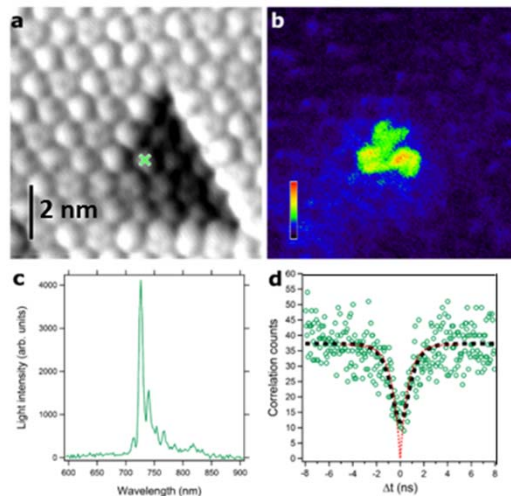


Physikalisches Kolloquium

Di 12.11.19
15:15 Uhr
14:45 Uhr, Kaffee/Tee
R 513



Dr. Klaus Kuhnke
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Stuttgart



What can time-resolved light detection tell us about the dynamics below the tip of a scanning tunneling microscope?

STM is a well-established technique to image surface topography with Ångström resolution (a) and to map the local density of electronic states. By measuring also the light emitted from the tunnel junction, it becomes possible to spatially (b), spectrally (c), and temporally (d) characterize local luminescence sources: The figure to the left shows a nanometer-sized single photon emitter (X-trap) on a thin molecular C60 film.

I will give an introduction to STM-induced luminescence and discuss nanosystems providing various kinds of photon time correlations reaching from the millisecond to the picosecond time scale.