The Biomedical Engineering Society and The Department of Biological Engineering Welcomes:

Dr. Buddy D. Ratner
Professor of Chemical & Bioengineering
University of Washington

Presenting a Lecture Entitled:
Evolving Biomaterials
from auto parts, to synthesized polymers, to materials engineered with precision

Monday, April 17 Wrench Auditorium 12:00 PM
In Memorial Union

Come and See how Medicine, Engineering, Biology, and Chemistry Disciplines can be Applied to Tomorrow’s Materials

Refreshments will be provided For more information, please call 573-884-6535

Abstract:
Biomaterials, materials intended for interaction with living systems, have progressed in a 55 year period from off-the-shelf commodity materials, to materials synthesized specifically for biomedical applications, to materials designed to work with biology or regulate biology with precision. This talk will look at biomaterials as a still-evolving and growing endeavor. Some historical roots will be explored. A few foundation materials such as polyurethanes and hydrogels will be described. Finally, the evolution of these materials to a new generation of biomaterials with precise functionality will be presented. Specific examples of modern biomaterials intended to improve the healing of medical devices and materials aimed at tissue engineering will be elaborated upon.

Biography:
Buddy D. Ratner is the Michael L. and Myrna Darland Endowed Chair in Technology Commercialization, Professor of Bioengineering and Professor of Chemical Engineering at the University of Washington. He received his Ph.D. (1972) in polymer chemistry from the Polytechnic Institute of Brooklyn. From 1985-1996 he directed the NIH-funded National ESCA and Surface Analysis Center for Biomedical Problems (NESAC/BIO), and in 1996 he assumed the directorship of University of Washington Engineered Biomaterials (UWEB), an NSF Engineering Research Center. He is the editor of the Journal of Undergraduate Research in Bioengineering, lead editor of Biomaterials Science: An Introduction to Materials in Medicine (now in its second edition with approximately 15,000 copies sold) and author of more than 400 scholarly works. Ratner was president of the Society for Biomaterials (1990-1991), president of the American Institute of Medical and Biological Engineering (AIMBE), 2002-2003 and vice president of the Tissue Engineering Society International (TESI) 2003-2005. He is a fellow of AIMBE, fellow of the American Vacuum Society and fellow, Biomaterials Science and Engineering (FBSE). In 2002 Ratner was elected a member of the National Academy of Engineering, USA. His research interests include biomaterials, tissue engineering, polymers, biocompatibility, surface analysis of organic materials, self-assembly, nanobiotechnology, RF-plasma thin film deposition, biomedical ethics and entrepreneurship.