Ongoing work: atomic force microscopy (AFM), low-energy electron diffraction (LEED), and IR spectroscopy (IRS)

- AFM and LEED to characterize diamond surface morphology and crystallinity

- in-situ infrared spectroscopy of metal film formation on these surfaces to prove the formation of interface compounds and development of the metal-film conductivity in relation to morphology and crystallinity
Photoelectron spectroscopy (PS)

- Ultraviolet PS allows to determine the electronic structure of the metal-diamond interface.
- Barrier heights are influenced by many parameters: metal, surface termination, post-metallization annealing, surface defects, doping...
- Most existing studies were carried out on doped diamonds.

Need to perform UPS on metallized E6 diamonds.

Barrier heights of different metals on clean and oxygen terminated diamond.