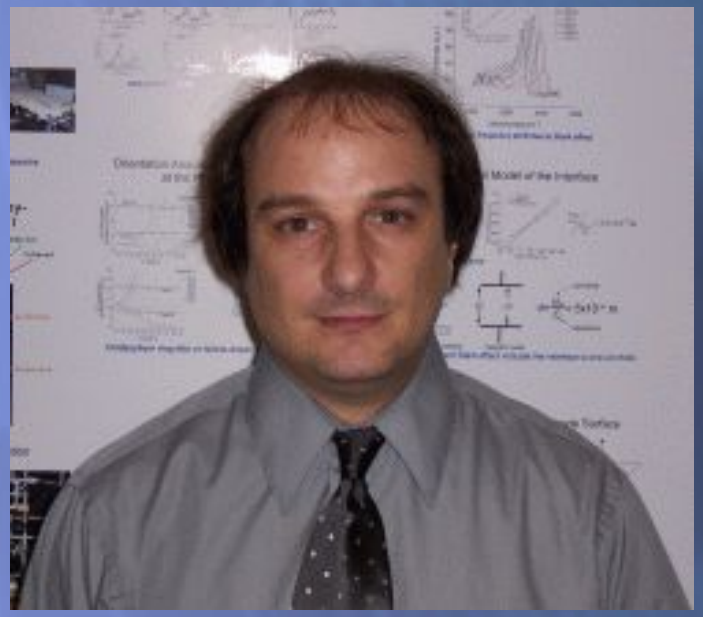
G-COE/RCMS Seminar

Prof. Dr. Steven Baldelli

(Department of Chemistry,
University of Houston, USA)

“Sum Frequency Generation Imaging of Surfaces”



Abstract:
Vibrational spectroscopic imaging is demonstrated for a variety of organic functionalized patterned surfaces. The images from sum frequency generation imaging microscopy (SFGIM) are analyzed using 3 different contrast mechanisms in the interpretation of the transition from bright to dark regions-of-interest (ROI). For this experiment, microcontact printing was used to spatially control the surface monolayers by using a patterned stamp and by varying the terminal functional group of the backfilling solutions. Analysis, by the three different methods, suggested that there was significant mixing between the stamped and backfilled regions which influenced the contrast in the images at the resonant peaks. In addition, the interference between the resonant peaks and non-resonant background also had an effect on the resulting image appearance.

July 14, 2009 16:00-17:30

Noyori Materials Science Laboratory
-Research Center for Materials Science-
Chemistry Gallery, 2F

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