NSERC CREATE **TOP-SET** Un programme *FONCER* du CRSNG

Séminaire

Le vendredi 18 janvier 2019, 14h45
Des rafraîchissements seront servis dès 14h15
Complexe de recherche avancée, pièce 233
Université d'Ottawa, 25, rue Templeton
Le séminaire se déroulera en anglais.

Seminar

Friday, January 18, 2019, 2:45 p.m.
Refreshments to be served starting at 2:15 p.m.
Advanced Research Complex, room 233
University of Ottawa, 25 Templeton Street

Advanced materials for energy conversion and sensing

Ghada I. Koleilat, Dalhousie University

Abstract: Emerging optoelectronic technologies seek to push the boundaries of both efficiency and cost-effectiveness through the use of flexible platforms and novel material systems. My talk will primarily center on the potential of colloidal quantum dots and semiconducting single-walled carbon nanotubes in energy conversion and sensing applications. I will also discuss my group's recent work on developing highly oriented crystalline structures for high efficiency stable photodetector applications.

Bio: Ghada I. Koleilat received her BASc (2006) in Electrical Engineering from Concordia University, her MASc (2008) and her PhD (2012) in Electrical Engineering from the University of Toronto. During her graduate studies, she developed the world's first functional colloidal quantum dot tandem solar cell employing a single quantum tuned material. She also conceived a material processing that enabled prolonged stability and improved electrical properties in photovoltaic junctions based on colloidal quantum dots. That process is now patented and licensed to InVisage, Inc. Before joining Dalhousie University in August 2016, Koleilat did her postdoctoral training at Stanford University where she investigated the properties of single walled carbon nanotubes and their potential in photovoltaics. Her work has frequently been highlighted in major media outlets like Nanotechweb, Materials Today, National Post, MIT's Technology Review and Engadget, to name a few. Her first publication (ACS Nano 2008) was one of the 10 highest cited articles in the journal for 4 years. She has received several prestigious highly competitive awards for her research work, most notably the Banting PDF (2012). She was ranked 3rd among all the engineering and natural science applicants (PDF NSERC applicants).