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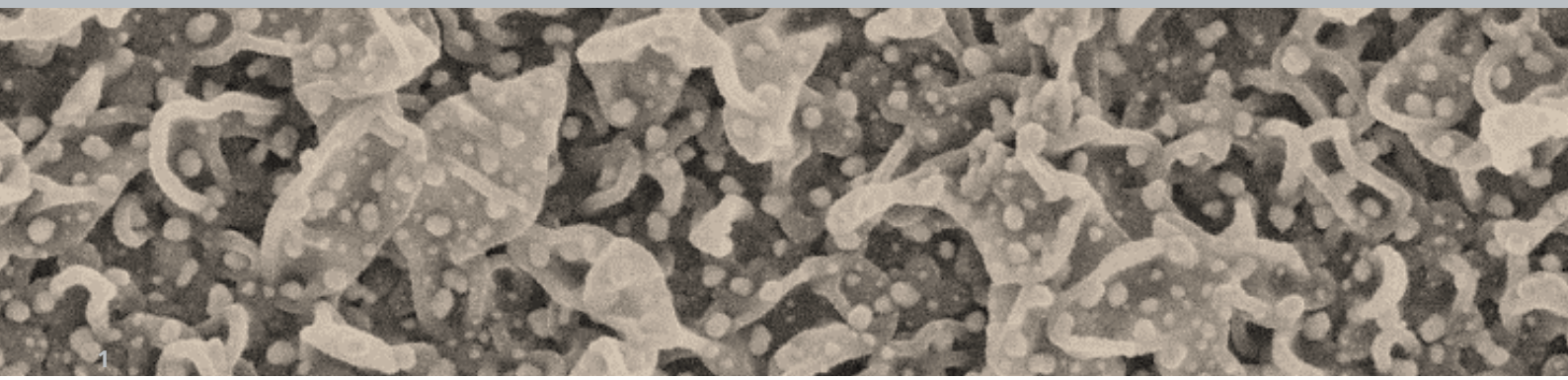


1 *Surface of a thin film composite membrane with characteristic ridge-and-valley structures and deposited silver nanoparticles (SEM, 30000 times magnification)*

# SURFACE ANALYSIS OF MATERIALS FOR MEDICINE AND THE ENVIRONMENT


**Fraunhofer Institute for Microstructure of Materials and Systems IMWS**

Walter-Huelse-Str. 1
06120 Halle (Saale)
Germany

Contact:
Dr. Andrea Friedmann
Telephone: +49 345 5589-258
andrea.friedmann@imws.fraunhofer.de

www.imws.fraunhofer.de


## Background

The chemical and physical properties of surfaces determine how they interact with their environment. Functional characteristics like wettability, biocompatibility and adhesion properties, as well as resistance against harmful environmental stress, depend on surface properties. Comprehensive surface analysis is, therefore the key to understanding, designing and assuring the quality of biofunctional surfaces and coatings for a target application.

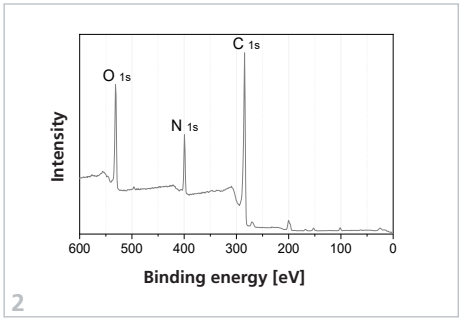
## Technology

We use the following spectroscopic methods to determine the elemental compositions and binding sites on a surface, as well as for the detection of functional groups:

- Infrared spectroscopy
- Raman spectroscopy
- X-ray photoelectron spectroscopy (XPS)

We offer the following microscopic and surface analytical methods for the investigation of the micro- and nanostructure, analysis of the roughness, and physical-chemical properties of surfaces:

- Scanning electron microscopy (SEM)
- Atomic force microscopy (AFM)
- Profilometry
- Contact angle analysis




2 *XPS spectrum of a filtration membrane surface with element- and bond-specific peaks.*