

# *Chemistry In Emerging Technologies Lectures*

Peckham Hall, Rm. 12 - Nazareth College, 4245 East Ave., Pittsford, NY

Monday, February 23, 2015

## *Spatially Selective Functionalization of Porous Silica for Nucleic Acid Purification Applications*

**7:00 pm: Prof. Lewis Rothberg**, University of Rochester, Department of Chemistry, CTO, Diffinity Genomics ([www.diffinitygenomics.com](http://www.diffinitygenomics.com))

An accidental discovery in my laboratory led to founding Diffinity Genomics in 2005 with the idea of commercializing new DNA assay technology. In this presentation, I will discuss the many surprises along the way and how Diffinity evolved its focus towards nucleic acid purification. Blessed by management with vision, several talented employees and a nurturing University, Diffinity launched its first product, RapidTip™, in 2010. That product enables purification of DNA amplification (polymerase chain) reactions in less than 60 seconds and was named by the *Scientist* to be one of the top 10 most innovative products in the life sciences in 2010. I will review the general ideas behind the technology underlying Diffinity's products and its prospects for the future. At the same time, I will share a personal perspective on my foray into commercialization and its impact on my life experience and scientific career.

**Lewis Rothberg** has been a Professor of Chemistry at the Univ. of Rochester since 1996. His group does research primarily in the area of organic electronics, investigating the science of light emission, charge photogeneration and charge transport in conjugated, processable materials with an eye to future applications in solid-state lighting, flexible displays, electronic paper and organic solar cells. Some work in the research group has strayed into biomolecular sensing applications and resulted in the formation of two local start-ups, Diffinity Genomics and Pathologics (now Adarza Biosystems). Lewis remains active in Diffinity as chief technical officer. Lewis got his undergraduate BS in Physics at the University of Rochester in 1977 and his Ph.D. in Physics with Nicolaas Bloembergen at Harvard University in 1984. His thesis work involved studies of dephasing-induced four-wave mixing to verify the correct treatment of quantum mechanical damping in nonlinear optical processes. From 1984-1996, he worked at AT&T and then Lucent Bell Laboratories on a variety of problems in soft condensed matter physics. He became Distinguished Member of Technical Staff at Bell Labs in 1994 and a Fellow of the American Physical Society in 1996.

**8:15 – 9:30 p.m.: Reception – Peckham Hall Lobby**

**Further information on these lectures and other Rochester ACS Section events is available at [www.Rochester.sites.ACS.org](http://www.Rochester.sites.ACS.org)**