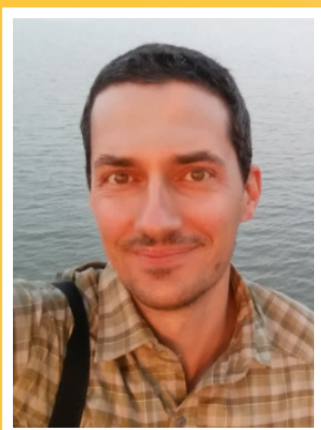


# Hydrogen, Water, Electrons: Providing the Means for a Sustainable World



## Dr. Ivan Ermanoski

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A major challenge of a growing population on Earth lies in balancing the ever-increasing need for resources with the physical limitations of our planet and biosphere. The most prominent of these needs is energy, which is currently satisfied by mining and burning of carbon-based materials leading to CO<sub>2</sub> emissions with global and likely disastrous consequences. Lowering CO<sub>2</sub> emissions worldwide requires substantial changes in the transportation sector, where liquid hydrocarbons offer unmatched performance in terms of cost and energy density. An appealing alternative transportation fuel is hydrogen. More broadly, hydrogen can be used as chemical storage to enable the dispatchability of renewable electricity.

Ivan Ermanoski graduated from the University of Belgrade, Serbia, with his B.Sc. in physics and earned his Ph.D. in physics at Rutgers University. He spent two years as a postdoctoral fellow at the National Institute of Standards and Technology, working on extreme UV lithography. Since 2007 he has been at Sandia National Laboratories. His most recent work has been in the field of solar-thermochemical fuel production and in iodine sorption characterization.

**Thursday, November 3, 2016**

**11:30 a.m. Lunch**

**12:00 - 1:30 p.m. Seminar/Discussion**

**Wrigley Hall, Room 481**

Arizona State University, Tempe campus

This event is hosted by Ellen B. Stechel,  
Deputy Director, ASU LightWorks®

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