



UNIVERZA V NOVI GORICI
Vipavska cesta 13, 5000 Nova Gorica

The University of Nova Gorica (Slovenia) – Laboratory of Quantum Optics is seeking a postdoctoral researcher in the field of pump-probe spectroscopy.

Job Description:

The University of Nova Gorica is currently implementing a new state-of-the-art light source, named CITIUS, for ultrafast science, generating tunable, intense, femtosecond pulses in the spectral range from IR to XUV. The XUV pulses are produced (in the range 14-80 eV) by laser-induced high-order harmonic generation in gas (HHG). This radiation is monochromatized by a time-preserving monochromator, allowing one also to work with high-resolution bandwidth selection. The tunable IR-UV pulses are generated (in the range range 0.4-5.6 eV) by an optical parametric amplifier. The IR-UV and XUV pulses follow different optical paths and are eventually recombined on the sample for pump-probe experiments.

The experimental station includes: an ARTOF 10K (VG-Scienta) Time of Flight energy electron analyzer, for angle and time resolved photoemission; a cryogenic manipulator He closed circuit, T_{\min} on sample 15 K, 5 degrees of freedom; a preparation chamber with conventional tools for sample preparation (heating stage up to 1000 degrees, ion sputtering, evaporators). The facility also includes an independent system for conventional XPS (with a monochromatized X-ray source) and ARPES with a He discharge lamp.

The researcher we are looking for will:

- contribute to the commission of the CITIUS experimental station;
- assist CITIUS users during experiment preparation and during experimental sessions;
- have the chance to develop her/his original research line in the field of material science.

The source CITIUS is operated by the Laboratory of Quantum Optics (<http://www.ung.si/en/research/laboratory-of-quantum-optics/>). The latter has well established collaboration activities with several groups working at the FERMI free-electron laser (<http://www.elettra.trieste.it/lightsources/fermi.html>) and at the Elettra Synchrotron (<http://www.elettra.trieste.it/lightsources/elettra.html>) in Trieste (Italy). Part of the activities will be carried out in the framework of the project CENILS (<http://cenils.eu/>).

The hired researcher will have the possibility to join present collaborations, as well as to develop new links with the local, national and international scientific communities.

Envisaged experiments will include both material characterization through photo-physical reaction and the study of intra-molecular processes in isolated species. In this context, the selected candidate will have the freedom to propose and develop his/her own scientific ideas.

Qualifications:

- A PhD in Physics, Chemistry, Material Science or equivalent degree
- Proven ability to promote and perform independent work in a group-oriented research environment
- A distinguished publication record
- Very good oral and written communication skills in English

The initial contract duration will be one year, with possible further extension.

For more information, write an email to: giovanni.de.ninno@ung.si

The application must include:

- a motivation letter
- two letters of recommendations
- CV including two references
- a list of relevant publications

The deadline for the application is July 15, 2014. Applications should be sent to the following addresses:

Giovanni De Ninno, giovanni.de.ninno@ung.si, Tea Stibilj Nemec, tea.stibilj.nemec@ung.si.