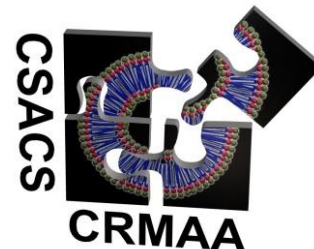


# McGill Chemical Society Seminar Series



Wednesday, Jan. 4<sup>th</sup>, 2017, 1:00 PM

Otto Maass Chemistry Building, Ruttan Room



## Prof. Elsa Reichmanis

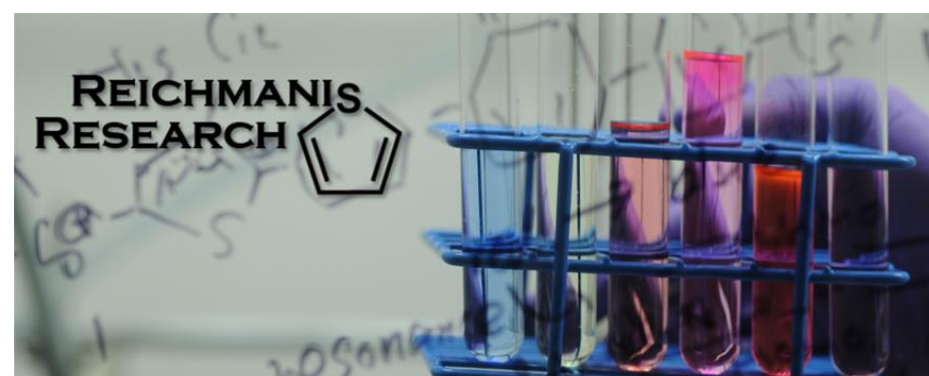
Georgia Tech, Atlanta



# *Active Organic and Polymer Materials for Flexible Electronics: a path to sustainable systems*

Abstract:

Printed, flexible electronics have potential as low cost alternatives for devices in industries ranging from energy to health care to security. The successful introduction of these devices however, relies on the design and development of sustainable, robust and reliable materials and processes. Studies have shown that not only does device performance



depend critically on semiconductor alignment at many length scales, materials' mesostructure can be manipulated in solution prior to device fabrication. Recently, it has been demonstrated that even with no perturbations, polymer semiconductors self-assemble in solution over time. Observations surrounding the behavior of these materials suggest that requisite macroscopic long-range order required for high performance devices may be achieved through process optimization which utilizes knowledge associated with materials structure-process-property relationships. Further, it has been shown that bio-derived materials may facilitate organization of conjugated materials in aqueous media thereby minimizing the use of toxic organic solvents during processing. This presentation will explore how a focus on sustainability can impact the design and development of all-printed, flexible electronic devices. Such devices present potential low cost alternatives for devices in a range of industries such as health care, security, and energy.

**EVERYONE IS WELCOME!**