

**METAL-MOLECULE-METAL JUNCTIONS:
DEVELOPEMENT OF AN UHV NANOSTENCIL**

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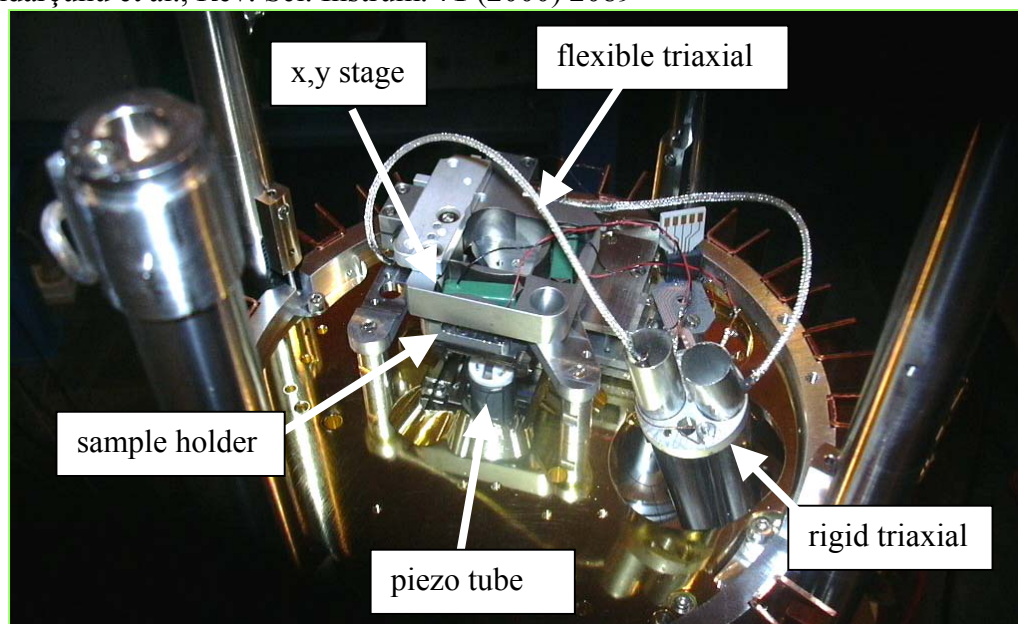
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We are developing an UHV dynamic nanostencil system [1] that will allow to fabricate electrodes separated by few nanometers on an insulating surface, to connect them with functionalized molecules, to characterize them in-situ with AFM and finally to measure *in-situ* the I(V) curves of the obtained nanodevices [2]. The device is based on a modified commercial UHV AFM. The first experiments are focalized onto the definition of a procedure for the reproducible UHV-fabrication of metallic wires on a monocrystalline surface. Ag/MoS₂ was chosen as testing system.

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[1] R. Lüthi *et al.*, Appl. Phys. Lett. **75** (1999) 1314

[2] T. Ondarçuhu *et al.*, Rev. Sci. Instrum. **71** (2000) 2089



Digital photo of the modified AFM head.