

## **STS of single atoms and molecules: From tunnelling to contact**

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### **Abstract :**

Using low-temperature scanning tunnelling microscopy and spectroscopy we investigate the conductance of adatoms and molecules on metal surfaces. Going beyond the tunnelling regime, we explore closer tip-sample distances in the point contact range where currents of several microamperes are passed through the tunnelling junction. The conductance of C<sub>60</sub> molecules, which are imaged at submolecular resolution, is found to be affected by the molecular orientation. We also find clear indication of heating owing to inelastic processes. Molecular switching is observed from planar molecules. At single Co atoms we observe a Kondo effect and find that the characteristic Kondo temperature is modified by the angstrom-proximity of the STM tip.