

Dr. Damien AUREAU

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Biography

Degrees: Diploma of Chemical Physics specialist, School of Chemistry, Chimie Paristech (<http://www.enscp.fr/>); Master of research in "Material Science and Nano-objects" of UPMC in 2005; Doctor of Physics of Polytechnique school (<http://www.polytechnique.edu>) in 2008, with honors for his work on the silicon/organic layer interfaces, based on the chemical stability and the electronic quality of the interface between the substrate and the organic molecules covalently attached.

He worked in several laboratory in the world, the IMTA in Mexico, the University of Turku in Finland, the Helmholtz Zentrum in Berlin, Germany, the University of Cork, Ireland and the University of Texas at Dallas, USA.

In collaboration with the professor Yves Chabal, Laboratory for Surface and Nanostructure Modification (Dept. of Materials Science of Engineering), he developed a new field of reactivity on surfaces, providing nanopatterning of silicon surfaces by methoxy species grafted by wet chemistry. This discovery opened the field to new insights in terms of reactivity of small organic entities on organized surfaces.

He is now permanent researcher for the CNRS in the Lavoisier Institute in the University of Versailles, in the "electrochemistry and physical-chemistry of surfaces" group of Arnaud Etcheberry and Anne-Marie Gonçalves. He is participating in the CHARMMMAT Labex, the Ile-de-France Photovoltaic Institute (www.ipvf.fr) and the NEXT-PV international laboratory with the University of Tokyo. He extended his field of expertise into the field of surface modification of oxides and different III-V's semiconductors, by chemistry, electrochemistry and physical methods.. He is a specialist of the different techniques used to study those interfaces, as AFM, XPS, LEIS, SEM-EDX, IR, contact angle measurement, ellipsometry, photoluminescence, C-V measurements.

He is the co-author of 2 book chapters, gave several talks in international conferences and published about 50 papers.