



SEMINARIO

Micro and Nanofabrication at the Centre of Nanofabrication

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The Centre of Nanofabrication is a joint proposal between the IMDEA-Nanoscience and the Campus of Excellence UAM-CSIC to create a facility of excellence for the micro and nanofabrication of structures and devices based on a wide range of nanosciences such as 2D materials, nano-optics, photonics, radiation detectors, nano-magnetism, bio-chemistry, micro-fluidics, nems&mems, or nanostructured organic semiconductors; among others. After 5 years of hard work, this centre has been recently finished and since September 2014 is fully operational.

In the first part of this talk, I will present a brief history of the Centre of Nanofabrication and a summary of the micro and nanofabrication available resources as well as some examples of the ongoing research on several topics.

In the second part of the talk I will focus on the fabrication of devices onto 2D Materials, such graphene or molybdenum disulfide. In particular, I will present in a more detailed manner the latest results on direct e-Beam assisted patterning of few layer MoS₂ devices, for photonics and nano-optics applications.

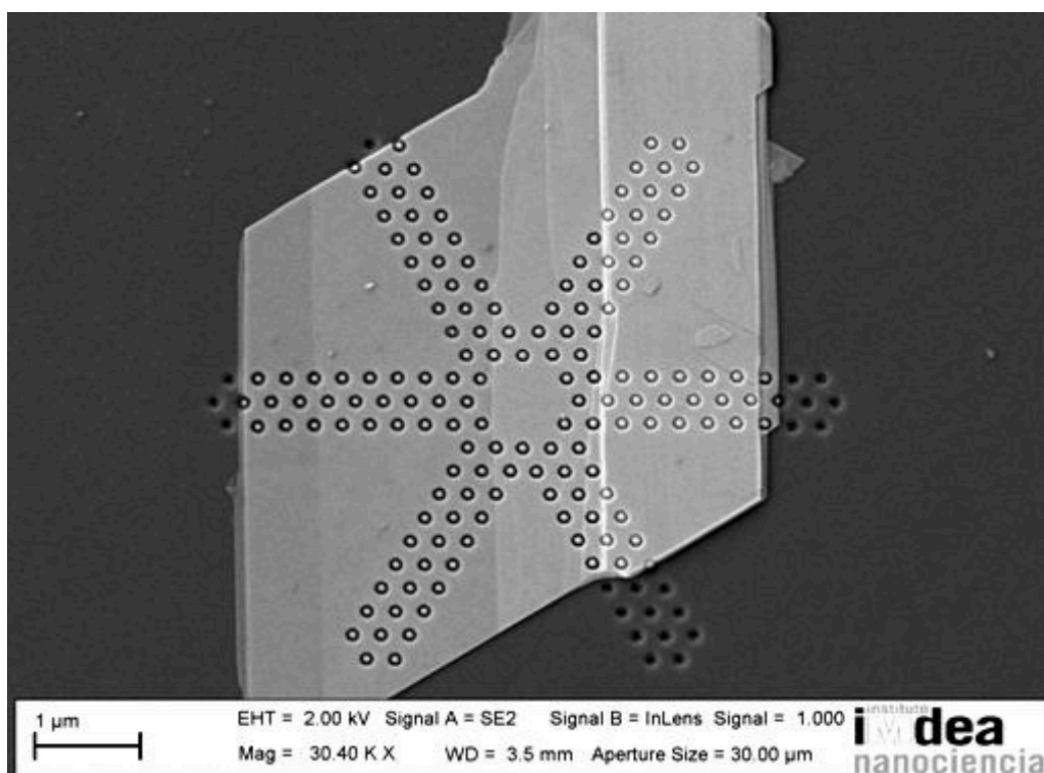


Figure 1: SEM image of a photonic structure fabricated by direct e-Beam assisted etching of a few layer MoS₂ flake deposited on SiO_x.