Passing current through a single molecule: conductance, inelastic effects and thermopower

Nicholas Agrait

Universidad Autónoma de Madrid, Madrid, Spain e-mail: nicolas.agrait@uam.es

Using a scanning tunneling microscope (STM) we explore the transport properties at the single molecule level in ambient conditions and at low temperatures. In this talk I will present our experimental results on the conductance single molecules, paying special attention to inelastic scattering effects in magnetic and non-magnetic molecules. I will also present our recent experiments on the thermoelectric effects in single molecules.