

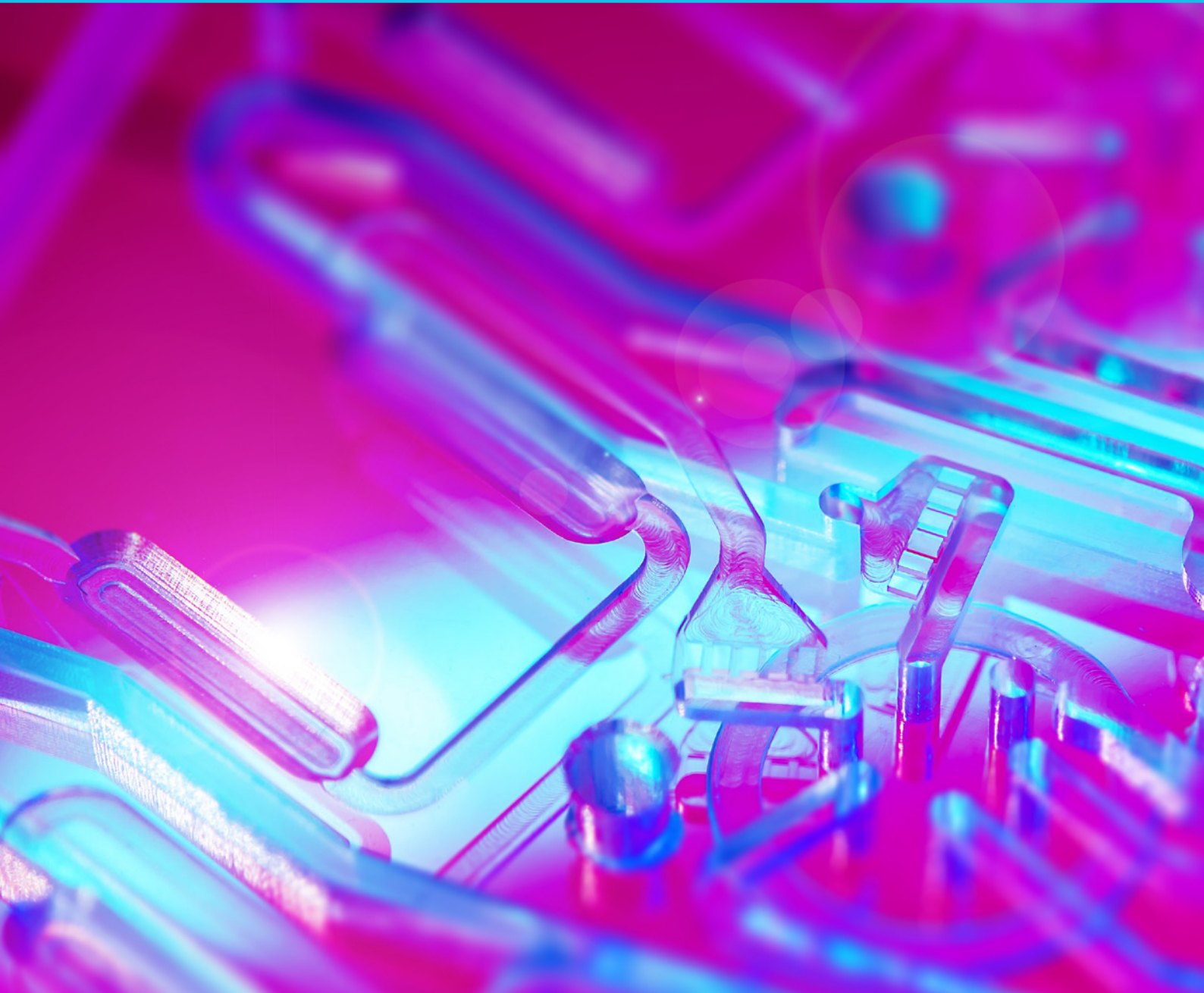


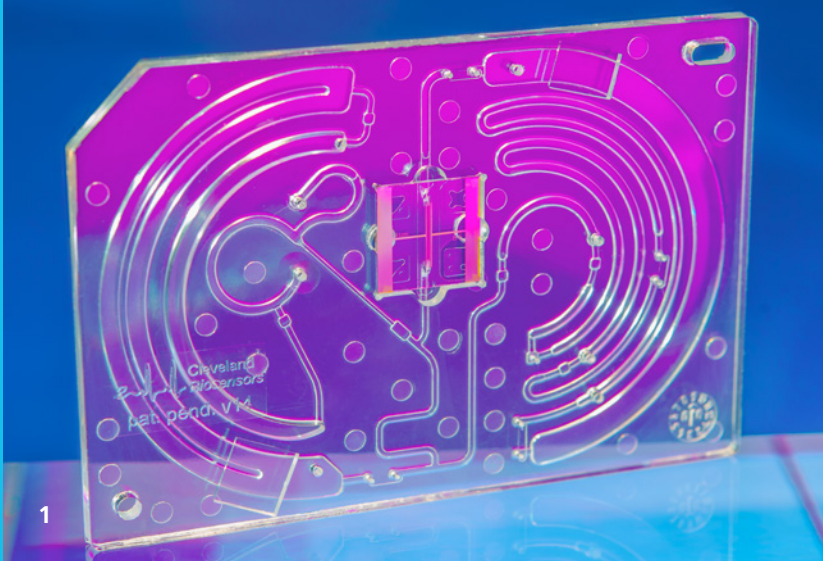
Fraunhofer

ICT – IMM

FRAUNHOFER INSTITUTE FOR CHEMICAL TECHNOLOGY ICT, BRANCH ICT-IMM

MICROFLUIDIC ANALYSIS SYSTEMS





BRINGING YOUR IDEAS TO LIFE

Excellence in microfluidic systems development

The expertise of Fraunhofer ICT-IMM for industrial development is based on

- more than 20 years of experience in the integration of microfluidic systems as well as a broad technology basis,
- interdisciplinary teams covering the full range from physicists to engineers, chemists, biochemists, and molecular biologists.

We provide

- a wide range of prototyping and testing facilities from electronics and mechanical workshops all the way to dedicated labs for microfluidics and bio-applications,
- patented microfluidic solutions.

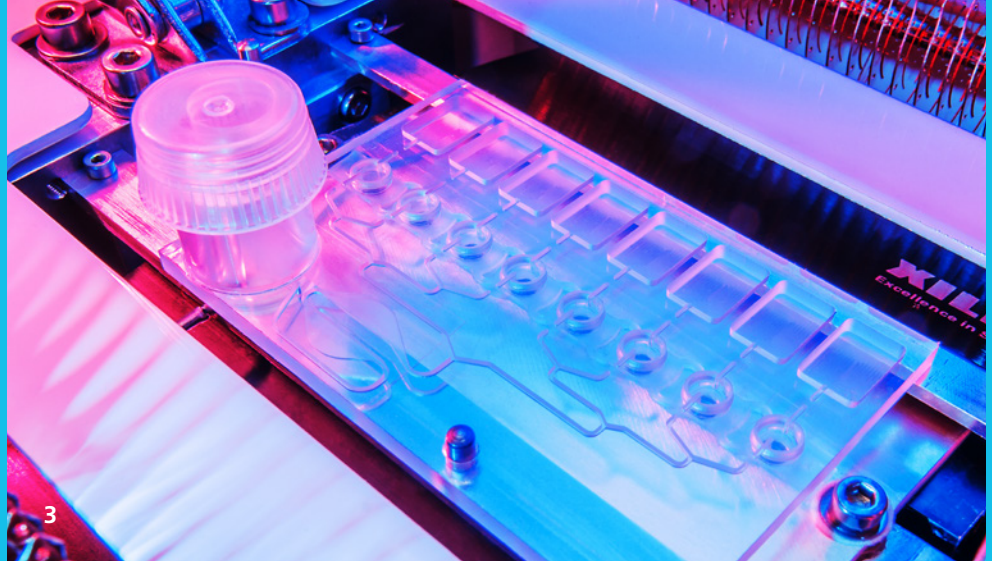
We develop integrated, automated microfluidic systems and devices for industrial application in the field of

- medical diagnostics,
- environmental monitoring,
- (bio)-security applications,
- food quality control,
- industrial analysis and process control.

Our core competencies



- 1 Microfluidic chip for toxin analysis.
- 2 Valves for fluidic handling.
- 3 Integrated microfluidic system.



SOLUTIONS FOR MICROFLUIDIC SYSTEMS DEVELOPMENT

