The NMI is an application-oriented oriented research institute that combines scientific knowledge to the economy accessible

- Application-oriented research and development at the interface of biosciences and materials science.
- Efficient, broad range of services for SMEs and major customers.
- Flexible structures, highly qualified, interdisciplinary teams, state-of-the-art equipment and quality management for exceptional results.
- Consulting, measurement, testing, analysis, studies and implementation of innovative solutions.
- Realization of goal-oriented project networks in a strong network with companies, research institutions and universities from various industries, particularly in the life sciences sector.
- The nucleus of successful start-ups.
- Established in 1985 as a charitable foundation under civil law.
- 190 employees.
- Subsidiary company NMI TechnologieTransfer GmbH (NMI TT GmbH).

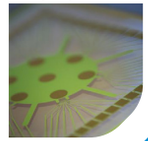
NMI
Natural and Medical Sciences Institute

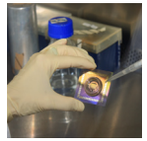
NMI TT
Technologie Transfer GmbH

With our focus on solution-oriented, applied research and development, we quickly achieve concrete results. Convince yourself our broad, interdisciplinary expertise for your requirements.

NMI creates results.

» Micro- and nanosystems for life science applications





PHARMA AND BIOTECHNOLOGY

BIOMEDICAL ENGINEERING

SURFACE AND INTERFACE TECHNOLOGY

TECHNOLOGY DEVELOPMENT PRODUCTION

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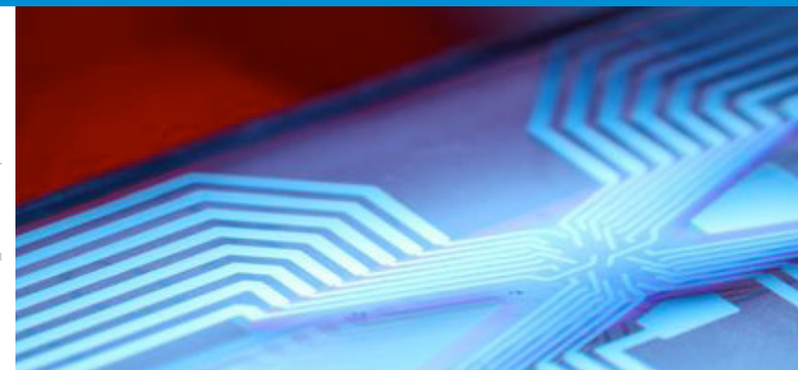


NMI 2018_mikro-nanosysteme

NMI
Natural and Medical Sciences Institute

Design, development and manufacture of microelectrode and microfluidic systems made of biostable and biocompatible materials.

NMI TT
Technologie Transfer GmbH

micro >> nano >> *bio*

>> 1

- Application-specific and knowledge-based conception of product ideas
- „Multi-physics“ simulations of microfluidic systems and microelectrode arrangements

>> 2

- Micro- and nanostructured thin-film systems, electrochemical deposit

  on processes
- Structured biofunctionalization of microsystems
- Bonding techniques
- Biostable insulation layers

>> 3

- Thin-film processes in the clean room (photo, electron beam, shadow mask lithography, PVD, PECVD, nanoimprinting)
- Production of microfluidic functional samples with CAD/CAM micromilling robots
- Microassembly of 3D components
- Electrical/fluidic contacting
- Encapsulations

>> 4

- Microscopic and spectroscopic analysis of surface topography and chemistry
- Preparation and analysis of biological/technical interfaces
- Electrical and electrochemical characterization
- Investigating the long-term stability of materials and components

>> 5

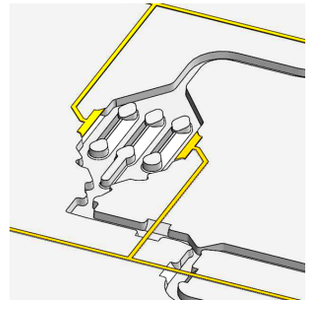
- System characterization under application conditions
- Biological functional assays (cell culture, biochemistry, electrophysiology)

>> 6

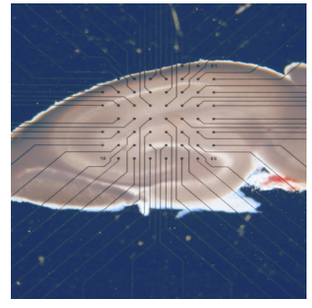
- Cost-optimized, standardized processes for small series production
- Integration of biomaterials and surface functionalization in the production process
- Encapsulation of implant systems
- Product-oriented quality assurance

1 Concept and modeling → 2 Technology and development → 3 Samples and prototypes → 4 Test and analysis → 5 Application → 6 Production

Lab-on-a-chip systems for drug testing and diagnostics

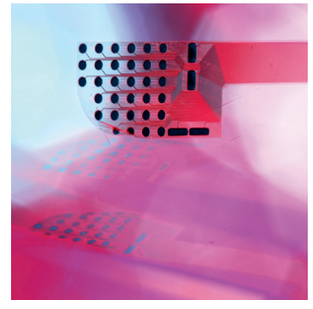


Microelectrode arrays for electrophysiology and neurotechnology



Biosensors for diagnostics and medical technology

Intelligent implants for the eye, ear and brain



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