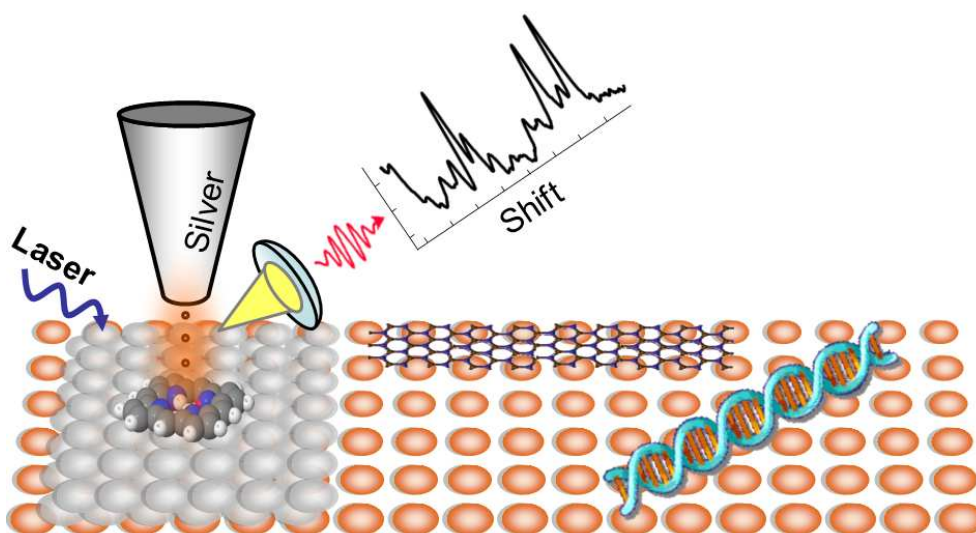


Post-doc position in:

Optical spectroscopies at the single-molecule level.

Raman and low-temperature fluorescence spectroscopies are powerful optical approaches to gather detailed chemical, structural or environmental information on organic systems. Conversely, low-temperature scanning tunneling microscope enables imaging objects with atomic resolution but lacks chemical sensitivity. Recently, two approaches have been reported that aim at combining the spatial resolution of the STM with the chemical sensitivity of optical vibronic spectroscopy, namely tip-enhanced Raman spectroscopy (see *Nature* 498, 82 (2013)) and STM-induced fluorescence (see our *PRL* 118, 127401 (2017)). Indeed, both methods reported on vibronic spectroscopy with sub-molecular spatial resolution. The aim of the project is to combine these approaches, to compare their respective potential, and to establish the foundation of a new kind of optical microscopy allowing a chemical identification of a species with atomic-scale spatial resolution.



We are looking for a highly motivated post-doc candidate with (ideally) a strong background in low temperature STM and in optical spectroscopy. The project will take place in Strasbourg (France) under the guidance of Guillaume Schull. It offers an opportunity to work on a very active field of nanoscience in one of the worldwide leading team combining LT-STM and optics. The post-doc should start by the end of the year and for a duration of up to three years.

For further information please contact: Guillaume Schull

Institute for Physics and Chemistry of Materials of Strasbourg (IPCMS).

Group webpage: <http://www-ipcms.u-strasbg.fr/stmipcms/>

Personal webpage: http://www.ipcms.unistra.fr/?page_id=9705&lang=en

Phone: (33) 3 88 10 70 22