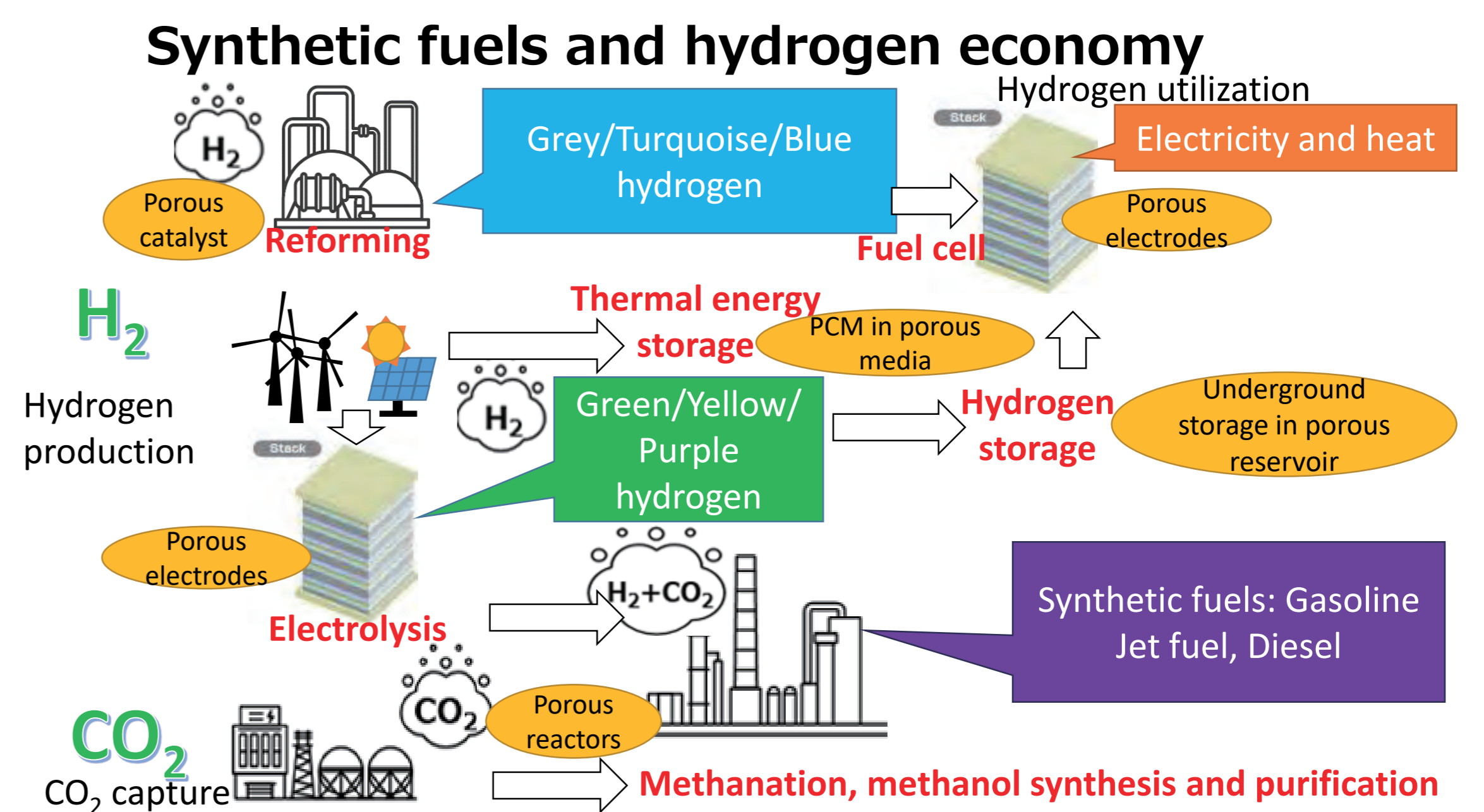
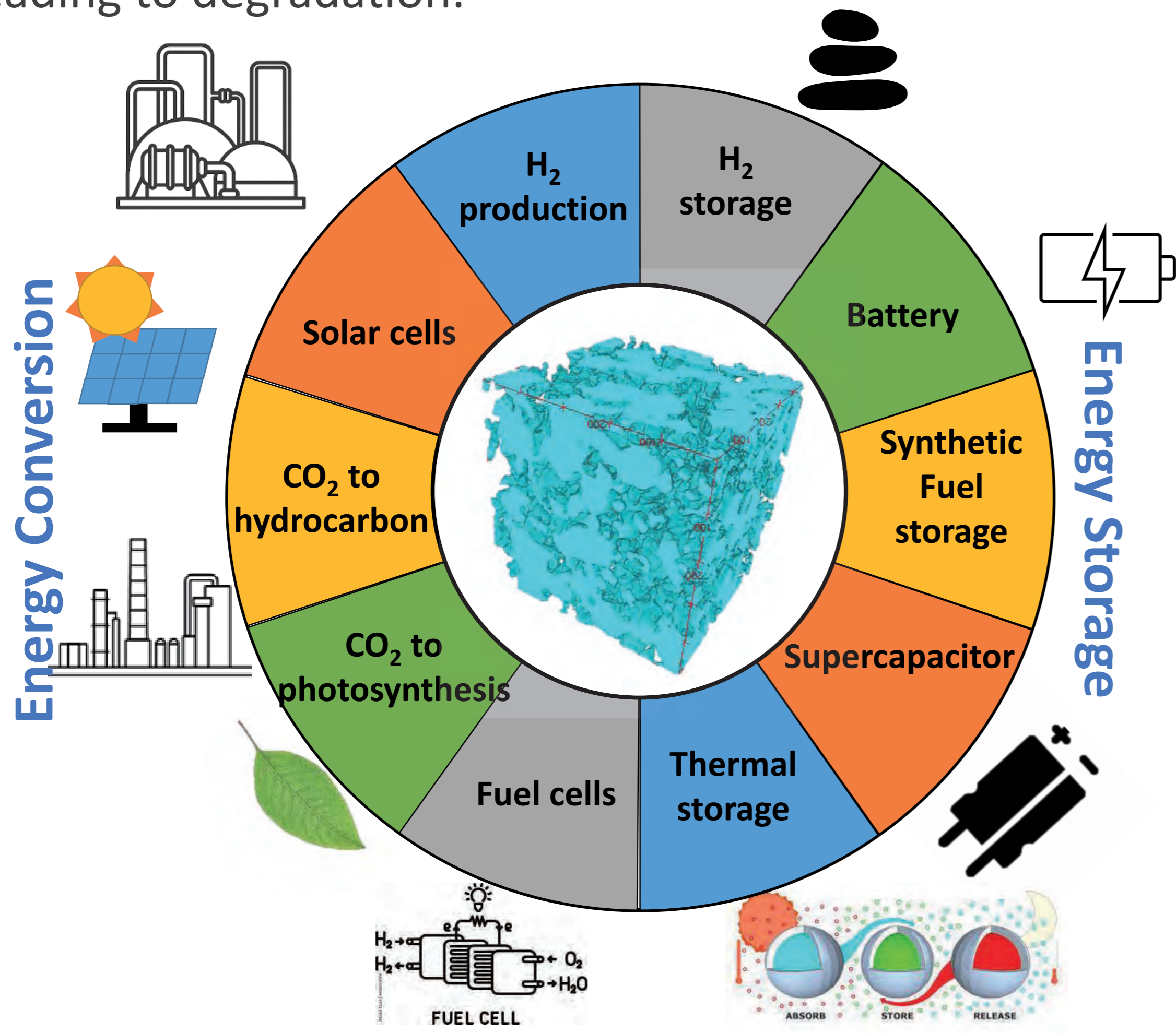


