



2015 DOW LECTURE

Craig Hawker

*Materials Research Laboratory
University of California, Santa Barbara, CA*

Tuesday, May 26, 2015

4:00pm, Tech L361

Reception to follow in Cook Hall Atrium

Novel Chemical Building Blocks for Functional Material Platforms

Abstract: The self-assembly and directed functionalization of polymeric materials is a promising platform for the “bottom-up” fabrication of nanostructured systems. In designing such nanostructures, the molecular characteristics and functional groups of the chemical building blocks dictate the assembly process and are therefore critical in the formation of various structures. This feature will be illustrated with examples ranging from new strategies for the fabrication of nanostructured particles to novel hydrogels and surface coating inspired by marine organisms.

Biography:

Professor Craig J. Hawker, FRS is Clarke Professor and holds the Alan and Ruth Heeger Chair of Interdisciplinary Science at UCSB where he directs the California Nanosystems Institute and the Materials Research Laboratory. He came to UCSB in 2004 after eleven years as a Research Staff Member at the IBM Almaden Research Center in San Jose, CA. Prior to this he attended the University of Queensland, Australia in 1981 and received his undergraduate degree in Chemistry. After graduating, Craig went to the University of Cambridge in the United Kingdom to study the biosynthesis of Vitamin B12 under Prof. Sir A. R. Battersby. Upon finishing his doctorate, Craig ventured to the United States to do his post-doctoral work with Professor J.M.J. Frechet at Cornell University.

Professor Hawker’s research activities focus on synthetic polymer chemistry and nanotechnology, integrating fundamental studies with the development of nanostructured materials for advanced properties and functions in microelectronics and biotechnology. This work has led to over 400 peer-reviewed papers and 50 patents with a number of materials being commercialized. He has helped establish a range of start-up companies - Relypsa, Intermolecular, Olaplex, Tricida – serving as both Founder and Scientific Advisor. For his pioneering studies, Professor Hawker’s recent honors include the 2013 American Chemical Society Award in Polymer Chemistry, the 2012 Centenary Prize from the Royal Society of Chemistry and an Arthur C. Cope Scholar Award from the American Chemical Society in 2011. Professor Hawker has been honored with election to the Royal Society (2010) as well as being named a Fellow of the American Chemical Society and the Royal Society of Chemistry.



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