Selected Publications

Photochemical Route for Accessing Amorphous Metal Oxide Materials for Water Oxidation Catalysis
Smith, R. D. L.; Prevot, M. S.; Fagan, R. D.; Zhang, Z.; Sedach, P. A.; Siu, M. K. J.; Trudel, S.; Berlinguette C. P.
Science **2013**
DOI: 10.1126/science.122368

Stabilization of Ruthenium Sensitizers to TiO2 Surfaces through Cooperative Anchoring Groups. Brown, D. G.; Schauer, P. A.; Borau-Garcia, J.; Fancy, B. R.; Berlinguette, C. P.
J. Am. Chem. Soc. **2013**, 135 (5), 1692-1695.

Intramolecular Hole Transfer at Sensitized TiO2 Interfaces
Hu, K.; Robson, K. C. D.; Johansson, P. G.; Berlinguette, C. P.; Meyer, G. J.
J. Am. Chem. Soc. **2012**, 134, 8352-8355. DOI: 10.1021/ja3018175

A Trisheteroleptic Sensitizer that Enables High Power Output in the Dye-Sensitized Solar Cell
Bomben, P. G.; Gordon, T. J.; Schott, E.; Berlinguette, C. P.
Angew. Chem., Int. Ed. **2011**, 50, 10682-10685.

Cyclometalated Ru(II) Dyes for the Dye-Sensitized Solar Cell
Bomben, P. G.; Robson, K. C. D.; Koivisto, B. D.; Berlinguette, C. P.
Coord. Chem. Rev. **2012**, 1438-1450

A special thank you to GreenCentre Canada for sponsoring the seminar

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Queen's Chemistry

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Department of Chemistry, Queen's University & GreenCentre Canada

are honoured to host the 4th Annual Green Chemistry Lecture:

Dr. Curtis P. Berlinguette, Department of Chemistry and Chemical & Biological Engineering, University of British Columbia

"Towards Green Solar Power"

Friday, October 11, 2013
11:30AM
Room 117, Chernoff Hall

Dr. Curtis P. Berlinguette

Dr. Curtis P. Berlinguette is currently a Canada Research Chair at UBC. 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 before doing two years of postdoctoral studies at Harvard University. He then started as an Assistant Professor at the University of Calgary in 2006 where he led a research program fully dedicated to solar energy conversion schemes. He then took up an Associate Professor position in the Departments of Chemistry and Chemical & Biological Engineering in July 2013.

Research

The research focus of Professor Berliguette is a two tiered initiative on solar energy conversion technologies. Through inorganic chemistry research in dye sensitized solar cells (DSSC) and solar fuels he hopes to increase the contribution of solar energy to the global energy mix. DSSCs have a 12% efficiency, making them the most efficient next-generation photovoltaic (PV) device. In order to amp up the efficiency Berliguette and colleagues have been perturbing the electronic structure of the metal complex by probing different coordination modes at the metal site. Solar fuels are required to store and transport energy converted from sunlight. Current methodologies utilize methane or petroleum sources for storage. The Berlinguette group has taken a different approach by designing, understanding and implementing water splitting by installing multiple metal centres within flexible organic ligand frameworks. The hopes are that these molecular structures will facilitate an optimal binding environment for water and dioxygen.

Awards and Distinctions

- Canada Research Chair (Tier II) in Energy Conversion (2008 to current)
- Alfred P. Sloan Research Fellow (2011)
- CoFounder, FireWater Fuel Corp. (2011)
- Alberta Ingenuity New Faculty Award (2007)

Contact

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