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Exploring electron transport through organic monolayers using conductive tip AFM techniques DENIS SCAINI, Synchrotron Trieste, Trieste, Italy; Department of Physics, University of Trieste, Trieste, Italy, MATTEO CASTRONOVO, Department of Physics, University of Trieste, Trieste, Italy, MARTINA DELL'ANGELA, Synchrotron Trieste, Trieste, Italy;, ROBERT HUDEJ, Synchrotron Trieste, Trieste, Italy; International School for Advanced Studies (ISAS), Trieste, Italy, LOREDANA CASALIS, Synchrotron Trieste, Trieste, Italy, GIACINTO SCOLES, Synchrotron Trieste, Trieste, Italy; International School for Advanced Studies (ISAS), Trieste, Italy; Princeton University, Princeton, NJ — We follow an alternative approach to the study of Metal-molecule-Metal junctions that uses a combination of two atomic force microscopy (AFM) techniques. We use Nanografting to build a nanopatch of the molecules of interest and a second made of a reference molecule into a hosting self assembled monolayer (SAM) typically made of alkanethiols. After the tip is changed to a conductive one CT-AFM is used to characterized the whole system recording, at the same time, the system topography. Some of the advantages of this approach are the possibility to build and study a wide range of different M-m-M junctions and the in-situ control of the quality of the monolayers and patches. Results will be presented on saturated and unsaturated thiols self-assembled and nanografted on Au(111) surfaces. The results will be compared with those obtained by Liang and Scoles at Princeton using similar techniques.

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