

**Propuestas TFM aprobadas.**  
**Master Nanomat curso 2016-2017**

<b>Titulo</b>	<b>Directores</b>
Metal-coordinated molecular networks on Cu(111) surfaces: from structure to magnetism.	Dr. Fernando Bartolomé Dr. Jorge Lobo
Slow magnetic relaxation of single molecule magnets containing lanthanides.	Dr. Fernando Bartolomé
Creating Graphene Nanostructures for Magnetoelectronic Applications.	Dr. David Serrate Dr. Jorge Lobo
Single-vortex physics in superconducting W-C nanostructures.	Dr. José M <sup>a</sup> De Teresa Dra. Rosa Córdoba
Controlled wettability in hierarchically structured surfaces	Dr. Carlos Sánchez
Searching for ferroelectricity in binary oxides.	Dr. José A. Pardo Dr. Pedro A. Algarabel
3D atomic observations of metals in petroleum catalysts by state-of-art Transmission Electron Microscopy.	Dr. Ricardo Ibarra
Fabrication and electrical characterization of all-carbon devices.	Dra. José María de Teresa Dr. Santiago Martín
Graphene Micro-and Nano-ribbons fabricated by Atomic Force Microscopy.	Dra. Ana Isabel Gracia Dr. José María de Teresa
Cancer treatment in animal models with nanoparticles.	Dr. Rafael Piñol Dr. Ángel Millan
Cell thermometry.	Dr. Rafael Piñol Dr. Ángel Millan
Magnetic anisotropy of a 3d-4f molecule series by relativistic quantum chemistry methods.	Dr. Jesús Javier Campo Dr. Francisco Javier Luzón
Nanopatterning of molecules on devices.	Dra. Ana Isabel Gracia
Enzymatic mechanisms analyzed by Atomic force microscopy at the single molecule level.	Dra. Ana Isabel Gracia
Enzymatic optical (nano)biosensors based on "in situ" synthesized nanoclusters.	Dra. Susana De Marcos Dr. Javier Galbán
Developing electrochemical sensors for the detection and quantitation of metal nanoparticles.	Dr. Juan Carlos Vidal
Carbonaceous platforms for the fabrication of green molecular electronic devices.	Dra. Pilar Cea Dr. Santiago Martín
Charge transfer (CT) complex formation for molecular electronic devices.	Dr. Santiago Martín Dra. Pilar Cea
Fabrication of ultrathin polymer films for CO <sub>2</sub> separation.	Dr. Ignacio Gascón
Development of a novel methodology for transfection based on magnetic hyperthermia.	Dra. Pilar Cea Dr. Jesús Martínez
Preparation and characterization of nanostructures based on bent-core molecules onto graphene.	Dra. Blanca Ros Dr. Santiago Martín
Amino-functionalized dendrimers that form nanoaggregates for gene and drug delivery.	Dra. Teresa Sierra Dr. José Luis Serrano
Nanostructured soft materials for organic electronics based on columnar liquid crystals.	Dra. Teresa Sierra Dra. Raquel Giménez
Dendrimer-based nanostructured systems for drug delivery.	Dra. Teresa Sierra Dra. Blanca Ros
Nanostructured organic materials based on amphiphilic bent-core molecules.	Dra. Blanca Ros

<b>Titulo</b>	<b>Directores</b>
Localized Magnetic Hyperthermia as a novel strategy to produce genetically modified cells.	Dra. Raluca Fratila Dra. Valeria Grazú
Biofunctionalization of ceria nanoparticles for their application in the neutralization of oxidative stress.	Dr. Rafael Martín Dra. Valeria Grazú
pH-sensitive micelles based on synthetic polypeptides for biomedical applications.	Dr. Rafael Martín Dra. Valeria Grazú
Antimicrobial nanomaterials for cultural heritage conservation.	Dr. Scott Mitchell Dr. Jesús Martínez
Pyranilidene derivatives for solar cells: synthesis and optimization of the TiO <sub>2</sub> anode.	Dr. Santiago Franco Dra. Raquel Andreu
Stimuli responsive nanocarriers from amphiphilic block copolymers.	Dr. Luis Oriol Dra. Milagros Piñol
Nanofibers by self-assembly of amphiphilic bent-core molecules: preparation and characterization.	Dra. Blanca Ros Dr. Víctor Sebastián
Russian-doll based oral delivery of hybrid nanosystems for treatment of colorectal cancer.	Dra. Valeria Grazú Dra. Lucía Gutiérrez
Synthesis, Characterization and Catalytic Applications of Metallic Nanoparticles Supported on Biomorphic Carbons.	Dr. Antonio Monzón Dra. Eva Romeo
Continuous photodegradation of organic pollutants with hybrid nanofibers using UV-LED radiation.	Dra. Silvia Irusta Dra. M. Pilar Lobera
Fabrication of Microfluidic SERS devices by Nanoimprint Lithography Techniques: Application to early detection of Sarin Gas Threats.	Dra. Reyes Mallada Dra. María Pilar Pina
Synthesis of gold based plasmonic nanostructures for SERS detection of Sarin Gas.	Dra. Reyes Mallada Dra. María Pilar Pina
Fabrication and Testing of Si based Micropreconcentrators modified with MOF type materials for Sarin Gas Adsorption.	Dr. Miguel Urbiztondo Dra. María Pilar Pina
Fabrication of Polymeric Micropreconcentrators by Nanoimprint Lithography and Conventional Photolithography Techniques: Application to Sarin Gas Adsorption.	Dr. Miguel Urbiztondo Dra. María Pilar Pina
MOF (metal-organic framework) based mixed matrix membranes for CO <sub>2</sub> capture.	Dr. Joaquín Coronas
ZIF-8 membranes on GO supports for gas separation.	Dr. Edgar Muñoz Dr. Joaquín Coronas
Nanoparticles containing natural antimicrobials with pharmacokinetic control of the release to be used in smart dressing materials.	Dra. Silvia Irusta
Synthesis, development and optimization of visible-light driven photocatalysts.	Dr. Carlos Bueno
Synthesis and photocatalytic applications of POMs@TiO <sub>2</sub> hybrid nanostructures.	Dr. Scott Mitchell Dr. Carlos Bueno