We are pleased to have two new faculty join the Center for Macromolecular Science & Engineering (known as the MacroCenter for short). This Center spans two colleges on campus (College of Engineering and the College of Liberal Arts and Sciences) where center members are found in four separate departments: Chemistry, Chemical Engineering, Materials Science & Engineering, and Physics. **Altogether we are 14 faculty working on macromolecular problems with approximately 100 graduate students and postdoctoral associates**.

The two newest members of the center, one in our Engineering College and the other in our Liberal Arts College, have something in common, something important: both are interested in biologically oriented research. The trend towards solving such problems is clear, and we feel the center is now well represented in this field. We welcome their new thinking, their enthusiasm, and their willingness to be a part of us.

The MacroCenter is among the oldest in the nation, being established in 1970. You can take a closer look at us here:

http://www.cmse.ufl.edu/

Important to note is that we value collaborations, both within the university as well as nationally and internationally. No doubt, research collaborations are global, and we are part of this. Hopefully you will want to contact any of us for more information (see the link above). We welcome your comments.

Please join us in welcoming Jennifer Andrew and Brent Sumerlin to the University of Florida MacroCenter family.

KEEP IN TOUCH

We want to hear from you! Send your comments to our MacroCenter Office Administrator, Ms. Sara Klossner, email Klossner@chem.ufl.edu, or write her at Department of Chemistry, P.O. Box 117200, Gainesville, FL 32611-7200. Please include your email address if you have one, photos are welcome, too.

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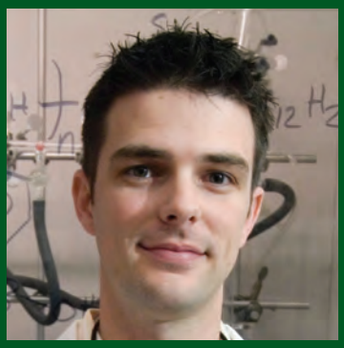
The MacroCenter Welcomes Its New Faculty

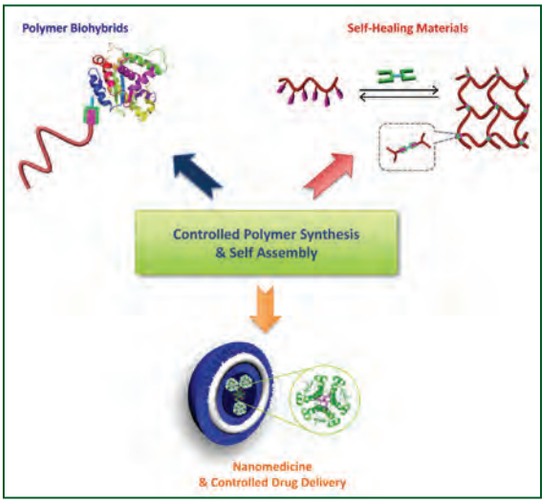
The Center for Macromolecular Science & Engineering
at The University of Florida
www.cmse.ufl.edu



Brent Sumerlin, sumerlin@chem.ufl.edu, graduated from North Carolina State University in 1998 with a B.S. in Textile Chemistry, and received his Ph.D. in 2003 at the University of Southern Mississippi under the direction of Dr. Charles McCormick. He continued his work as a Visiting Assistant Professor/Postdoctoral Research Associate in the group of Krzysztof Matyjaszewski at Carnegie Mellon University from 2003-2005. In 2005 he joined the Department of Chemistry at Southern Methodist University as an Assistant Professor. In the spring of 2007, he was named the Harold Jeskey Trustee Assistant Professor in Chemistry, and in 2009 was promoted to Associate Professor with tenure. His work has been well recognized in the scientific community. In 2011 he was named a Kavli Fellow (Frontiers of Science, National Academies of Sciences). In 2010 he was named an Alfred P. Sloan Research Fellow and a Gerald J. Ford Research Fellow. In 2008 he received an NSF CAREER Award and he also received the ACS Leadership Development Award. Dr. Sumerlin's research has been published in 64 peer-reviewed articles, and in 2007 he had the #1 most referenced article in Macromolecules. Dr. Brent Sumerlin has recently joined our research and teaching efforts here at the University of Florida.

Research Interests

His research involves the synthesis and investigation of stimuli-responsive polymeric materials with particular emphasis being dedicated to materials with biological relevance. For example, polymers that respond to changes in glucose concentration in the surrounding environment are being investigated by Dr. Sumerlin's group for their potential as feedback-controlled insulin delivery systems. Additionally, his group has developed new routes to "smart" materials in which stimuli-responsive polymers are conjugated to proteins that may have therapeutic or enzymatic potential. This combination of materials allows access to biohybrids that have the evolved sophistication of naturally-occurring macromolecules with the tuned utility of synthetic polymers. Other projects current underway in Dr. Sumerlin's research group include the design, preparation, and investigation of dynamic-covalent self-healing materials and the development of new synthetic polymer chemistry methodology.



Jennifer Andrew, jandrew@mse.ufl.edu, came to the University of Florida in 2011 and is currently an Assistant Professor in the Department of Materials Science & Engineering. She was recently awarded the NSF CAREER Award. She received her B.S. in Materials Science from Northwestern University in 2002, and her Ph.D. in Materials Engineering in 2008 from the University of California, Santa Barbara. She was then a UC President's Postdoctoral Fellow in Michael J. Sailor's lab in the Department of Chemistry and Biochemistry at the University of California, San Diego.

Research Interests

New and innovative materials stand to revolutionize the way we diagnose and treat diseases. The development of minimally invasive in vivo therapeutic and diagnostic technologies that act locally and in a controlled manner remains one of the challenges in the pharmaceutical industry. To address this challenge, our research seeks to develop new materials through cross-disciplinary research that lies at the interface of materials science, biology, chemistry and medicine. In many diseases, specifically cancer, early screening techniques are invasive and their risks outweigh their potential benefits. Additionally, cancer patients tend to be asymptomatic prior to metastasis, and current early screening techniques have not proven effective at reducing mortality. Therefore, in addition to being able to locally treat cancerous cells, we need to be able to non-invasively detect the presence of these cells prior to metastasis. Our research seeks to develop stimuli-responsive polymer-based nanocomposite materials that allow for point of care engineering. The point of care engineered materials provide clinicians tools that can readily and effectively diagnose patients at their location, without relying on sending out blood or tissue samples for complex and time-consuming analysis. By eliminating the need for highly specific and costly equipment, this class of diagnostic materials can be easily implemented worldwide, in both developed and developing countries.