



### Seminar series of Enabling Advances in Technology (EAT) @ DIET

#### Seminar Announcement

December 17th, 2015 - DIET Dept. Room 206, 1:15 p.m.

# Porous silicon solar cells

**Speaker: Dr. Kostantin Kholostov**

**Abstract:** A new process for the fabrication of crystalline silicon solar cells based on an ultrathin silicon membranes is presented. The silicon membranes are obtained using the technology of porous silicon. This allows the reduction of the cost of a solar cell due to possibility of reusing of the silicon wafers divided into a great number of membranes. The approach combines the efficiency of crystalline silicon solar cell, with the huge absorption of porous silicon, and with a more efficient way to use the material. The new process faces the main challenge in obtaining an effective and not expensive surface passivation of the porous surface, in order to achieve good photovoltaic behavior.

**Bio:** Konstantin Kholostov obtained his M.Sc. degree in electronic engineering in 2010 from the Belarusian State university of Informatics and Radioelectronics. In 2011 he won a 3-year PhD scholarship at University of Rome "La Sapienza". In March 2015 he successfully reached PhD degree in electronic engineering with thesis entitled "A new metallization technology for solar cell application". Since 2015 works as a postdoctoral researcher at the University of Rome "La Sapienza".