

Moments in Materials Presentation: *Antimicrobial Polymers*

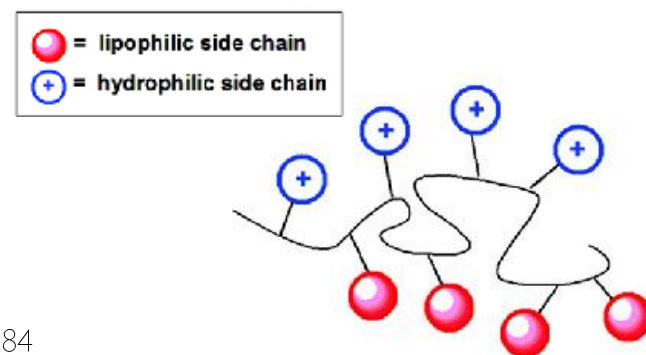
Speaker: Spencer Brucks

When: Thursday, July 24th 2014, 4:30 p.m.

Where: NWC, 7th floor meeting room, RM 703



Antibiotic-resistant bacteria pose one of the greatest threats to global public health. In the United States alone, two million patients annually suffer from hospital-acquired infections. Globally, 1/4 of all deaths are caused by microbial infection, many of which were previously treatable with antibiotics such as penicillin. There is thus a worldwide need for new prevention and control strategies. Antimicrobial polymers represent a paradigm shift in bacterial treatment and a promising solution to this global crisis. I will discuss the mechanism by which antimicrobial polymers are thought to selectively target bacteria, and the structure-function relationships that endow these materials with bactericidal activity. I will conclude with recent applications across several industries.



Selected references

(1) Kenawy, E.-R., Worley, S. D., Broughton, R., *Biomacromolecules* 2007, 8, 1359-1384

(2) Muñoz-Bonilla, A., Fernández-García, M., *Prog. Polym. Sci.* 2012, 37, 281-339