Using Sunlight to turn Water and Carbon Dioxide into Fuel

In the DOE Energy Innovation Hub, the Joint Center for Artificial Photosynthesis, we are developing a non-biological, artificial photosynthetic system that will generate fuels directly from sunlight, water, and carbon dioxide. This talk will include a discussion of a feasible and functional prototype and blueprint for an artificial photosynthetic system that is composed of only inexpensive, earth-abundant materials, as well as results, recently achieved at Caltech, which demonstrate technical progress towards the development of the artificial photosynthetic prototype.

ABOUT THE SPEAKER

Nate Lewis obtained his PhD in inorganic chemistry from MIT in 1981. He is Professor of Chemistry at Caltech since 1991 and is the Scientific Director of the Joint Center for Artificial Photosynthesis, the DOE’s Energy Innovation Hub in Fuels from Sunlight. His research interests include artificial photosynthesis and electronic noses. Nate continues to study ways to harness sunlight and generate chemical fuel by splitting water to generate hydrogen. He is also developing an electronic nose, which consists of chemically sensitive conducting polymer film capable of detecting and quantifying a broad variety of analytes.

TUESDAY, MARCH 25, 2014

2:00 - 3:30 pm, ICTAS Room 310