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SANS FRONTIÈRES

Les technologies solaires , à Pasadena, Californie



~Armenian Engineers and Scientists of America
Presents
“Advancing Solar-Energy Technologies for
Sustainable Fuel Production”
by
Dr. William Royea
Tuesday March 18, 2014, 7:30 pm
at Parsons Corporation
100 W Walnut St, Pasadena, CA 91124
The sun produces enough solar energy in a single hour to meet all of earth’s power
requirements for a full year. While plants can capture and store the sun’s energy through photosynthesis, there currently exists no system for creating chemical fuels
from sunlight that is robust, inexpensive, and efficient. Recent innovations in physics,
chemistry, materials science and nanotechnology; however, are now leading to major

breakthroughs in solar fuel generation. The Joint Center for Artificial Photosynthesis
(JCAP), is the largest and most ambitious research project ever untaken to develop an
integrated artificial photosynthetic system. Established in 2010 as a U.S. Department
of Energy (DOE) Energy Innovation Hub, JCAP aims to find a cost-effective method to
produce fuels using only sunlight, water, and carbon-dioxide as inputs. An overview
of recent advances in JCAP will be presented.

Dr. William Royea is the Assistant Director for Strategy and Communications in the
Joint Center for Artificial Photosynthesis at the California Institute of Technology
(Caltech). Dr. Royea has over a decade of management experience in technology
development and commercialization, research and manufacturing operations, and
intellectual property licensing. His technical expertise is in the field of semiconductor
photoelectrochemistry and chemical vapor detection. In 2004, Dr. Royea led the
formation of Next Dimension Technologies, a Caltech start-up company that develops
chemical vapor detection systems. As president of Next Dimension Technologies, he
managed technology and product development for clinical diagnostic, industrial
manufacturing, and military and homeland security applications. Prior to that role, he
was a management consultant with McKinsey & Company, where he was responsible
for redesigning the R&D strategy for a top-ten pharmaceutical company and
coordinating the merger integration of a $4B manufacturing operation. Dr. Royea
holds a Ph.D. in Chemistry from Caltech and an A.B. degree in Chemistry from
Occidental College.