

## Micha Asscher



Received his PhD in Physical Chemistry from the Hebrew University of Jerusalem under the supervision of Professor Yehuda Haas. He spent his Post-doctoral training together with Professor Gabor A. Somorjai in UC Berkeley (1981-1984) where he studied the basics of Surface Science and catalysis.

In 1984 he joined the Faculty of his *Alma Mater*, at the Institute of Chemistry of The Hebrew University of Jerusalem, Department of Physical Chemistry. In 1997 he became full professor of Chemistry. Between 2001-2004 he was the chairman of The Institute of Chemistry and subsequently (2005-2008) a deputy Dean for Research and Development at the Faculty of Science of the Hebrew University. In 2004 he was awarded among the "Top 50 Researchers" as nominated by Scientific American.

In his research he is interested in the basic and applied science of light-matter interactions and reactivity in general. He used linear and non-linear optical methods to follow the kinetics and dynamics of chemical processes at the gas-surface interface under ultra high vacuum conditions as models for heterogeneous catalysis. Photochemistry of intact and caged molecules on oxide surfaces has been studied as model systems of photo-catalysis as well as mimicking inter stellar photo-reactivity. New patterning technique at the sub-micron dimensions has been developed in his group based on laser ablation of weakly bound buffer materials with metal layers on top. Recently, the role of surface plasmon excitation of nanometer size metallic clusters in enhancement of photo-catalysis has been investigated. The role of extremely high electric fields that can be generated by charging layers of molecular (water) ices that act as nano-capacitors is another topic of interest in his group. It correlates well with the strong transient electric fields generated at the vicinity of plasmon-excited metal particles.