

## Polymeric Coatings

### Surface functionalization / modification

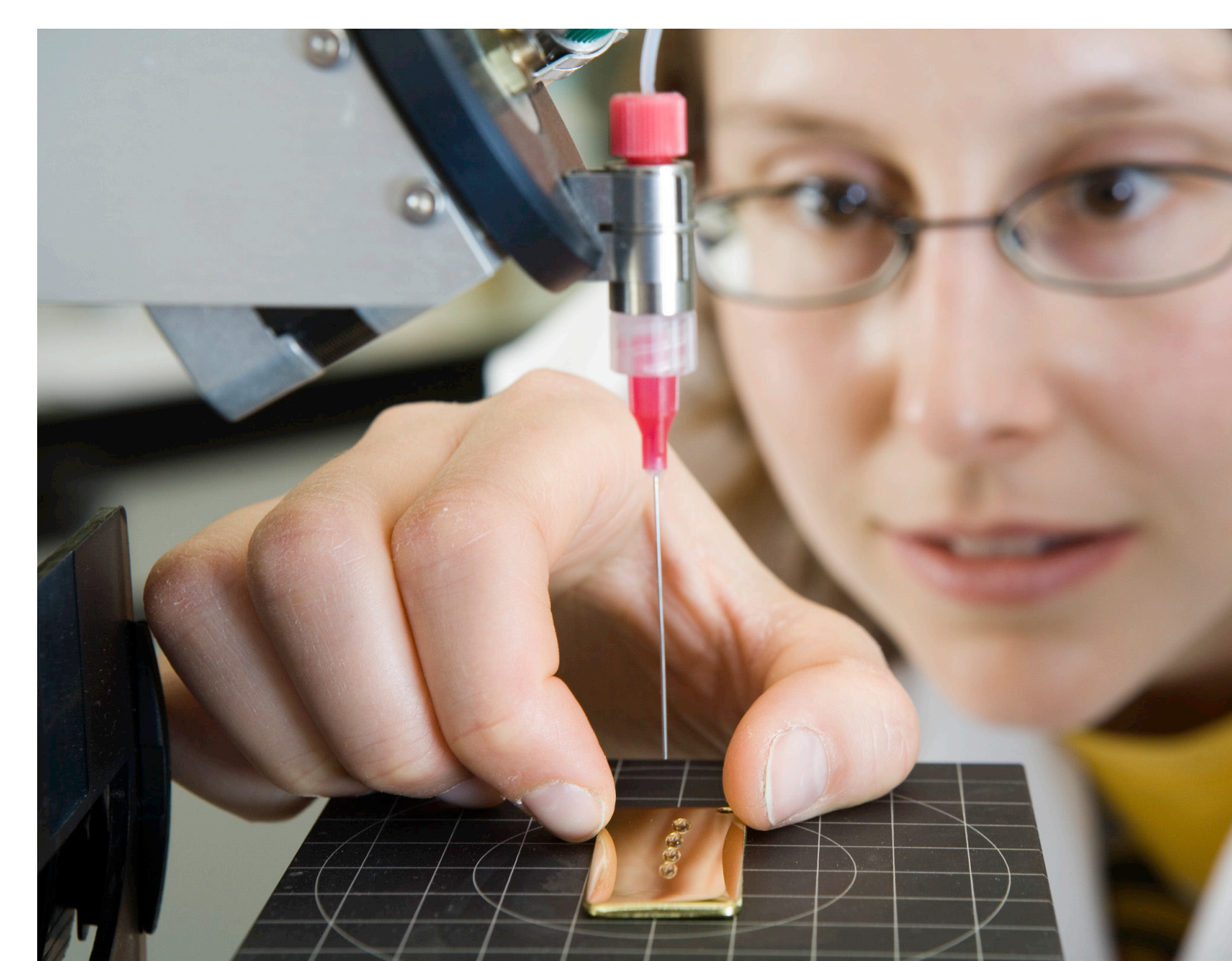
- Fabrication / formulation of functional coatings
  - Sol-gel coatings
  - Polymeric coatings (paints, laquers)
  - Hybrid-coatings
  - Monomolecular layers
- Surface modification of pigments / fillers
- Adhesion promotion to difficult substrates

### Coating characterization

- Surface analysis and characterization
- Adhesion tests
- Thermal analysis of polymers and coating-materials
- Development of application-oriented tests

