

## CONFERENCIAS MAGISTRALES

### "NANOPARTICLES, SERS AND THEORY"

*Prof. George C. Schatz  
Northwestern University  
Plenaria Inaugural*

*Miércoles 3 de octubre,*

*Horario: 9:00-10:00*

*Auditorio principal de la UPDCE*



#### **Bio sketch**

George C. Schatz is the Morrison Professor of Chemistry at Northwestern University. He received his undergraduate degree at Clarkson University and Ph D at Caltech. He was a postdoc at MIT, and has been at Northwestern since 1976. Schatz is a member of the National Academy

of Sciences, the American Academy of Arts and Sciences, and he has been Editor-in-Chief of the Journal of Physical Chemistry since 2005. Schatz is a theoretician specializing in electronic structure methods, dynamical processes, electrodynamics, and statistical mechanics.

#### **Keywords**

Surface enhanced Raman spectroscopy, plasmon, nanoparticle.

#### **Abstract of the conference**

Silver and gold nanoparticles have a history that dates to the Roman empire and before, as well as detailed work by Michael Faraday in the 1850s. However these particles have been given new directions in the last 40 years through a number of advances in nanoscience, and especially by the discovery of surface enhanced Raman spectroscopy (SERS) in the 1970s. This talk will provide an overview of these advances, especially as relates to SERS substrates, to single-molecule SERS, and to tip enhanced Raman spectroscopy (TERS). An emphasis in this talk will be on the use of theory to understand the optical properties of plasmonic materials, especially in SERS measurements and applications.

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