Department of Mechanical and Biofunctional Systems

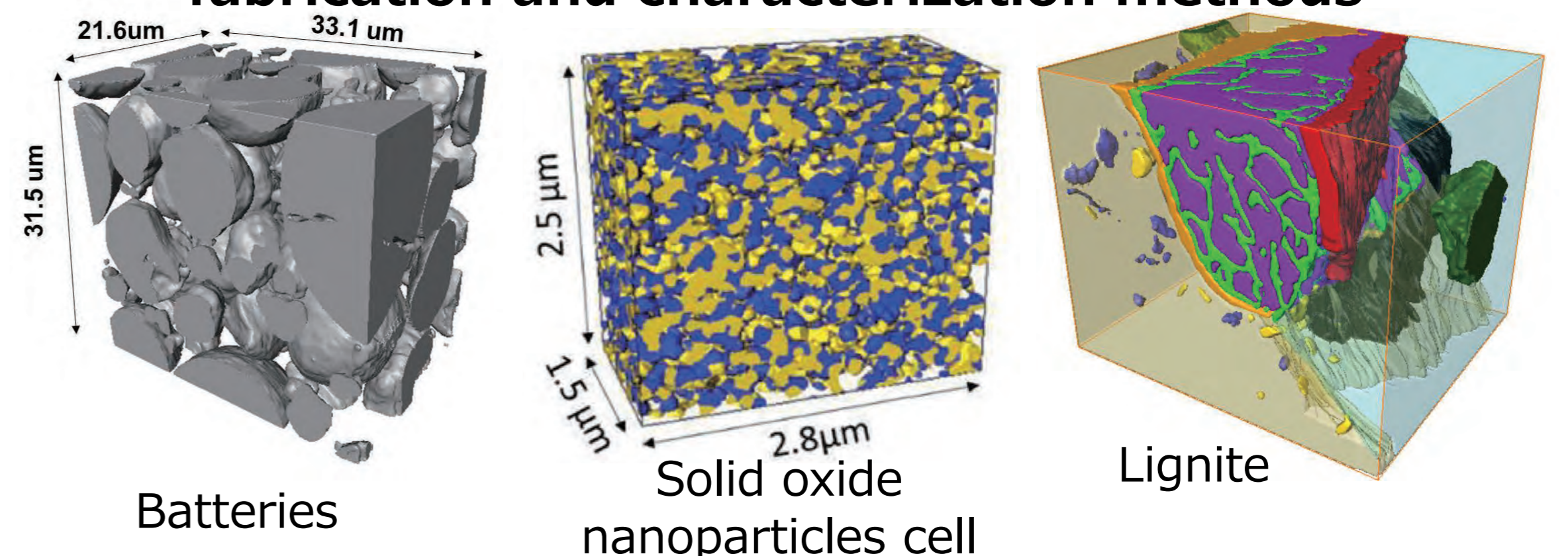
Thermal and Electrochemical Processes Engineering  
 Department of Mechanical Engineering, Graduate School of Engineering <https://sites.google.com/g.ecc.u-tokyo.ac.jp/sciazkolab>

