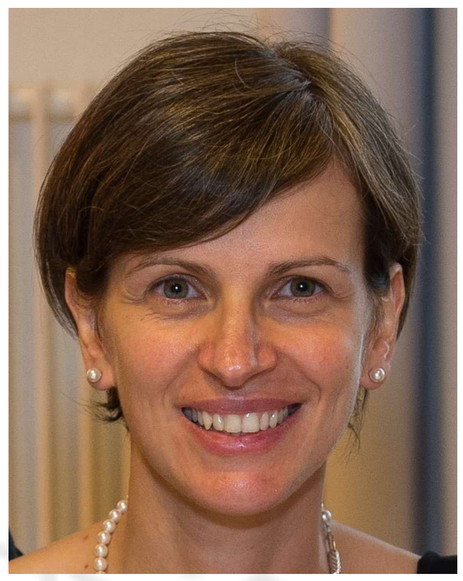
Departamento de Física de la Materia Condensada

Universidad Zaragoza

SEMINARIOS 2026

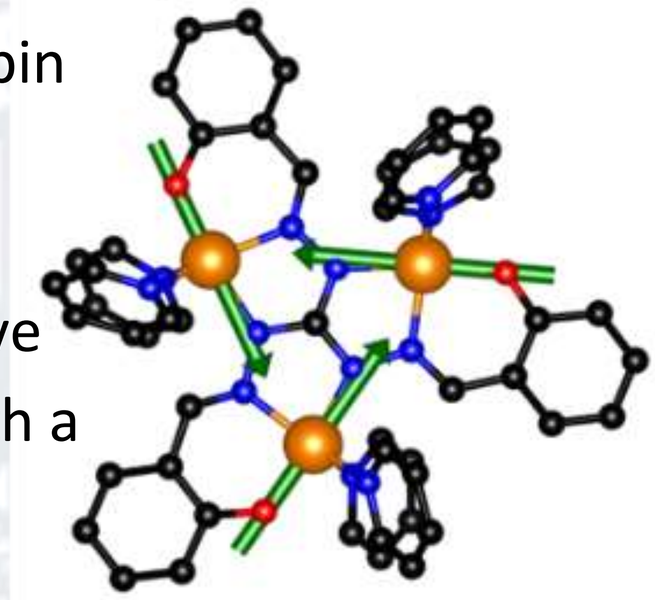


Maria Fittipaldi

Department of Physics and Astronomy,
University of Florence and INSTM UdR

Electric Control of Magnetic Exchange in a Molecular Spin Triangle

Spin-electric (SE) materials allow for the electric control of spins, offering a faster, more energy-efficient, and space-confined alternative to magnetic field manipulation in quantum technology. Using Electric Field Modulated Electron Paramagnetic Resonance (EFM-EPR), we investigated the SE effect in antiferromagnetic spin triangles. In a Cu_3 trimer, we demonstrated that the SE signal originates primarily from variations in isotropic exchange interaction when the field is applied in-plane. Moreover, we have revealed a SE effect on a Cr3 antiferromagnetic spin triangle with a sizeable Dzyaloshinskii–Moriya interaction.



Maria Fittipaldi is an Associate Professor of Experimental Condensed Matter Physics. Her research sits at the crossroads of instrumentation development, condensed matter physics, chemistry, and biophysics, with a strong focus on advanced magnetic-resonance techniques. Over the years, she has applied state-of-the-art multi-frequency (continuous-wave and pulsed) EPR and, more recently, Mössbauer spectroscopy to investigate semiconductors, nanomagnets, proteins, and functional materials. Her recent work explores spin–electric effects in magnetic molecules using EPR setups she helped to design and build.

Con la colaboración de:

Facultad de Ciencias
Universidad Zaragoza

INMA

CSIC Consejo Superior de Investigaciones Científicas
Universidad Zaragoza

19 Febrero (jueves)

HORA: 12:30

SALÓN DE ACTOS-MATEMÁTICAS FACULTAD DE CIENCIAS