Craig Hawker is Clarke Professor and holds the Alan and Ruth Heeger Chair of Interdisciplinary Science at the University of California, Santa Barbara. His research focuses on synthetic polymer chemistry and materials design, integrating fundamental studies with the development of nanostructured systems for application in the biomedical, advanced electronic materials and personal care industries. He has served on the scientific advisory boards of a number of companies and is co-inventor of Olaplex. His scientific work has led to over 450 peer-reviewed papers and 60 patents. Hawker’s recent honors include the American Chemical Society Award in Polymer Chemistry, the Centenary Prize from the Royal Society of Chemistry and an Arthur C. Cope Scholar Award from the American Chemical Society in 2011. Hawker is a fellow of the Royal Society (London), AAAS, ACS and the Royal Society of Chemistry. He received a Ph.D. in organic chemistry from the University of Cambridge.

**Novel Chemical Building Blocks for Functional Material Platforms**

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.