### Porous materials in fuel processing and energy technologies

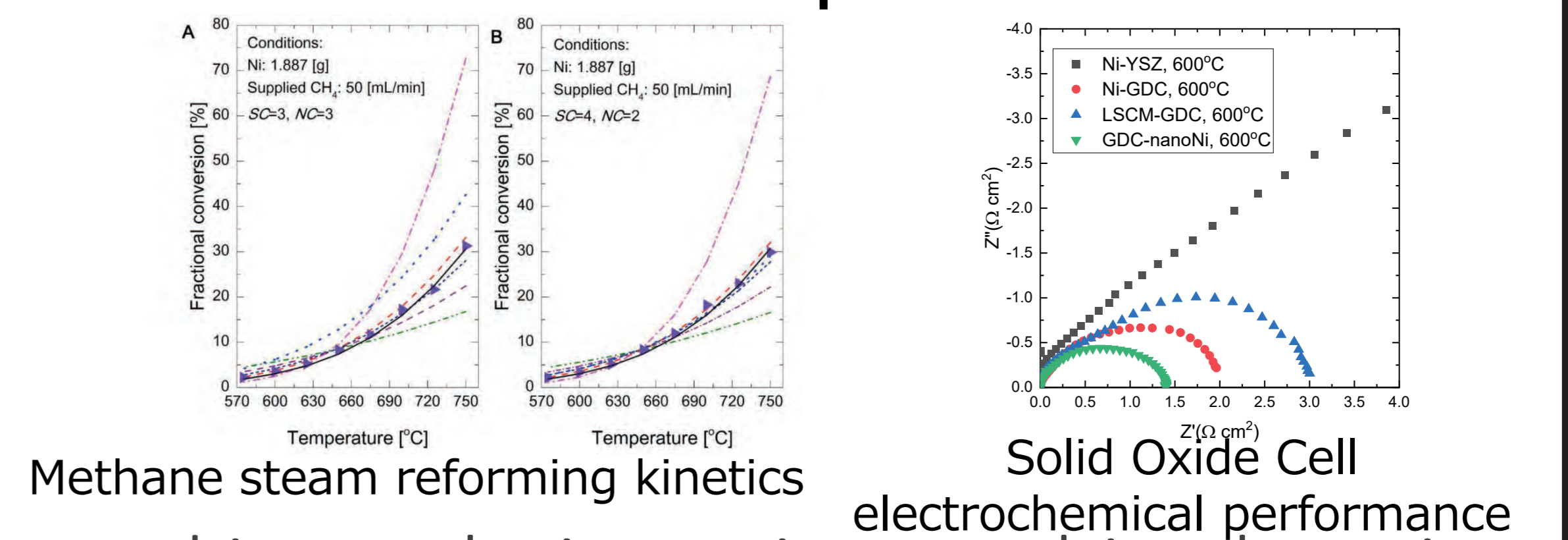
Efficient energy utilization and fuel processing are crucial from the technological, environmental and social points of view. Numerous energy conversion technologies rely on porous structures. Within our laboratory, we specialize in the production and utilization of synthetic fuels alongside electrochemical reactions within electrolysis and fuel cell systems. Our emphasis lies in understanding the intricate relationship between the microstructures of energy devices, their performance, and the mechanisms leading to degradation.



### 3D porous multiphase microstructure fabrication and characterization methods



### Thermophysical and electrochemical properties characterization and prediction methods



### Prediction of porous materials' microstructure and its evolution using machine learning

