Dr. Brent H. Shanks  
Mike and Jean Steffenson Chair  
Anson Marston Distinguished Professor in Engineering  
Chemical and Biological Engineering - Iowa State University

"Bioprivileged Molecules: A Strategy For Next Generation Chemical Products"

Much of the effort in converting biomass to biobased chemicals has been driven by the retrosynthesis of target molecules. An alternative approach is the synthesis of "bioprivileged molecules" that are biology-derived chemical species that can be readily converted to a diversity of chemical products including drop-in replacements and novel species, which can be used for next generation materials, specialty chemicals, nutraceuticals, antimicrobials, insecticides, herbicides, consumer goods, etc. The dual potentiality of a bioprivileged molecule is vital in creating value from biomass since innovative bioproducts represents a powerful driver for the development of biobased chemicals beyond just replacing fossil carbon with renewable carbon. The important role of these molecules has been demonstrated as key intermediates in the integration of biology and chemistry by our NSF Engineering Research Center for Biorenewable Chemicals (CBiRC). Several examples of bioprivileged molecules being developed by CBiRC will be discussed.

**Required Graduate Student Seminar for ChE 5971**  
Refreshments served before Seminar

Sponsored by:  
School of Chemical, Biological and Materials Engineering  
The University of Oklahoma  
100 E. Boyd, Sarkeys Energy Center, T-301, Norman, OK  
405-325-5811  
Accommodations on the basis of disability are available by contacting the office