Applications

- Cancer diagnostics
- DNA/RNA amplification
- Pathogen detection
- CTC extraction
- Flow cytometry
- Single cell dispensing
- Toxin detection
- Blood analysis
- Gluten extraction from flour
- Gas monitoring
- Oil monitoring
- Microparticle sizing
- Titration
- Aerosol detection

Modules

- Electronic control units (e.g., temperature, flow)
- Light barriers
- Flow sensors
- Microelectrodes
- Multichannel fluorescence detection
- Microcentrifuge
- Microactors (e.g., pumps, mixers, valves)
- Filtration
- Assay/Kit and reagents (development, integration, storage)
- Capillary electrophoresis
- DNA/RNA extraction, purification, amplification
- Plug detection
- Cell detection

Fabrication

- Mechanical processing (e.g., UPM, EDM, CNC milling)
- Laser material processing
- Thin film technology
- Thick film technology
- Injection molding
- Polymer technology
- Rapid prototyping (incl. small scale production)
- Electronics
- Sensor integration
- Packaging
- Assembly
- Microfluidic chip bonding

Contact

Dr. Karin Potje-Kamloth
Head of Department
Microfluidic Analysis Systems
Phone +49 6131 990-247
karin.potje-kamloth@imm.fraunhofer.de

Fraunhofer ICT-IMM

Carl-Zeiss-Straße 18-20
55129 Mainz | Germany
info@imm.fraunhofer.de
www.imm.fraunhofer.de