

Title: Solution-Processed Optoelectronic Devices

Speaker: Ted Sargent, University Professor, Department of Electrical and Computer Engineering, University of Toronto

Abstract: Colloidal quantum dots, perovskite semiconductors, and their combinations, have proven the potential of liquid-processed semiconductor materials in the field of optoelectronics.

I will present advances in:

- Sensitive photodetectors and image sensors;
- Solar photovoltaics;
- Optical sources, both LEDs and lasers; and
- Electrocatalysts for CO₂ reduction and energy storage;

based on recent advances in materials chemistry combined with photophysics of these materials and improved device optoelectronic models.



About the Speaker. Ted Sargent is University Professor in the Edward S. Rogers Sr. Department of Electrical and Computer Engineering at the University of Toronto. He holds the Canada Research Chair in Nanotechnology and also serves as Vice President - International for the University of Toronto. He is founder and CTO of InVisage Technologies Inc. of Menlo Park. He is a Fellow of the Royal Society of Canada; a Fellow of the AAAS "...for distinguished contributions to the development of solar cells and light sensors based on solution-processed semiconductors;" and a Fellow of the IEEE "... for contributions to colloidal quantum dot optoelectronic devices He received the B.Sc.Eng. (Engineering Physics) from Queen's University in 1995 and the Ph.D. in Electrical and Computer Engineering (Photonics) from the University of Toronto in 1998.