



ΙΔΡΥΜΑ ΤΕΧΝΟΛΟΓΙΑΣ ΚΑΙ ΕΡΕΥΝΑΣ

ΕΡΕΥΝΗΤΙΚΟ ΙΝΣΤΙΤΟΥΤΟ ΧΗΜΙΚΗΣ ΜΗΧΑΝΙΚΗΣ
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ΣΕΜΙΝΑΡΙΟ

- ΟΜΙΛΗΤΗΣ:** Dr. Michel Rerat
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- ΘΕΜΑ:** **AB INITIO CALCULATION OF LINEAR AND NON LINEAR OPTICAL PROPERTIES OF MOLECULES AND MATERIALS**
- ΤΟΠΟΣ:** Αίθουσα Σεμιναρίων ΕΙΧΗΜΥΘ-ΙΤΕ
- ΗΜΕΡΟΜΗΝΙΑ:** Παρασκευή, 4 Απριλίου 2003
- ΩΡΑ:** 12:00

ΠΕΡΙΛΗΨΗ

The theoretical determination of the response of a compound to an outer field can be of great importance to know if its synthesis, sometimes expensive, is worth or not, or to propose new materials with such an electromagnetic property.

Even if the methodology for calculating electric susceptibilities is not very easy, particularly for infinite periodic systems, progress in quantum computational chemistry and physics allows us now to obtain accurate values of these optical properties and their behaviour versus parameters like the outer field frequency, the geometry or size of the studied system, etc.

In this talk, different methods of (hyper)polarizability calculation will be described first for molecules and condensed matter, then, some results and following applications as physisorption or second harmonic generation (SHG) at the surface of a crystal will be given.