

Title **Photochemical CO₂ Reduction:
Current Status and Future Prospects**

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Date & Time Friday, April 15, 2011 3:00p.m.

Place INAMORI Hall, Ito campus, Kyushu University

Abstract

Solar energy is a more abundant source of energy than any other source available on Earth. Many researchers consider the solar generation of fuels (stored in the form of chemical bonds such as hydrogen from water and methanol from CO₂) as the best and essential solution for clean energy, yet sunlight-driven water splitting or CO₂ reduction to methanol/methane remains a formidable problem. Researchers in this field have achieved the efficient coupling of light absorption and charge separation with dark catalytic reactions to produce CO and formate under a variety of conditions. The current status and future prospects of photochemical CO₂ reduction will be discussed together with our recent results in this field.

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About the Speaker

Dr. Etsuko Fujita is a Senior Chemist and the group leader of Artificial Synthesis Group in the Chemistry Department at Brookhaven National Laboratory, and the recipient of the 2008 BNL Science and Technology Award for outstanding research in solar fuels generation. She received a B.S. in Chemistry from Ochanomizu University, Tokyo and a Ph.D. in Chemistry from the Georgia Institute of Technology. Her research interests span solar fuels generation including water splitting and CO₂ utilization, mechanistic inorganic chemistry, and thermodynamics/kinetics of small molecule binding/activation. She is an advisory board member for several solar energy conversion projects including the NSF funded the Center for Chemical Innovation Project "Powering the Planet"; the Japan Science and Technology, PRESTO (i.e., Precursory Research for Embryonic Science and Technology) Project entitled "Light Energy and Chemical Conversion"; and the Strategic Research Centre on Solar Energy Conversion, Dublin, Ireland.

Host: Professor Yoshinori NARUTA

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