

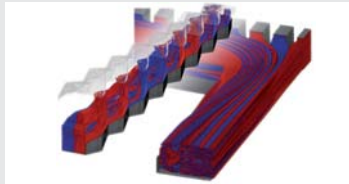
GET INTO THE FLOW

> navigate to success with microfluidic systems by imm



■ Get into the Flow

Simulation



CFD Simulations of interdigital and split-and-recombine micro mixers

Purification

Filtration



Sliding transport module for non-conventional micro fluidic processing incl. filtration



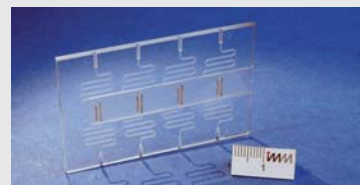
Purification and isolation of mRNA from cervical smears for HPV-detection

Lysis

Isolation

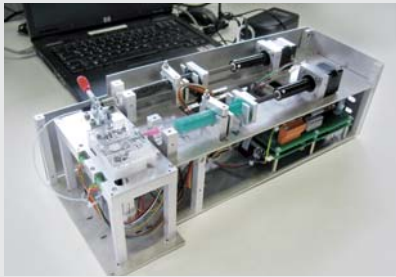


Purification and isolation of DNA from whole blood based on silica beads

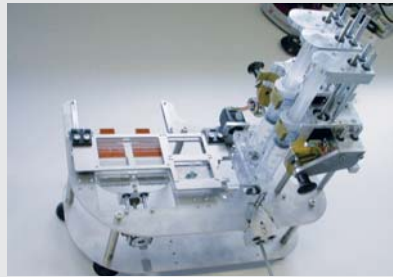


Fast electrochemical lysis of cells

ANALYTICAL SYSTEMS



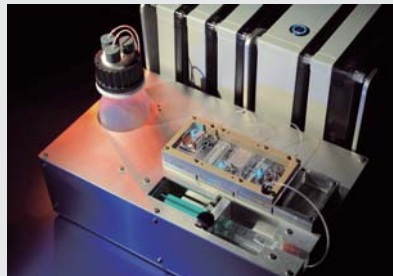
Fully automatic preparation of complex samples incl. smears



Detection of circulating rare tumor cells in cancer diagnostics and therapy control



Isolation and analysis of fetal cells from maternal blood



Microsystem for fully automated DNA-preparation from air samples

Active Valves

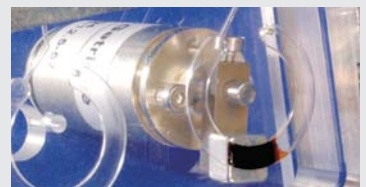


Turning valves integrated on chip



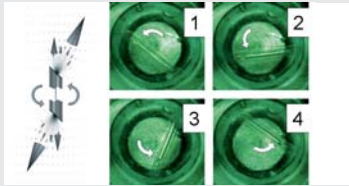
Main board for control logic

Electronics



On-chip pulsation-free displacement pump based on ferrofluid movement

Get into the Flow



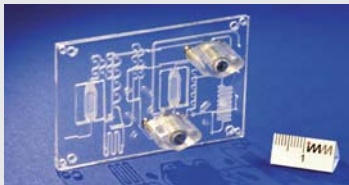
Acoustic induced mixing. CFD model and experiment of acoustic stirring

Metering & Mixing



Fluidic light barrier

Process Control



rt-MLPA on chip for multiplex amplification of mRNA (cancer cell detection)

