

NANOCRAFT

exploring nanospace

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User oriented research for technical and biological surfaces

As spin off from Max-Planck-Institute of Colloids and Interfaces (MPI-KGF) we take on compact projects of research about Nano-, Bio- and Surface Technology. With costly developed methods in SEM and SPM, NanoCraft is unique in imaging surfaces conventional (topographic, elastic) as well as chemical sensitive down to molecular scale.

Chemical Force Microscopy in combination with Digital Pulsed Force Mode

NanoCraft (Research & Development) combined the self developed Chemical Force Microscopy with the Digital Pulsed Force Mode, this opened for the first time the possibility of chemical and also biological force mapping of technical and biological surfaces on nano- and μ -scale. It is now possible to determine and image several interaction forces like H-Bonds, van der Waals, hydrophobic, ionic and polar interactions. Parallel to Adhesion Force Imaging it is also possible to image further physical properties like elasticity and viscosity. With the options of LFI (Low Force Imaging), HRI (High Roughness Imaging) and the possibility of measuring in different media, the investigation of interfaces is getting a new dimension of quality. This unique analytical service is offered exclusively by NanoCraft in the frame of mission oriented research.

Imaging of physical and chemical properties with SEM, AFM & CFM on nano and μ m-scale:

- Topography / roughness
- Chemical contrasts (CH₃, NH₂, OH, COOH, CF₃,...)
- Biological interactions (enzymes, antibodies...)
- Intermolecular forces
- Adhesion forces/adhesion energy
- Contrasts of elasticity
- Electrical and magnetic interactions
- van der Waals Forces