

# Development of Scalably Manufacturable Solar-Fuels Generators

## Frontiers in Catalysis Science and Engineering Seminar Series

### Presented by...

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### Abstract

JCAP's mission is to build fully integrated solar-fuels generators that utilize earth-abundant semiconductors and catalysts for efficient conversion of water to O<sub>2</sub> and H<sub>2</sub> and for the reduction of CO<sub>2</sub> to liquid fuels. JCAP prototypes are designed to enable separation of products and therefore require membranes and complex interfaces between various material components that will function under realistic operating conditions. JCAP's long-term goal is to develop a commercially viable, solar-generation technology that simultaneously satisfies the following four criteria: high efficiency, multi-year stability, low module cost, and safe operation. JCAP's approach to assembling complete artificial photosynthetic systems is to develop robust concepts for complete solar-fuels generators, then to break them down into essential assemblies of components, and finally to adapt or discover the materials needed to fabricate those assemblies. JCAP research bridges basic and applied sciences as well as engineering associated with prototype construction and consideration of scale-up challenges.

**More info:** <http://solarfuelshub.org/index.html>

Hosted by: Bruce Garrett / Morris Bullock  
Admin: Brooke Lanigan

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9:30 am