

**Professor Mark RATNER**

**Electron Transfer and Molecular Conductance: Some Mechanistic Issues**

*Department of Chemistry, Northwestern University, 2145 Sheridan Road, Evanston,  
IL 60208-3113, USA*

*Email: ratner@chem.northwestern.edu*

The original insights that Marcus brought to the issue of electron transfer have proved to provide a superb approach to nearly all problems of charge transfer in molecular systems. In transport junctions, the dissimilarities from the molecular transfer situation (energy sink, nature of the perturbation, environmental coupling, measurement, etc) at first seem to deny any real link. But there is a fundamental identity arising from the motion of a charge in an asymmetric electrochemical potential environment. Using this analogy, we will discuss some advances in junction transport theory, and how they relate to the electron transfer problem in molecules.