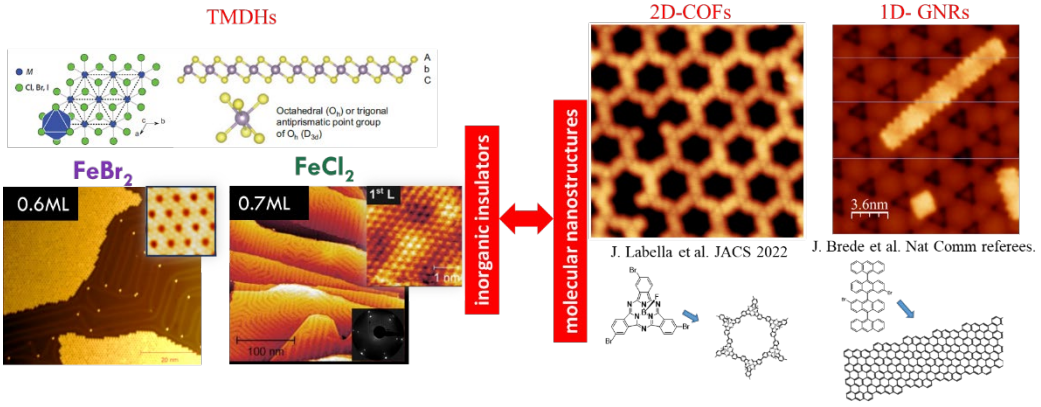
INSTITUTO DE NANOCIENCIA
Y MATERIALES DE ARAGÓN

PhD CONTRACT OFFER / OFERTA DE CONTRATO PREDOCTORAL

We seek highly motivated students holding a degree in Physics /Chemistry to fill a PhD position in Physics strongly focused towards Surface Science and Materials Science.

PhD project: 'QUANTUM PROPERTIES OF HYBRID ORGANIC-INORGANIC INTERFACES STUDIED BY SCANNING TUNNELING MICROSCOPY'

Ultrathin heterostructures at their thinness limit of the unexplored family of two-dimensional magnetic insulator layered materials -the transition metal di-halides (TMDHs)- combined with planar molecular structures fabricated with atomic precision. Study of their fundamental structural, electronic and magnetic properties focusing in two aspects: i) to elucidate whether the TMDH slabs isolate electrically the molecular structures as to induce quantum behaviour to make them serve as *quantum bits* or *quantum sensors*; ii) to determine how the *magnetism of the TMDH* influence the quantum states of the organic structures.



Requirements: You should hold a Master's degree (or equivalent) in Physics, Materials Science, Nanotechnology, or a related field. Excellent written and verbal communication skills in English. We greatly appreciate previous experience with UHV techniques, scanning probe methods, low-temperature setups, and scientific software packages (e.g., MATLAB, Python, Origin, Igor, etcetera).

Host group: The group combines world-class surface science methods methods (available at Laboratorio de Microscopias Avanzadas) with large experience at synchrotron facilities. The institute is in Zaragoza (population ca. 800,000) with flight and train connections to all major destinations.

Contract: Contract under FPI (Formación de Personal Investigador) program (call AEI-PID 2022). 4 years contract.

Applications: Contact the project PIs below with your CV, cover letter and transcripts of your Bachelor and Master degrees **before September 28th**.

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