School of Molecular Sciences
Arizona State University

SMS Fall 2022 Eyring Seminar

Thursday Nov 3 | 6pm | Marston Theater (ISTB4)

Join us for an outdoor reception on ISTB4 Patio 5:00pm—5:40pm

David Tirrell, PhD

Professor, California Institute of Technology

Biography Dr. David A. Tirrell is the Ross McCollum-William H. Corcoran Professor of Chemistry and Chemical Engineering, Carl and Shirley Larson Provostial Chair, and Provost at the California Institute of Technology. Tirrell was educated at MIT and at the University of Massachusetts at Amherst. He joined the Department of Chemistry at Carnegie-Mellon University in 1978, returned to Amherst in 1984, and served as Director of the Materials Research Laboratory at UMass before moving to Pasadena in 1998. At Caltech, he has served as chairman of the Division of Chemistry and Chemical Engineering (1999-2009), director of the Beckman Institute (2011-2018) and provost (2017-present). Tirrell's research interests lie in macromolecular chemistry and in the use of non-canonical amino acids to engineer and probe protein behavior. His contributions to these fields have been recognized by his election to the American Academy of Arts and Sciences, the American Philosophical Society, and all three branches (Sciences, Engineering and Medicine) of the U.S. National Academies.

Genetic Engineering of Macromolecular and Cellular Materials

Recombinant DNA technology has made it possible to prepare artificial macromolecules with essentially complete control of molecular architecture. Intermolecular interactions can be programmed into such systems, and can be used to engineer supramolecular organization and macroscopic mechanical behavior. Most recently, we have begun to explore more complex "living materials," in which mixtures of bacterial cells and artificial proteins acquire the capacity for self-repair, regeneration, mineralization and responsiveness to environmental conditions.

**ZOOM option available: https://asu.zoom.us/j/87081218152*