

## SPECTROSCOPY AND MOLECULAR STRUCTURE



### INTRODUCTION

This research group, in operation since 1998, its concern is the study of materials using SURFACE ENHANCED RAMAN SPECTROSCOPY (SERS), what has allowed it to publish several articles dealing with the methodology to analyze consistently the obtained spectra. Additionally, the use of Raman Microscopy as a non-destructive method of studying the structure of materials, helps to identify the identity of particles in the range of micrometers. Its research is supported by high level ab-initio based quantum chemical calculations.

### RESEARCH TOPICS

- SERS spectroscopy: theoretical models and applications.
- Spectroscopy and reactivity of energetic molecules.
- Microscopy and Raman microanalysis for nano-materials.

### SCIENTIFIC-TECHNICAL SERVICES

- Raman laboratory.
- Micro-Raman laboratory
- Laboratory of atomic force microscopy (Characterization of microstructured materials).
- Specific training of research

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