Amplification



5x parallel transmission and fluorescence detection cell

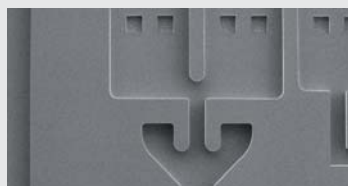
Detection



Custom-made syringe pump

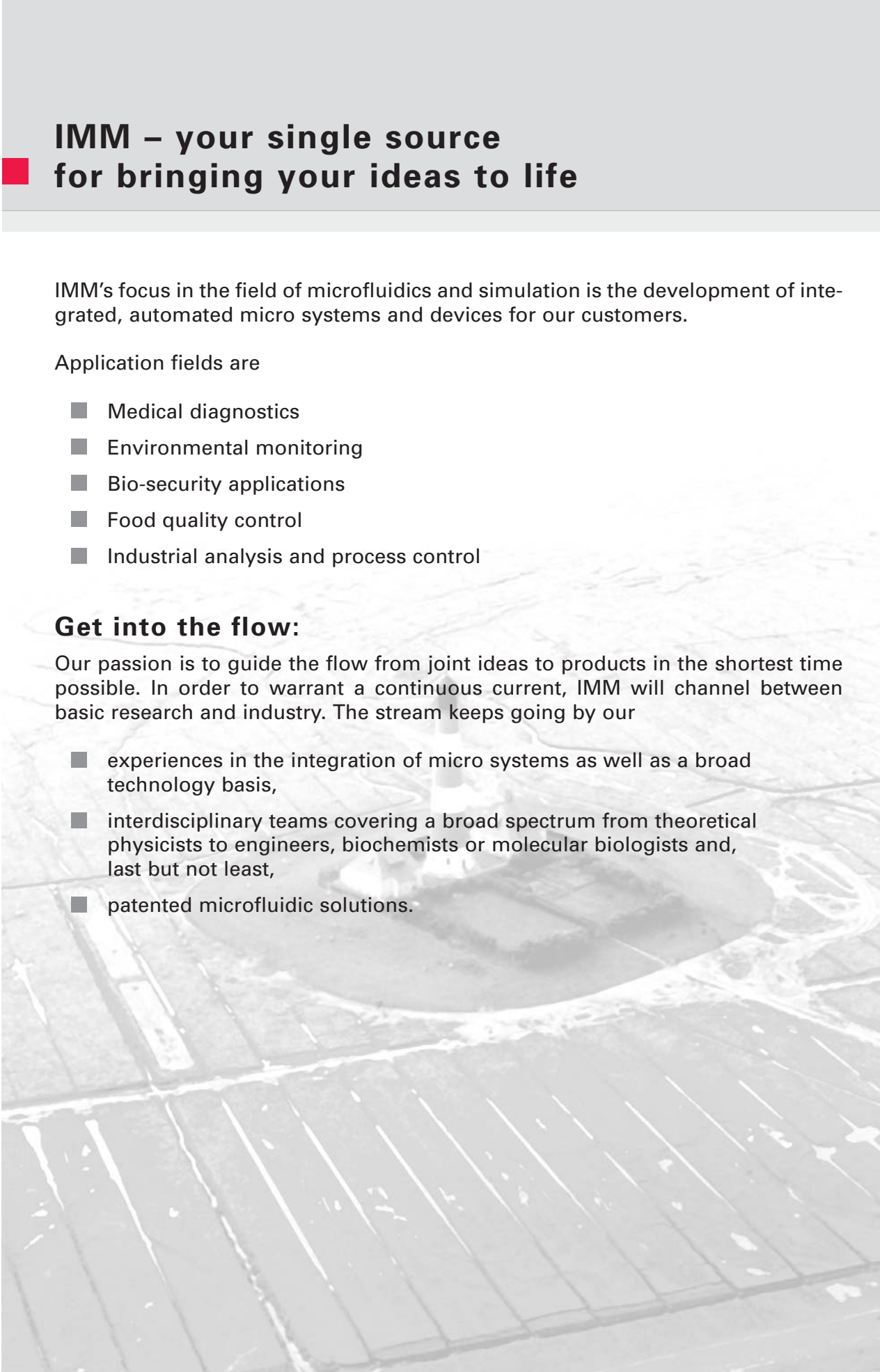
Mechanics

Passive Valves



Structures using capillary forces for fluid handling on chip

Pumps



IMM – your single source for bringing your ideas to life

IMM's focus in the field of microfluidics and simulation is the development of integrated, automated micro systems and devices for our customers.

Application fields are

- Medical diagnostics
- Environmental monitoring
- Bio-security applications
- Food quality control
- Industrial analysis and process control

Get into the flow:

Our passion is to guide the flow from joint ideas to products in the shortest time possible. In order to warrant a continuous current, IMM will channel between basic research and industry. The stream keeps going by our

- experiences in the integration of micro systems as well as a broad technology basis,
- interdisciplinary teams covering a broad spectrum from theoretical physicists to engineers, biochemists or molecular biologists and, last but not least,
- patented microfluidic solutions.

Partners



For further questions please do not hesitate to contact us:

Dr. Marion Ritzi-Lehnert
Head of Fluidics and Simulation
Phone: +49 61 31 / 990 - 399
Phone: +49 61 31 / 990 - 205
Ritzi@imm-mainz.de

Institut für Mikrotechnik
Mainz GmbH
Carl-Zeiss-Straße 18-20
55129 Mainz
Germany
info@imm-mainz.de
www.imm-mainz.de

 Institut für
Mikrotechnik
Mainz GmbH