

# NANOSMAT2024

Barcelona-Spain

# 15<sup>th</sup> International Conference ON SURFACES, COATINGS AND NANOSTRUCTURED MATERIALS



7-11  
JULY  
2024

## Special Session 3

### NANOTECHNOLOGY FOR MATERIALS AND DEVICES APPLIED TO SOLAR AND THERMAL ENERGY CONVERSION (SS3)

The use of nanotechnology and nanotools continuously allows to exploit the properties of materials at low dimensionality and to take full advantage of the resulting devices' performance. Systems developed at the nanoscale drive the route towards higher efficiency in materials usage and definitively higher energy efficiency, which corresponds to higher environmental and economic sustainability.

This session is dedicated to the most recent and groundbreaking developments of nanomaterials and nanocomponents that play a significant role in the conversion of solar radiation and recovery of heat.

#### Topics:

- Emerging nanomaterials for solar and thermal energy conversion and storage.
- Ultra-high temperature nanomaterials.
- Generators, hybrid devices and batteries based on nano-systems for storage and conversion of solar and thermal energy.
- Nano-architectures for solid-state thermal-to-electrical converters (thermoelectric, thermionic, thermophotovoltaic, pyroelectric and electrocaloric).
- Novel nanotechnology approaches for development of photovoltaic and thermophotovoltaic cells.

#### Organisers:

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#### Detailed info:

<https://www.nanosmat2024.com/ss3.html>

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