

Consortium

Institut Jean Lamour

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The « Surfaces and Spectroscopies » group in Institut Jean Lamour has an experimental setup unique in France composed of a molecular beam epitaxy chamber, a high resolution photoemission analyzer (Scienta SES 200) and a low temperature STM (5K-Omicron microscope). This equipment allows to prepare and characterize the surfaces and to study them in situ. In addition, we have an association contract with the CASSIOPEE beamline at SOLEIL synchrotron.

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Synchrotron SOLEIL

A. Taleb-Ibrahimi, F. Bertran, P. Le Fèvre

The CASSIOPEE beamline is well suited for photoemission spectroscopy in the 10-1500 eV energy range with an energy resolution ranging from 1 meV (20 eV) to 40 meV (1000 eV) and with adjustable polarization (linear or circular). Preparation of substrates and growth of thin films, structural and chemical characterizations are made in a MBE chamber. High resolution valence band and core-level spectroscopy or spin-polarized photoemission spectroscopy can be carried out.

[CASSIOPEE web page.](#)

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Laboratoire de Physique des Solides

A. Zobelli, A. Glotter, O. Stephan

The LPS STEM group is a leading electron microscopy group, specialized in EELS. Their NION UltraSTEM microscope is equipped with a Cs correction system (allowing 1 Å resolution) and a new CCD camera yielding EELS acquisition four times more sensible than commercial microscopes. The LPS group has also been pioneered in the characterization of carbon nanostructure and its defects. Moreover, it has also all the numerical tools to interpret the STEM images or spectra.

[STEM web page.](#)

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Institut Néel

C. Berger, D. Mayou

The Institut Néel has a long experience on epitaxial graphene, which started with the unique on-site collaboration of Claire Berger with Georgia Tech. With Walt de Heer, she pioneered graphene as an electronic material. The experimental team and Didier Mayou's theory team have a long and fruitful track record of collaboration on electronic structure and transport properties since 1990. The team has a long experience with transport and electronic properties and has been involved with graphene and carbon nanotubes since a decade.

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