Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

icma
Instituto de Ciencia
de Materiales de Aragón

Instituto Universitario de Investigación
en Nanociencia de Aragón
Universidad Zaragoza

PhD opportunity

Topic:

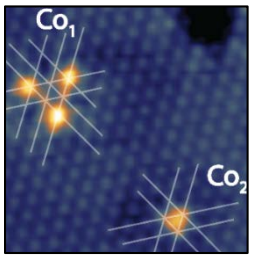
Transport properties of non-trivial 2D electronic states with nanoscale resolution

The Instituto de Ciencia de Materiales de Aragón (CSIC-Universidad de Zaragoza), the Instituto de Nanociencia de Aragón (Universidad de Zaragoza) and the Physikalisches Insitut (University of Würzburg) are looking for interested candidates to enroll in a joint PhD project. Upon completion of the program, the selected candidate will be awarded a **double PhD degree by the University of Zaragoza and the University of Würzburg**

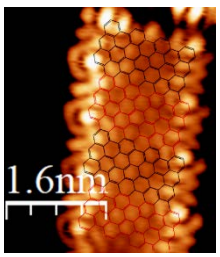
Keywords: Scanning Tunneling Microscopy; Molecular Nanoprobe; Surfaces States

Start Date: September 2018
Duration: 3 years
Gross Salary ZGZ: 17,500 €/year
Gross Salary Würzburg: 28,000 €/year

Funding institutions:
MINECO (MAT2016-78293-C6-6-R)
SFB 1170



Topological insulators



Graphene nanoribbons

Summary: The recently developed method in Würzburg University called MONA (MOlecular NAnoprobe), which combines elastic and inelastic STM techniques in a unique tool, allows us to study local electronic transport in nanosctructures with dimensions on the order of a few nm. We are going to apply this method to unveil the transport properties of several surfaces with technological interest, as the ones depicted by the side images.

Applicants should hold a degree in *Physics* or *Chemistry* and M.Sc. with a strong *Nanotechnology* background. Eligible candidates should contact one of the involved supervisors before the end of June.

Supervisors & contact:

- Dr. **David Serrate** (serrate@unizar.es), *ICMA (CSIC-University of Zaragoza)*
- Prof. **Ricardo Ibarra** (Ibarra@unizar.es), *INA&LMA, University of Zaragoza*
- Prof. **Matthias Bode** (bode@physik.uni-wuerzburg.de), *University of Würzburg*