



# SOLAR QUEST

SEMINAR ANNOUNCEMENT

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## **III-V THIN-FILM SOLAR CELLS BY EPITAXIAL LIFT-OFF TECHNIQUE**

DATE: Thursday, March 8, 2012

TIME: 14:00 pm-16:00 pm

PLACE: Seminar Room A-502  
CCR Building, 5F

### **ABSTRACT**

With over 40% conversion efficiency, multi-junction III/V solar cells are the most efficient solar cells available. Initially only applied to power satellites, these cells are presently also used in concentrator photovoltaic (CPV) systems. Utilizing current technology, the CPV approach is on the verge of commercial application. In addition there are numerous ways to realise a further increase of output power as well as further cost reduction.

On cell level, the efficiency can be further increased to at least 50% by the combination of sub-cells with non-matching crystal lattices utilizing a virtual-lattice approach. In addition, a major cost reduction can be obtained by the application of the so-called Epitaxial Lift-Off (ELO) technology that allows transfer of the high-efficiency thin-film cell to a cheap carrier and subsequent reuse of the semiconductor wafer for the production of the next III/V cell.

Solar Quest Host: Prof. Yoshitaka Okada, ext. 56501  
Refreshments will be served.

