# NMI stands for applied research and development at the junction of life sciences and material sciences



- Application-oriented research and development, consultation, measurements, testing, analyses, studies and implementation of innovative solutions.
- Wide, efficient service spectrum for SMEs and large customers.
- Flexible structures, highly qualified, interdisciplinary teams, state-of-the-art equipment and quality management for outstanding results.
- Realisation of goal-oriented projects with a strong network of industrial partners, universities and research institutes with various specializations, especially the life sciences.
- Incubator for new companies.
- Founded in 1985 as a non-profit foundation.

■ 190 employees. Subsidiary: NMI Technologie Transfer GmbH (NMI TT GmbH).

With our focus on solution-oriented, applied research and development, we achieve concrete results quickly and efficiently. Convince yourselves of our wide, interdisciplinary competence in meeting your demands.

NMI - achieving results.

## >> Micro- and nanosystems for life science applications



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Design, development and fabrication of microelectrode arrays and microfluidic systems using biostable and biocompatible materials



### micro >> nano >> bio

>> 1

- Application-oriented and know-how based concepts for product ideas
- "Multi-physics" simulations of microfluidics and microelectrode arrays

>> 2

- Micro- and nanostructured thin film systems, electrochemical deposition technology
- Biofunctionalized patterning of microsystems
- Bonding technology
- Biostable insulating layers
- Microelectrodes

Design and modelling

Technology and development

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**>>** 3

- Thin film technology in the clean room (optical, electron beam and shadow mask lithography, PVD, PECVD, nano imprinting)
- Fabrication of microfluidic functional models using CAD/CAM micro milling
- 3D micro assembly
- Electrical and fluidic connections
- Encapsulation

Samples and

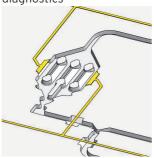
prototypes

>> 4

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

Testing and analytics

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



Microelectrode arrays for electrophysiology and neurotechnology



>> 5

Application-oriented characterization of systems

>> 6

- Biological functional assavs (cell culture, biochemistry, electrophysiology)

dized processes for small batch productions Integration of biomate-

Cost effective, standar-

- rials and surface functionalization into the production process
- Encapsulation of implant devices
- Product oriented fabrication processes and quality management

Application

Production

Biosensors for diagnostics and medical technology

Intelligent implants for eye, ear and brain

