



American Chemical Society

Central Wisconsin Section



Polymers in Museums: Restoration and Preservation of the Saturn V Rocket and Apollo Spacesuits

by

John Droske

Professor of Chemistry, UWSP

Wednesday, February 19, 7:30 pm
UW-Marshfield/Wood County
Aldo Leopold Science Building Room 127

Dinner: 6:00 pm – China Chef

Abstract:

Space-age materials generally are believed to “last forever”. Unfortunately, especially for artifacts with historical significance, this is proving not to be the case. Synthetic polymers, like other organic-based materials, may degrade over time and some artifacts from the Apollo program are showing significant degradation. For example, some rubber gloves from the Apollo missions are hardened and literally are crumbling. We have been using thermogravimetric analysis and infrared spectroscopy to characterize Apollo spacesuits that are part of the Smithsonian collection. Our efforts to characterize the degradation of the suits and to suggest ways to improve the storage and display of these important suits will be discussed. Last summer, we were contracted by the Smithsonian to analyze the external foam from the Saturn V rocket that is on display at Johnson Space Center. The presentation will include the characterization that was done to determine the relative condition of the foam as part of the Save America’s Treasures Saturn V restoration project.

The Speaker:

JOHN P. DROSKE is Professor of Chemistry at the University of Wisconsin-Stevens Point. He received his B.S. and M.S. in Chemistry from DePaul University and his Ph.D. in Organic Chemistry from Colorado State University under the direction of the late John K. Stille.

His research interests are in synthetic polymer chemistry and his undergraduate research group has prepared high temperature resistant polymers, electrically conductive polymers, and degradable copolymers for bone replacement applications. In 2000, he was named Polymer Advisor for the Materials Research Group Panel at the Smithsonian Institution.

John is the founding director of the POLYED National Information Center for Polymer Education that is housed at UWSP and, for 2001-2003, is President of the Intersociety Polymer Education Council. With Bob Badger, John currently is involved in an NSF-funded effort to develop college-level, polymer curricular materials that will be disseminated via the internet. He has received the UWSP University Scholar Award and the ACS Polymer Divisions’ Joint Distinguished Service Award.



Dinner with our guest speaker will be at the China Chef, 233 S. Central Avenue (downtown Marshfield) at 6 pm. **Make reservations by Tuesday at 4 PM** by contacting Tom Marty at 715-389-6502 or tmarty@uwc.edu.

UW-Marshfield/Wood County is located on the west side of town, 2000 W. Fifth St. From Hwy. 97 (North Central Ave.) go to 5th Street, turn west. Once on 5th Street, continue 20 blocks to campus.