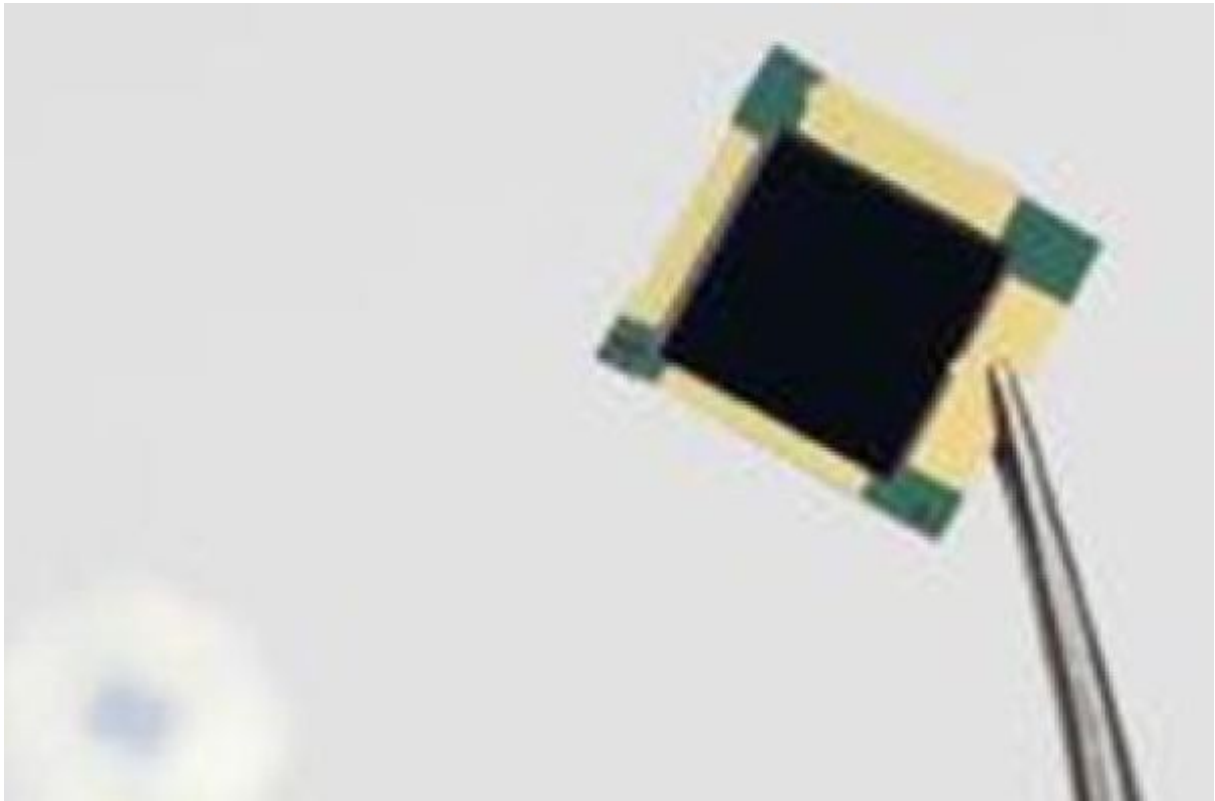




ICFO SCHOOL ON THE FRONTIERS OF LIGHT: Emerging Photovoltaics

July 02, 2018 to July 06, 2018

ICFO Auditorium

Announcing the launch of this year's ICFO School on the Frontiers of Light

Emerging solar cell technologies will play a key role in energy generation, and advanced technologies such as electrical vehicles, zero emission buildings, wearables or a new generation of smart devices. Harnessing energy from the sun is a rather complex interdisciplinary challenge that has been based on advances made both in material and photonic sciences.

This course, co-organized by researchers from ICFO and ICMAB, and delivered by leading international experts, will introduce the fundamentals of photovoltaic energy conversion both from an electronic as well as photonic point of view and will emphasize on the interplay of photonics with recombination and loss mechanisms, within the framework of the device

physics for emerging photovoltaic cells. Recent advances in specific emerging PV technologies will be presented as case studies, in particular perovskite, organic and quantum dot solar cells.

The school includes advanced lectures, lab tours, research seminars, group discussion sessions covering cutting-edge topics in research and industry, and is ideally designed for master-level and first year PhD students.

Lecturers & Topics:

Eli Yablonovitch (University of California Berkeley) - Photonics of photovoltaics.

Thomas Kirchartz (University of Duisburg-Essen) - Measuring and Understanding Recombination in Solar Cells

Jenny Nelson (Imperial College London) - Understanding loss mechanisms in organic solar cells.

Juan Bisquert (Universitat Jaume I, Castellon) - Device physics of perovskite solar cells

Maria Antonietta Loi (University of Groningen) - Quantum Dot solar cells.

Gregory Kozyreff (Free University of Bruxelles) - Classical electromagnetism for ultra-thin solar cells.

Scientific Organisers: [Prof. Jordi Martorell](#), [Prof. Gerasimos Konstantatos](#), [Prof. Valerio Pruneri](#) and [Dr. Robert Sewell](#) at ICFO, [Dr. Mariano Campoy Quiles](#) from ICMAB.

Supported by the Fundacio Catalunya - La Pedrera - Ignacio Cirac Program Chair, Frontiers of Light Schools aim at giving talented young researchers and students worldwide a first introduction to a thematic research area and a taste of an international research environment. They incorporate a dynamic and social learning environment beyond participating in lectures, including group discussions, direct interactions with the lecturers, student talks, poster presentations, and visits to labs.