

# Expertise

## Drug delivery systems

- Controlled delivery systems
- Extra- and intracorporeal devices
- Reusable and disposable concepts



## Microvalves and micropumps

- Application-specific development
- Biomedical and analytical applications



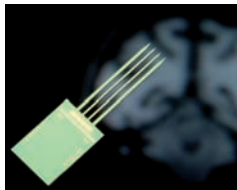
## Integrated microfluidic structures

- Mixing, focusing, ...
- Handling of cells
- System solutions with pumps, valves, ...



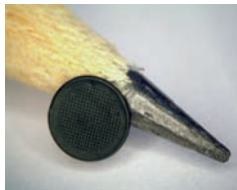
## Tools for neuroscience research

- Silicon microprobes
- Drug delivery and electrophysiological recording
- Miniaturized pumping modules



## Microactuators

- Osmosis
- Electroactive polymers (EAP)
- Swelling hydrogels



## Medical sensor systems

- Inertial sensors to detect body movements
- Flow sensors for gases and liquids
- RFID technology for medical devices



## Customized documentation according to regulatory bodies

# Contact

For any further questions please contact:

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Our service philosophy is:  
„From idea to production - one-stop services“

Since 1988, HSG-IMIT with its business units Sensors & Systems, Microfluidics, Lab-on-a-Chip and Prototyping & Production offers substantial R&D services in the field of Microsystems Technology. This portfolio is completed by a close cooperation with the Department of Microsystems Engineering (IMTEK) at the University of Freiburg.



HSG-IMIT is member of the  
Innovationsallianz Baden-Württemberg



HSG-IMIT is  
certified according  
ISO 9001 : 2008

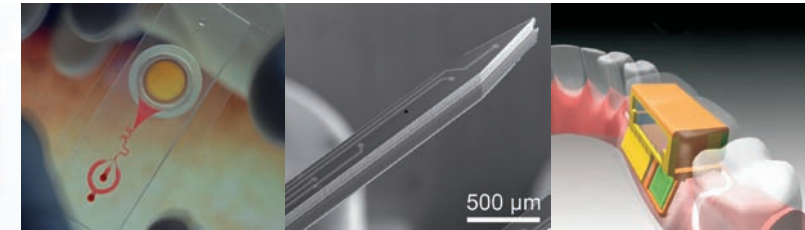
## HSG-IMIT

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# R&D Services



Consulting • Development • Prototyping

# Micro Medical Technology



# Micro Medical Technology

**M**icro Medical Technology at HSG-IMIT focuses on the development of novel microsystems and components for innovative medical and pharmaceutical products. Based on our know-how in medical technology as well as microsystems and microfluidics, we realize completely new approaches or enhance existing products with microtechnologies. Typically, we envisage smaller, smarter, lighter, cheaper, and more power efficient solutions.

## Available technologies:

- Silicon micromachining
- Polymer hot embossing and injection molding
- PDMS replica molding
- Precision and micromechanics
- Analog and digital electronics

HSG-IMIT provides individual system solutions and accompanies you with R&D and consulting from the first idea up to the complete product.

# Our Services

**A**s a professional partner, we work for industrial companies and support research institutions with our expertise. To guarantee seamless transfer of development results and compliance with medical regulatory affairs, we pursue:

- Quality management (ISO 9001 : 2008)
- Risk management
- Usability engineering

In detail, we offer the following services which can be flexibly integrated in your product development chain:

- Modeling, simulation & construction
- Systems engineering
- Concept and feasibility studies
- Product development
- Prototyping & small volume series production, e.g. for clinical trials
- Device test & characterization
- Product and process qualification

# Your Advantage

**T**ake advantage of our expertise and incorporate our know-how in your development process. This will enable you to place new innovative products faster and more cost-effective on the market.

## Expertise in microsystems and microfluidics

- Enhancement of existing products
- Development of new products

## Simple and fast access to key equipment

- Cleanroom fabrication (germ-reduced & particle controlled)
- High-tech instrumentation pool

## Flexible R&D support

- ISO 9001 : 2008 certified R&D partner
- Opportunity to participate in publicly funded R&D programs

