Plenary Speaker Robert Langer Plans to Focus on Biomaterials

Robert Langer, Kenneth J. Germeshausen Professor of Chemical and Biomedical Engineering at MIT, will give his plenary presentation on "Biomaterials: New Polymers and Novel Applications" at the 1995 MRS Spring Meeting in San Francisco. The Plenary Session is scheduled for Monday, April 17 at 6 p.m.

In his talk, Langer will emphasize the role materials scientists can play in medical research by intentionally synthesizing materials for medical applications to replace the current process of using off-the-shelf materials to address medical problems. In particular, Langer will discuss the use of degradable polymers to deliver the products of biotechnology, such as proteins, peptides, and gene therapy agents, and the use of bioerodible polymers for tissue engineering.

Langer developed his career on biomaterials since, as a postdoctoral fellow, he was the first to discover premises on which the use of polymers could be used for the delivery of all molecules with a molecular weight over 500 daltons. From this discovery, he developed an evolution of methods from incorporating molecules into a variety of polymers to finding polymers that could be used for the slow delivery of vaccines.

Robert Langer

Langer and his students created the field of controlled release. His research sparked investigations by many researchers and companies who now design controlled release systems for macromolecules considered for medical therapy.

Langer's collaborative research efforts further led him to the discovery of polymeric systems used for tissue engineering. This concept resulted in the development of new skin for burn victims and patients with skin ulcers, and the formation of other tissues such as liver and cartilage.

In 1989, Langer was elected to the Institute of Medicine of the National Academy of Sciences, and in 1992 he was elected to both the National Academy of Engineering and to the National Academy of Sciences. He is the only active member of all three U.S. National Academies. He has written 420 articles, 122 patents, and edited 9 books. MRS

https://doi.org/10.1557/S0883769400044468 Published online by Cambridge University Press