

Modelling and Experiment: a synergistic approach for high efficiency c-Si solar cells

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In this seminar Prof. Olindo Isabella will introduce the Photovoltaic Materials and Devices group at Delft University of Technology. Then, he will focus on high efficiency heterojunction solar cells based on c-Si solar cells. State-of-the-art numerical modelling and experiments go hand in hand to optimize heterointerfaces at atomistic scale and guide materials development for excellent transport of charge carriers.



CV Prof. Olindo Isabella

I come from a small town in south of Italy. I hold an MSc degree in electronic engineering and a PhD degree in advanced opto-electronics for thin film solar cells. I studied in Naples in Italy for my MSc degree, but I carried out my PhD at TU Delft. Then, as a foodie, otaku, and martial arts lover, I had great fun in Japan while working as a researcher at AIST in Tsukuba. After that, I started my academic career at TU Delft at first as assistant, then associate and finally full professor in photovoltaic technologies and applications. In parallel to my academic job, I am married with two kids and practice aikido, running and tennis. Also, I love cooking and Lego's and I like reading tech blogs. Currently I am the head of the Photovoltaic Materials and Devices group, which is the largest Dutch university group fully focused on solar energy conversion. I am a principal investigator at Advanced Metropolitan Solution Institute in Amsterdam; I am responsible for the Solar Urban thematic area of Urban Energy Institute of TU Delft; and I am the director of the TU Delft PV Technology Centre. Research wise, even though I am concerned about the whole photovoltaic value chain from materials, to cells, modules, and system, I primarily work on crystalline silicon photovoltaic technology. Together with my team, we invent, model, fabricate and measure record efficiency solar cells and, lately, upscale them to large areas substrate. These activities serve other research lines in the group on advanced multi-junction solar cells, photovoltaics, XIPV systems, photovoltaic multi-scale modelling and circular photovoltaics.

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