

56th GREEN Open Seminar

2017/ 5/ 31(Wed) 14:00~15:00

Venue : Seminar room#409,410, 4F, Collaborative Research Bldg.
Namiki Site



Understanding and Controlling Electrochemistry for Electrolyzers and Batteries

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Abstract

In this talk we address chemistries associated with carbon dioxide reduction and oxygen evolution chemistry. We show that a simple electrodeposition method with a controlled electrolyte can produce catalysts for both reactions exhibiting both very high activity and, in the case of carbon dioxide reduction, high selectivity for ethylene production. We will also discuss recent work addressing electrolytes for advanced battery chemistries. We discuss prospects for Mg ion batteries and show how controlling the electrolyte can yield high coulombic efficiency Mg deposition and stripping. Electrolyte control is also central to our developing understanding associated with sulfur chemistry relevant to Li-S batteries

Chair: Hidenori Noguchi (GREEN nanointerface laser spectroscopy group leader)