ISTITUTO DI CHIMICA DEI COMPOSTI ORGANOMETALLICI

Consiglio Nazionale delle Ricerche

Venerdì 21 Febbraio 2020
alle ore 11.00

presso AULA 2 dell'Edificio F
Area della Ricerca CNR di Firenze
Via Madonna del Piano, 10 Sesto Fiorentino (Firenze)

la Prof. Verónica Salgueiriño
Departamento de Física Aplicada and CINBIO, Universidade de Vigo
Spagna

terrà il seguente seminario:

" Synthesis, Characterization and Manipulation of Transition Metal Oxide Nanocrystals"

Si invitano tutti gli interessati a partecipare.

Dr. Claudio Sangregorio

Dr. Francesco Vizza
Direttore ICCOM

Short Abstract:

Nanocrystals of magnetic materials can show interesting behaviors stemming from the combination of chemistry and magnetic performance, which also determines or directs their final purpose. Different examples of magnetic nanocrystals of transition metal oxides, synthesized and manipulated by wet-chemistry methods, will be detailed describing the magnetic behavior and the possible diversity of the ultimate functionalities (magneto-optical activity, exchange bias, spin dynamics, etc. or heat delivery and magnetic guidance of self-propelled swimmers).

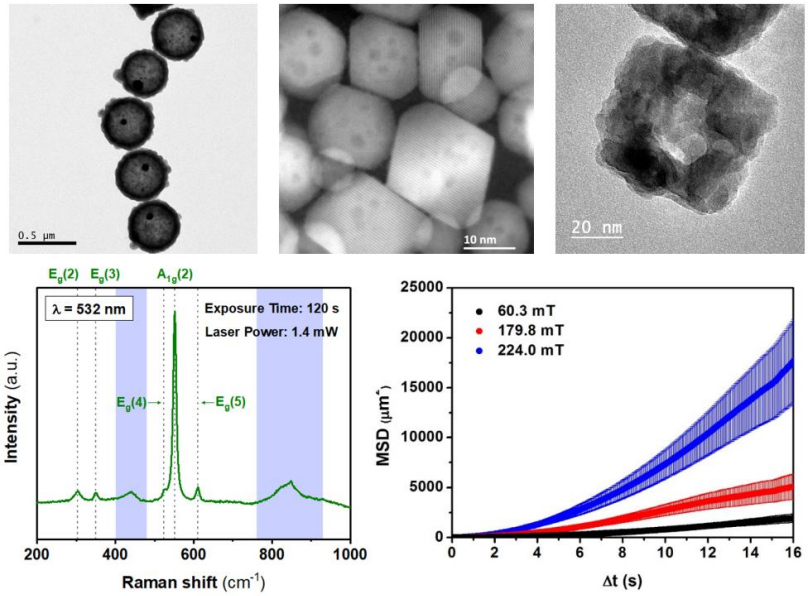

Figure 1. (top) TEM images of silica capsules including several $CoFe_2O_4$ nanoparticles and a single Au nanoparticle, of truncated octahedron shaped $ZnFe_2O_4$ nanocrystals, and of a mixed $Co_xMn_yFe_2O_4$ nanocage. (bottom) Raman spectrum from Cr_2O_3 nanoparticles and mean-squared displacement of magnetic swimmers in the presence of a magnetic field gradient.

References

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M. Ramos-Docampo, V. Salgueiriño *et al*. *ACS Nano* **2017**, *11*, 3973.
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