

CEIPEX BUT TOPIC 2

Položka / Field	Obsah / Content
CEIPEX RESEARCH TOPIC LEVEL 1	Advanced Nano & Micro technologies
CEIPEX RESEARCH TOPIC LEVEL 2	Nanostructures at surfaces
NAME OF THE RESEARCH GROUP	Molecular Nanostructure at Surfaces (RG-1-13)
SUPERVISOR	Prof. Jan Čechal
POTENTIAL CO-SUPERVISOR	Prof. Radek Marek (MUNI), Prof. Erik Glowacki
PROPOSED RESEARCH TOPIC TITLE	Tunable and robust charge injection layers
RESEARCH TOPIC DESCRIPTION	Charge injection layers are monolayer-thick molecular layers that decrease the contact resistance between organic semiconductors and metal electrode. Within the project, we will develop robust charge injection layers that allow independent tuning of the work function in the range of 1 eV, yet remain robust against mixing with OS up to 450 K. The project involves design, synthesis, layer preparation, and testing.
KEYWORDS	organic electronics, organic semiconductors, charge injection layers, surface analysis, synthesis, devices.
INTERDISCIPLINARY DIMENSION	Surface science and characterization - organic synthesis and product characterization - electronic devices
WEBPAGE OF THE RESEARCH GROUP	https://www.ceitec.eu/molecular-nanostructures-at-surfaces/rg260