

**5****Webinar Series****UNESCO-UNISA-iTLAB/NRF Africa Chair in Nanoscience & Nanotechnology (U2ACN2)**

# Multifunctional materials for emerging technologies

This presentation focuses on structure/property relationships in advanced materials, emphasizing multifunctional systems that exhibit multiple functionalities. Such systems are then used as building blocks for the fabrication of various emerging technologies. In particular, nanostructured materials synthesized via the bottom-up approach present an opportunity for future generations of low-cost manufacturing of devices. We focus in particular on recent developments in solar technologies that aim to address the energy challenge, including third-generation photovoltaics, solar hydrogen production, luminescent solar concentrators, and other optoelectronic devices.

**Federico Rosei**  
Full professor at Centre  
Énergie, Matériaux et  
Télécommunications,  
Institut National de la  
Recherche Scientifique,  
Varenes (QC) Canada



Dr. Rosei's research focuses on structure/property relationships in nanomaterials and the use of these materials as building blocks for emerging technologies. His research has been supported by over 18 million dollars in funding from the Province of Quebec, the Federal Government of Canada, and international agencies. He has collaborated with over twenty Canadian R&D organizations. He currently holds the Industrial Chemistry Chair at the University of Trieste's Department of Chemical and Pharmaceutical Sciences.

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