



## News

**20<sup>th</sup> Sede Boqer Symposium on Solar Electricity Production**  
**jointly with the**  
**IKI Annual Nano-Day**  
**and the**  
**BGU-ENEA WORKSHOP**

September 26-28, 2016

Saluting the Adelis Foundation for their  
Vital Partnership with Ben-Gurion University

The Sede Boqer Symposia on Solar Electricity Production take place approximately every 1½ years with the 1<sup>st</sup> Symposium held in 1986, making this the 20<sup>th</sup> symposium in this series. Following the tradition of these symposia, it will combine within a single event (without parallel sessions) presentations on all types of conversion of solar energy to electricity, namely photovoltaics, photo electrochemistry, concentrated solar power (CSP), etc. However, for the first time the symposium combines three different events (all are related to the scientific advancement in the mentioned research areas) and takes place on two campuses of the Ben-Gurion University - in Beer-Sheva and Midreshet Sede Boker. The conference includes the “IKI Nano-day” yearly organized by the Ilse Katz Institute for Nanoscale Science and Technology and the workshop of BGU-ENEA\* joint laboratory for alternative energy. The combined conference is held in honor of the Adelis foundation which has substantially contributed to the advancement of science in the field, fostering national and international collaborations and substantially improving BGU’s infrastructure equipment.

A total of 43 lectures will be spread over the three days of the conference (September 26-28). The dominating topics are related to photovoltaics. Photovoltaic presentations in 9 sessions will cover all levels of current research in this area: materials (including materials science on the nanoscale), devices and systems. The conference coincides with the appearance and first attempts of commercialization of a novel and unique semiconductor, the organic-inorganic hybrid perovskites. For the first time in the history of photovoltaic it is possible to produce high-efficiency cells at low monetary and energy costs, with apparent ease of fabrication from earth-abundant, readily available raw materials. The efficiency of perovskite solar cells has increased from 2.2% in 2006 to ~22% today. Two sessions of the symposium will be devoted to perovskite-based materials and solar cells. This topic will also be discussed in the invited talk by Prof. Guglielmo Lanzani (Politecnico di Milano) and in the plenary lecture by Prof. Jenny Nelson (Imperial College, London). We are particularly pleased to welcome Prof. Nelson, internationally renowned expert in solar cell physics, Fellow of the Royal Society, London, and recipient of the 2016 Faraday Medal.

Another special topic will address the physics of light-matter interactions, which will be discussed in the session “Photonic Nanostructures and Light Management for Highly Efficient Solar Cells” and in the key-note lecture “Ultra-thin solar cells: Promise, Recent Progress and Future Challenges” by Dr. Stéphane Collin (Laboratoire de Photonique et de Nanostructures, CNRS/LPN, France).

Due to the vital importance of energy storage a special session will be devoted to solar fuels, photo electrochemistry and electrochemistry. This session will begin with the lecture “Reflections on Rust: Iron Oxide Photoelectrodes for Solar Energy Conversion and Storage” by Prof. Avner Rothschild (the Technion), a world-renown expert in this research area.

Last but not least, three events will focus on thermo-solar conversion of sunlight: one session entitled “Concentrated Solar Power” includes among other lectures, presentations from the leading industrial companies *BrightSource* and *Shikun&Binui* about their projects in the Negev desert (at Ashalim); Dr. Clifford Ho (Sandia National Laboratories, USA) will deliver an invited key-note lecture entitled “State of the Art of Solar Tower Technology”; and a scientific tour of the large 121 MW Ashalim Solar Tower Thermal Power Station under construction in Israel’s Negev desert will be offered to all participants at the conclusion of the conference.

( [http://www.brightsourceenergy.com/ashalim-solar-project#.V6xI5\\_I96Uk](http://www.brightsourceenergy.com/ashalim-solar-project#.V6xI5_I96Uk) )

\* the Italian National Agency for New Technologies

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