### Applications

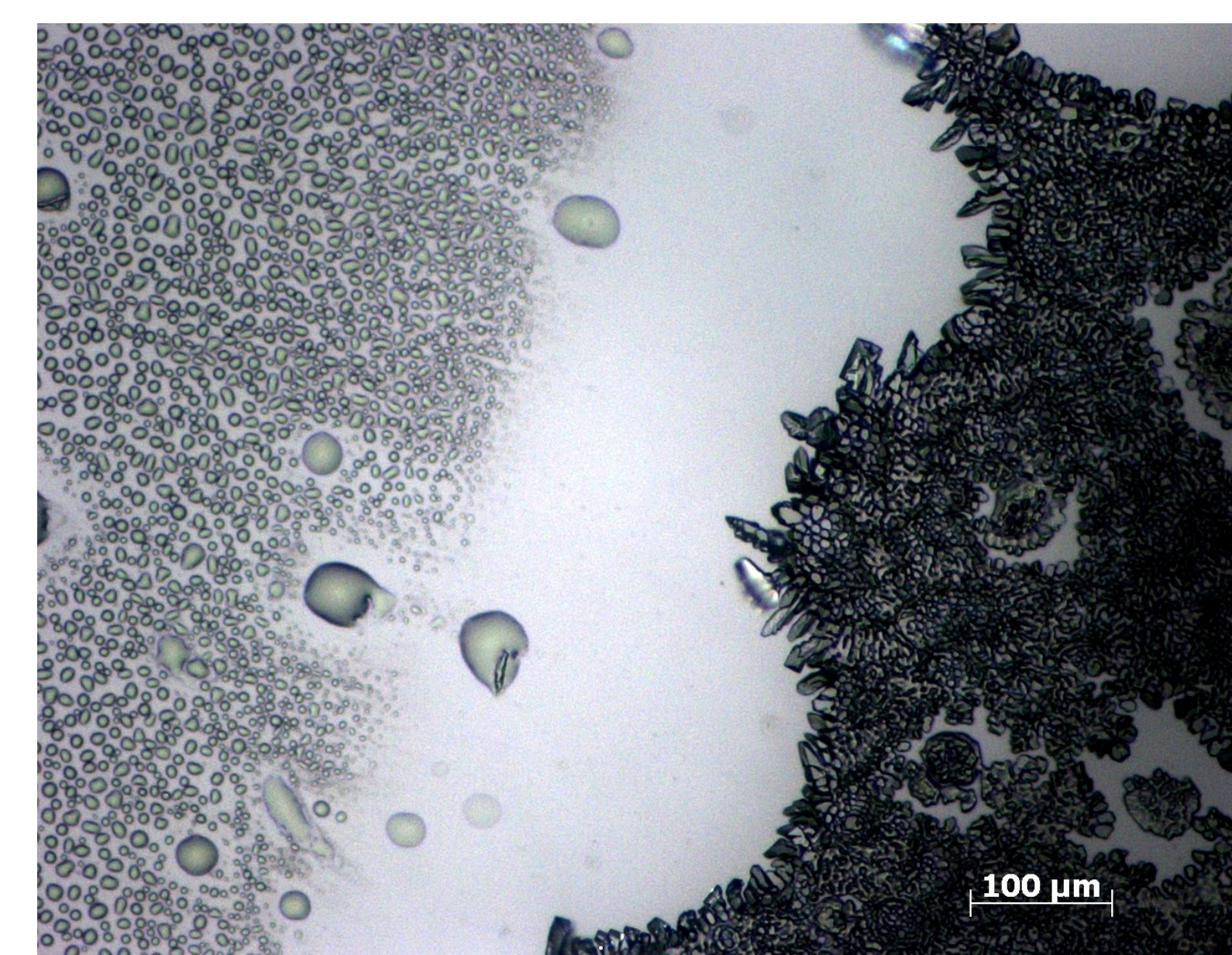
- Hydrophobic coatings
  - Non-stick / easy-to-clean coatings
  - Anti-freeze coatings
- Hydrophilic coatings
  - Anti-fogging coatings
  - Anti-calcification coatings
- Scratch-resistant coatings
- Anti-microbial coatings
- Anti-slip coatings
- Dispersion of nanoparticles



Determination of hydrophobicity of a nano-coating



Elemental analysis via XPS



Anti-freeze coatings  
(left: coated, right: uncoated)

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