



Symposium C : Energy Harvesting II: Organic, Perovskite and Hybrid Solar Cells and Materials

Scope of the Symposium

Scope of the symposium: This symposium is dedicated to research contributions in harvesting of solar radiation for energy applications, in particular the development of novel materials and devices applied to the conversion of solar light energy into chemical, electrical, and/or thermal energy. Special emphasis is on the development of novel (nano)materials, novel architectures, interfaces and contacts for the next generation of solar cells (perovskite, organic, hybrid and quantum dots solar cells), and solar modules and Tandem. Focus will be on fundamental studies of the physical-chemical properties of this important class of semiconductors. CONFIRMED SPEAKERS Emilio Palomares (ICIQ, Spain) Ivan Mora-Ser (St. Jaume University, Spain) Kai Zhu (NREL, USA) David Fenning (UCSD, USA) Juan-Pablo Correa-Baena (Georgia Tech, USA) Feng Gao (Linkping University, Sweden) Diego Bagnis (CSEM-Brasil, Brazil) Samuel D. Stranks (Cambridge - UK) Claudia Barolo (Unito, Torin, Italy) Giulia Grancini (Universit degli studi di Pavia, Italy) Yana Vaynzof (Technische Universitat Dresden, Germany)

Abstracts will be solicited in (but not limited to) the following areas

- *Next generation solar cells (organic and hybrid, and quantum dots): novel materials (hole and electron transport layers, contacts, metal oxide interfaces, lifetime and stability, new techniques for fabrication, encapsulation, and printing of solar cells*
- *Perovskite solar cells: long term stability and lifetime studies, physical chemical and opto-electronic properties, new materials (hole and electron transport layers, contacts, metal oxide interfaces), film structure and morphology*
- *Carbon nanotubes, fullerenes, graphene and other nanomaterials applied to solar energy harvesting*
- *Materials for down conversion/up conversion processes*
- *Advances in materials design and control, bandgap engineering, quantum confinement, and plasmonic effects to enhance the solar energy device conversion*
- *Large-area processing and fabrication of solar modules and Tandem and multi-absorber solar cells*
- *Quantum dot-plasmonic devices and materials for light-harvesting properties*
- *Solar thermal energy for energy-demanding applications*
- *Radiative and thermal cooling*
- *Theoretical approaches to designing and discovering novel concepts for solar energy conversion*

List of invited speakers

Symposium Organizers

Andr Sarto Polo (Universidade Federal do ABC) **Ana Flvia Nogueira** (Universidade Estadual de Campinas) **Jilian N Freitas** (CTI Renato Archer) .

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