



## PhD offer at INMA, Zaragoza (FPI of project PID2022-138750NB-C21).

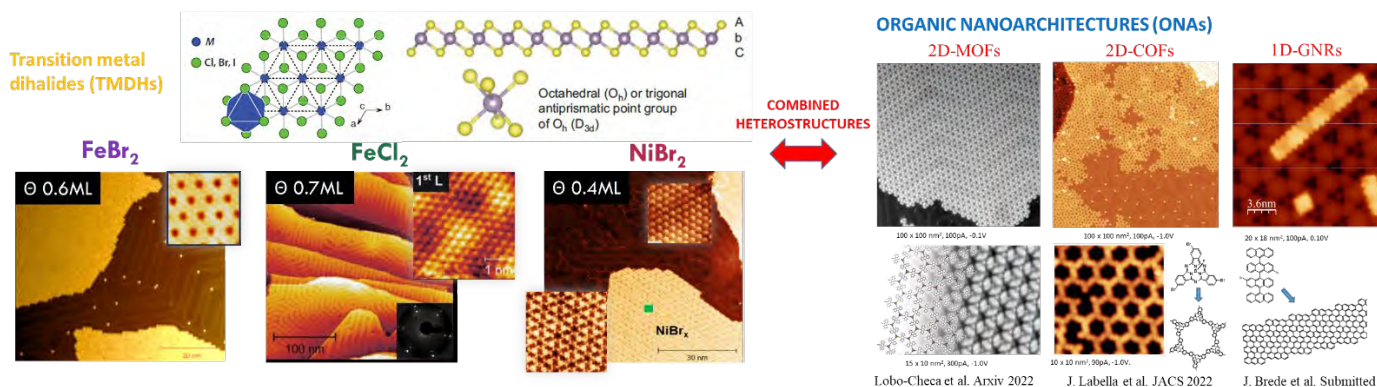
**TITLE:** *Quantum properties of hybrid organic-inorganic interfaces studied by STM*

**SUPERVISORS:** Drs. Jorge Lobo Checa & David Serrate

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We are seeking **highly motivated** candidates to fill a Ph.D. position in experimental physics based on surface science and Material Science. **Send us your CV, a cover letter stating your motivation and academic transcripts of your Bachelor and Master degrees.**

**Objective of the Ph.D. project:** To produce high quality 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 with atomically precise structure. The student will study the fundamental structural, electronic and magnetic properties of these heterostructures following two aspects: first, to elucidate whether the thinnest TMDH slabs retain their long-range magnetic order and exhibit robust insulating bandgap and, second, to determine how these properties affect the organic layers fabricated on top. The organic nanoarchitectures will be of different dimensionalities and their design flexibility will provide different fundamental quantum properties that are of fundamental interest.



**Host Group:** The successful candidate will work in a highly collaborative and interdisciplinary research environment. They will be continuously supervised by two senior scientists and will enjoy collaborative activities with other experts in the field. The host group combines various methods of probe microscopy and spectroscopy with a wide variety of synthesis and characterization techniques. The research institute is in Zaragoza (the fourth largest city in Spain) located practically in the middle of the three major economical regions of Spain (Madrid, Cataluña and the Basque Country).

**Requirements for the position:** As academic background, 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 any previous experience with ultra-high-vacuum techniques, scanning tunneling microscopy (STM), low-temperature experimental setups, and writing scientific software packages (e.g., MATLAB, Python, Origin, Igor, etcetera).