



POST-DOCTORAL POSITION AT THE JEAN LAMOUR INSTITUTE

Tribological properties of complex low-dimensional systems

The post-doctoral candidate will join the 'Surface and Metallurgy' group of the Jean Lamour Institute, which brings together more than 20 outstanding teams who develop frontier research in material sciences using state-of-the-art facilities (<http://ijl.univ-lorraine.fr/en/a-la-une/>).

The group focuses on the understanding at the atomic scale of the surface structure and properties of new materials called *Complex Metallic Alloys*. The group is also part of large collaboration at the European level within the European C-MAC network (see www.eucmac.eu), gathering leading teams in the field of science and nanoscience on complex alloy surfaces.

Complex Metallic Alloys are intermetallics characterized by large unit cells containing hundreds or thousands of atoms and best described by a cluster substructure. *Quasicrystals* - ordered materials lacking the translational periodicity of regular crystals - are the ultimate case, for which the unit cell is of infinite dimensions. The surfaces of such materials are used as templates to grow *self-organized molecular films* with novel structures under ultra-high vacuum conditions¹.

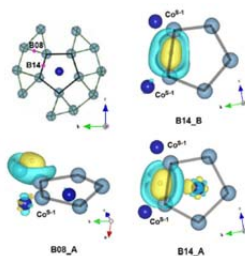
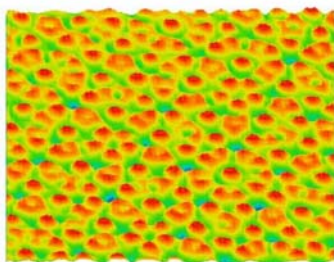
We are looking for an enthusiastic and self-motivated post-doctoral person able to enjoy scientific work working independently as well as in team. The successful candidate will develop atomic scale study of the adhesion and friction properties of 2D molecular films as a function of their structural complexity, from simple closed-packed structures to long-range quasiperiodic structures. All experiments will be carried out on state-of-the-art experimental platforms equipped with AFM and STM microscopies and much more.

Applicants should have a PhD in a relevant physics, chemistry or material science discipline and should have a previous experience with scanning probe techniques and ultra-high vacuum environment. Applications including your full CV, publication list, should be sent electronically.

Contact person: Vincent Fournée. vincent.fournee@univ-lorraine.fr.

Website : <http://ijl.univ-lorraine.fr/en/research/department-cp2s/metallurgy-and-surfaces/>

The position covers a period of 1 year, starting in October. Salary: ca. €30 000 /year gross.



¹ V. Fournée, E. Gaudry, J. Ledieu, M. C. de Weerd, D. Wu, T. A. Lograsso. ACS Nano, 2014, 8 (4), pp 3646–3653.