

# Monday Afternoon, May 20, 2024

## Keynote Lectures

### Room Town & Country A - Session KYL1-MoA

#### Keynote Lecture

Moderator: Johanna Rosen, Linköping University, Sweden

1:00pm KYL1-MoA-1 Engineered Functional Coatings for Clean Energy and Sustainability Applications, **Satishchandra Ogale** ([satishogale@gmail.com](mailto:satishogale@gmail.com)), Research Institute for Sustainable Energy, TCG-CREST, Indian Institute of Science Education and Research, India **INVITED**

Functional coatings are key to all clean energy applications including energy harvesting, storage and conservation, and by implication to the emergent issues in the domain of sustainability. Coatings enable intelligent decoupling and independent manipulation of surface and bulk properties; as such, they can allow synergistic integration of various phenomena operating in energy devices on different length scales. This includes management and control of electrical, mechanical, optical, thermal and other properties of interest to realize a desired optimum performance. In this talk, I will outline this scenario by taking examples of recent research in the fields of Batteries, photo/electro-catalysis for clean fuels, hybrid perovskite solar cells, and triboelectric nanogenerators. I will also briefly discuss the scaling up issues of the employed experimental coating methods of interest to industry.

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