

Philippe Leclere

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Philippe Leclère received a Ph.D. in Physics from the University of Liège (Belgium) in 1994. He joined the group of Jean-Luc Brédas at the University of Mons in February 1995 as a research fellow. From 2001 to 2004, he worked as a research associate and served as a research coordinator at the Materia Nova Research Center. During this period, he spent one year (2003) in the group of E.W. (Bert) Meijer at the Eindhoven University of Technology (TU/e) in the Netherlands. In October 2004, he became Research Associate and in October 2014 Senior Research Associate of the Belgian National Fund for Scientific Research (FRS - FNRS) in the group of Roberto Lazzaroni at the University of Mons (UMONS). In October 2020, he became Research Director of FRS-FNRS. In October 2021, he became Professor at UMONS creating and heading the Laboratory for Physics of Nanomaterials and Energy (LPNE) at the Physics Department. In October 2022, he became Full Professor.

His research is aiming at the characterization by means of scanning probe microscopy (SPM) and spectroscopy techniques of the morphology and the nanoscale properties of organic and hybrid systems including polymer blends, nanocomposites, block copolymers, liquid crystals, and supramolecular (nano)structures (build by self-assembly of functional (macro)molecules). These systems are mainly studied for their use in organic electronics and energy harvesting devices, in smart coatings as well as biomimetic polymer-based materials. He is also active in the development and validation of novel SPM techniques and methodologies to quantitatively determine mechanical, thermal, electrical, and the “coupled” (such as thermo- or piezo-electrical) properties of polymeric and hybrid materials at the nanoscale.

Title of the conference:

Toward the quantitative mapping of the mechanical properties of polymeric materials by dynamic AFM: beyond the observables!