



**Dr. Laurent Nittler,**

## **Research Associate in the X-Ray Photoelectron Spectroscopy**

The position is occupied from 14.11.2014

### **Fields of Interest:**

In the EAgLE project, Dr. Laurent Nittler will be in charge to follow the installation of the modern high resolution X-ray and UV photoelectron spectrometer based on VG Scienta R3000 XPS/UPS/ARPES analyzer. He will present lectures and seminars for the staff and PhD students to introduce this new analyzing technique at the IF-PAN. Furthermore he will join the currently running research projects and use this new spectrometer to characterize variety of innovative materials. He will design protocols for elemental and chemical characterization of studied materials to customize them with the possible studies applying photoelectron spectroscopy

### **Academic Degrees:**

2006 - 2011 Ph.D. in applied science - Université catholique de Louvain, Belgium  
2004 - 2005 Master in applied science (DEA) - Université catholique de Louvain, Belgium  
1997 - 2003 Dipl. Physicist - Universität Karlsruhe (TH), Germany

### **Academic Experience:**

2011 - 2014 PostDoc at the Research Centre in Physics of Matter and Radiation - Laboratoire Interdisciplinaire de spectroscopie électronique (PMR - LISE - University of Namur) for the projects:

- *Miroled*: Development of OLED lighting on metals - Tasks: Elaboration and characterization of thin films on various substrates
- *Gazton*: Gas treatment by plasma technique for environmental application - Tasks: Study of gas conversion in low pressure inductively coupled plasma
- *Biose*: Development of optical sensor for medical diagnostics - Tasks: Plasma deposition and characterization of thin films on various substrates
- *Various*: Service analysis for industrial contacts, instrument development, trainings various instruments

### **Selected Publications:**

- Phys. Rev. Lett. 93 (2004) 128303: F.-Q. Xie, L. Nittler, Ch. Obermair, Th. Schimmel: *"Gate-controlled atomic quantum switch"*
- Surf. Interface Anal. 44 (2012) 1072-1075: L. Nittler, A. Delcorte, P. Bertrand, H.-N. Migeon : *"Morphology study of small amounts of evaporated gold on polymers"*
- Surf. Interface Anal. 45 (2013) 18-21: L. Nittler, A. Delcorte, P. Bertrand, H.-N. Migeon : *"Insights into the yield enhancement and ion emission process in metal-assisted SIMS"*
- J. Phys. D 47 (2014) 065203: S. Abou Rich, T. Dufour, P. Leroy, L. Nittler, J.-J. Pireaux, F. Reniers: *"LDPE films treated by an atmospheric Ar-O<sub>2</sub> post-discharge: functionalization, etching, degradation and partial recovery of the native wettability state"*
- Appl. Phys. Lett. 105 (2014) 183104: A. Felten, D. McManus, C. Rice, L. Nittler, J.-J. Pireaux, C. Casiraghi: *"Insight into hydrogenation of graphene: effect of H plasma chemistry"*