

O 48: Invited talk (Ruslan Temirov)

Time: Wednesday 15:00–15:45

Location: HE 101

Invited Talk

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Extending the scanning probe toolbox in a molecular playground — ●RUSLAN TEMIROV — Peter Grünberg Institute (PGI-3), Forschungszentrum Jülich, Germany — JARA-Fundamentals of Future Information Technology, Germany

Invented only a couple of decades ago, scanning tunnelling microscopy (STM) plays a prominent role in surface science today. One of the research fields in which the STM has spurred considerable progress is experiments with large organic molecules on surfaces. The complexity and versatility of the organic adsorption promises rich functionalities

for future applications, but at the same time it generates tough challenges for the employed experimental techniques. In this talk, several examples will be considered which demonstrate the potential of the STM applied to the studies of molecular structures down to the level of a single molecule. Used in conjunction with complimentary surface science techniques and theory, the STM conveys a detailed bonding picture of a large multifunctional organic molecule on a metal surface. It will be shown how the methodology of the STM can be extended towards resolving chemically complex structures as well as transport studies on molecular wire junctions with controlled geometry.