

Title **Amorphous Mixed-Metal Oxides Tailored for Water Oxidation Catalysis**

Speaker Dr. Curtis P. Berlinguette
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Chemistry and Chemical & Biological Engineering
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Date & Time Friday, November 21, 2014 4:00 p.m.

Place I²CNER Hall, Ito campus, Kyushu University

Abstract

The conversion of water into hydrogen fuel is a promising scheme for the large-scale storage of solar electricity, but the efficiency of the conversion process suffers from substantial overpotentials. The development of efficient oxygen evolution reaction (OER) catalysts is needed to more easily convert water into hydrogen. We recently demonstrated that amorphous phases of metal oxide films can be accessed through a facile photochemical decomposition technique with precise composition control. This presentation will detail the mechanistic details associated with the electrochemistry of these films that display remarkably high anodic efficiencies.

About the Speaker

Dr. Curtis P. Berlinguette is an Associate Professor of Chemistry and Chemical & Biological Engineering at the University of British Columbia. After graduating with a B.Sc. in 2000 from the University of Alberta, Dr. Berlinguette headed to Texas A&M University to pursue a Ph.D. in Inorganic Chemistry (Advisor: Prof. K. R. Dunbar) before doing two years of postdoctoral studies at Harvard University (Advisor: Prof. R. H. Holm). He started his independent career at the University of Calgary in 2006 before moving his program to the University of British Columbia in 2013. He currently leads a research program fully dedicated to solar energy conversion, which includes the design of novel nanoscale materials for advanced solar cells, and developing economically viable ways of storing solar electricity as high density fuels. Dr. Berlinguette holds over five patents, has authored over 50 scientific articles, and holds a Tier II Canada Research Chair and an Alfred P. Sloan Research Fellowship.

Host: Professor Ken Sakai

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