

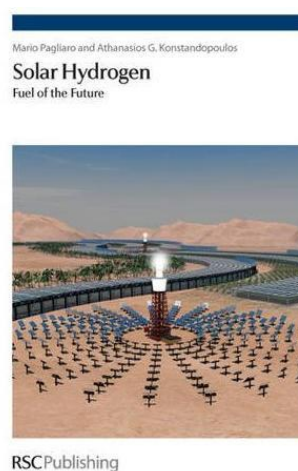
**Institute of Energy Technology – Professorship of Renewable Energy Carriers*****Invitation to a Seminar***

**Date:** Friday, November 16, 2012  
**Time:** 16:00-17:00  
**Place:** Maschinenlaboratorium ETH Zürich, ML-J34.1

**Speaker:** **Dr. Mario Pagliaro**  
National Research Council  
Institute of Nanostructured Materials  
Palermo, Italy

**Title: Solar Hydrogen. Fuel of the Future?**

**Abstract** – Is renewable hydrogen produced using solar energy to split water, the energy fuel of the future? This Seminar addresses a debated topic in the midst of accelerated innovation in both major domains of solar energy: photovoltaics and concentrated solar power. New thermochemical water splitting using concentrated solar power has the potential to convert and store solar energy into clean hydrogen using a fraction of the world's Sunbelt area to meet our present and future global energy needs. Photovoltaics, in turn, has the versatility required for supporting the creation of a distributed energy generation infrastructure in developing countries especially now that the price of PV solar electricity has fallen to unprecedented low levels. In all these cases, solar hydrogen will be used to store energy and release it on demand either for fuel cells (to power homes and boats) or internal combustion engines and turbines (for powering cars, trucks and in thermoelectric power units). But when and how could all this happen on the large scale required to face the global energy and environmental crises?



**Biosketch** – Mario Pagliaro is a chemistry scholar based in Palermo at Italy's Research Council (CNR) where he leads a research Group whose work focuses on the overlap of organic chemistry and materials science. His research interests are in the broad area of nanochemistry and span from sol-gel materials to biomass valorization and solar energy. He has a prolonged interest also in sustainability and management topics. Mario regularly organizes conferences and gives courses, seminars and tutorials on the topics of his research. In 2009, he chaired the 10<sup>th</sup> FIGIPAS Meeting in Inorganic Chemistry held in Palermo, Italy, and currently co-chairs the scientific organization of the SuNEC Conference as well as of the FineCat Symposium, a series of scientific meetings established by his research Group in 2011. Since 2004 he also organizes the prestigious Seminar "Marcello Carapezza" whose 2011 edition was hosted by Italy's Parliament. Mario is often an invited speaker at national and international venues, and in 2005 he was appointed "Maître de conférences associé" at the Ecole Nationale Supérieure de Chimie in Montpellier. His achievements are reflected in 80 research papers, several patents and book chapters and by 12 authored or co-authored books including *Solar Hydrogen* (RSC Publishing, 2012).



Host: Prof. A. Steinfeld, [www.pre.ethz.ch](http://www.pre.ethz.ch)