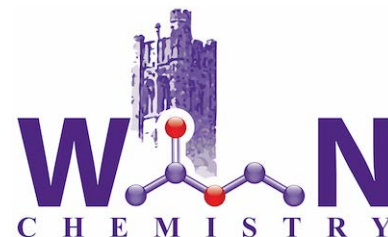




Department of Chemistry
The University of Western Ontario



PAUL de MAYO AWARD LECTURE

Dr. Stephanie Barbon

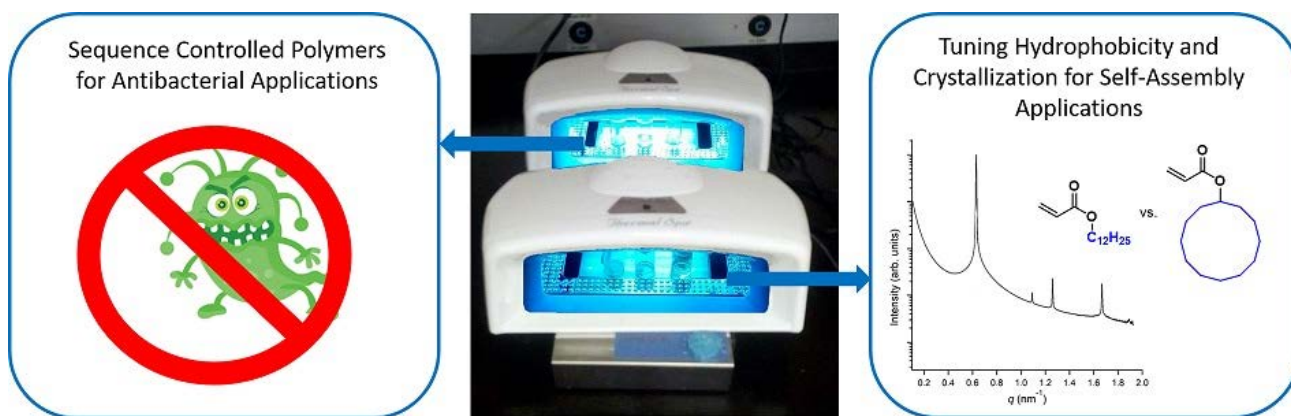
*University of California, Santa Barbara
Santa Barbara, California 93106*

Using Photoinduced ATRP to Control Sequence and Polymer Interactions for Self-Assembly and Antibacterial Applications

**Wednesday, May 23, 2018 at 2:30 pm
Room 9, Chemistry Building**

Polymer chemistry has advanced to the point where synthetic polymers are used in almost every aspect of life - from packaging and apparel to medicine and space travel. Nevertheless, synthetic polymers still fall short of naturally occurring polymers (*i.e.* DNA and proteins) in some ways. Efforts still need to be made to have precise control over the sequence of repeating units and the length (dispersity) of synthetic polymers, as well as the inter- and intra- polymer interactions in order to match the function of natural systems. This talk will discuss efforts in the Hawker group towards control over sequence and polymer interactions.

This first part of this talk will discuss the use of photoinduced atom transfer radical polymerization to synthesize polymers with very hydrophobic blocks. The effect of connectivity and steric bulk of the monomers on the polymer inter- and intra- chain interactions, including their self-assembly will be described. Secondly, we are able to synthesize polymers with short well-defined blocks in a one-pot process with quantitative conversions. By incorporating amine-containing and hydrophobic monomers in discrete controlled domains, antibacterial properties were imparted to these polymers. The effect of sequence on the antibacterial properties of the polymer will be discussed in detail.



If you require information in an alternate format, or if any other arrangements can make this event accessible to you,

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