Utilizing solar energy to split water and produce hydrogen is an ultimate goal for the supply of clean and sustainable energy. The high natural abundance of silicon together with its high fabrication process ability and excellent efficiency in photoelectrical conversion are reasons for its promising role in the utilization of solar energy. Yujie Xiong’s group found that hydrogen gas can indeed be produced from Si nanowires when illuminated in water, but the reactions are not a real water-splitting process. Instead, the production of hydrogen gas on the Si nanowires occurs through the cleavage of Si-H bonds and the formation of Si-OH bonds. These two types of surface dangling bonds both extract photoexcited electrons, whose competition greatly impacts on carrier lifetime and reaction efficiency.


**Research News**

**Photoelectrochemistry**

—Nature of Water Splitting on Silicon Nanowires

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**Achievements**

**Congratulations!** Our IAOEES board members have two papers selected as 2014 Top 5% downloaded reviews in the famous journal of Energy & Environmental Science. http://pubs.rsc.org/en/content/articlehtml/2015/ee/c4ee90056a

- A review of graphene and graphene oxide sponge: materials synthesis and applications to energy and the environment by Aiping Yu and Jiujun Zhang, et al.
- Progress in flexible lithium batteries and future prospects by Huiming Cheng, et al.

**Industry News**

**Welcome!** Six Industry Stars joined our board committee. Mr. Michael Wang, Mr. Jian Shi, Mr. Binglun Tian, Dr. Liyu Li, Dr. Junbing Yang, and Dr. Harris Yang.

**Hydrogen Fuel Cell Cars are in Market!**