



## Workshop on Plasmonics and Nanostructures in Silicon-based Thin Film Solar Cells

The first workshop on **Plasmonics and Nanostructures in Silicon-based Thin Film Solar Cells** is to be held at Aarhus University, Aarhus from **8th to 9th November 2012**. The workshop aims to create a platform for exchange of knowledge and ideas on the advances in the field of plasmonics and thin film silicon photovoltaics, with a focus on the role of various aspects of light management in improving solar cell efficiency.

The workshop will consist of invited talks, oral and poster presentations, and discussion sessions. We welcome researchers working on plasmonics, photonics, nanoscale fabrication and characterization techniques, silicon thin films, silicon solar cells, dielectric materials to join this workshop to share information on the novel and exciting field of light management in photovoltaics. Young researchers and students are encouraged to participate and benefit from the presentations by experts, and the stimulating discussions. The workshop will also promote networking and interaction between industrial and scientific participants.

Day	Venue	Time
Thursday, 8 <sup>th</sup> November 2012	iNano Auditorium No. 1593-012A Aud	10:30 to 18:30
Friday, 9 <sup>th</sup> November 2012	Mathematics Auditorium No. IMF-1532-116 Aud-G1	10:00 to 15:30

### Organizers:

Jointly organized by Dept. of Physics and Astronomy, Aarhus University and Dept. of Physics and Nanotechnology, Aalborg University

### Workshop Scientific Committee:

Arne Nylandsted Larsen (AU), Kjeld Pedersen (AAU) and Thomas G. Pedersen (AAU)

### Workshop Organizing Committee:

Sanjay Ram (AU) and Christian Fisker (AAU)

# Detailed Program

**THURSDAY, 8th November 2012 (Venue: iNANO Auditorium # 1593-012A Aud)**

**Topics: Plasmonics and nanostructures**

- 10:30 – 11:00 Welcome/Introduction
- 11:00 – 11:30 Christian Uhrenfeldt (AU)  
“Plasmonics in second generation solar cells”
- 11:30 – 12:00 Jesper Jung (AAU)  
“Polarizability of nanostructures at surfaces”
- 12:00– 13:15 Lunch Break
- 13:30 – 14:00 Duncan Sutherland (AU)
- 14:00 – 14:30 Mikael Grøndahl Nielsen (SDU)
- 14:30 – 15:00 Coffee break
- 15:00 – 16:00 Mikael Käll (*Invited speaker*) (Chalmers Univ. of Technology, Sweden)  
“Plasmonic directional antennas for sensing and spectroscopy”
- 16:30 – 18:30 **Poster Session**

**FRIDAY, 9th November, 2012 (Venue: Mathematics auditorium # IMF-1532-116 Aud-G1)**

**Topics: Silicon materials, solar cell and nanostructured back reflectors**

- 10:00 – 10:30 Christian Fisker (AAU)  
“Optical properties of anodized aluminum as a solar cell substrate”
- 10:30 – 11:00 Rita Rizzoli (CNR-IMM Bologna, Italy)  
“Silicon nanodots and graphene for tandem solar cells”
- 11:00 – 11:15 Coffee break
- 11:15 – 12:15 Ruud E.I. Schropp (*Invited speaker*) (Utrecht University, Netherlands)-  
“Thin and ultrathin film silicon solar cells”
- 12:15– 13:30 Lunch Break
- 14:00 – 14:30 Rui Pereira (University of Aveiro, Portugal)  
“Charge transport properties of solution-cast silicon nanocrystal thin-films”
- 14:30– 15:00 Sanjay K. Ram (AU)  
“Silicon thin film solar cell on nanostructured back reflectors”