

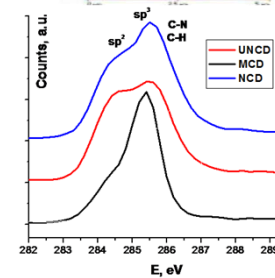
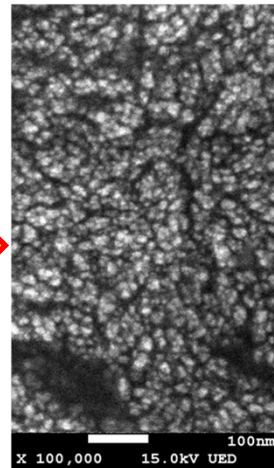
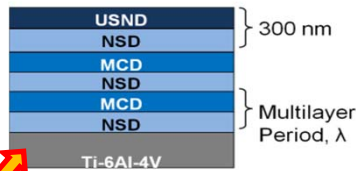
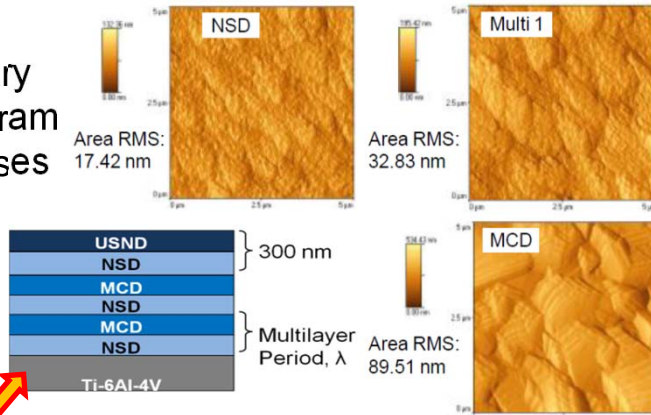
Materials World Network in NanoStructured Carbons (DMR-Award #0806521)

PI: Andrei V. Stanishevsky, University of Alabama at Birmingham

This project is a part of an international interdisciplinary research and training program in plasma-assisted processes of nano-structured carbon-based materials.

Major results:

- Multilayer micro-/nano-diamond coatings with increased fracture toughness and hardness up to 70 GPa;
- Controllable plasma surface modification and functionalization of nanodiamond (NCD) films and particles;
- CVD synthesis of nano-composites based on NCD and other carbon nanoforms.



Network members: Technical University of Lodz, Poland (primary); ParisTech - Cluny Center, France; Koszalin University of Technology, Poland, Aalto University, Finland.



Fifteen UAB students participated in research and training activities in Europe.

International conferences organized/co-organized: VaPSE 2009 Czech Republic (2009); 5th Wide Bandgap Materials – Progress in Synthesis and Applications Conference (2010); 7th Diamond and Related Films Conference (2010); 1st and 2nd US-Poland Workshop on Nanoscale Diamond Materials (2009 and 2010); NANOSMAT-6 (2011) (all in Poland), NANOSMAT-USA (2012).

