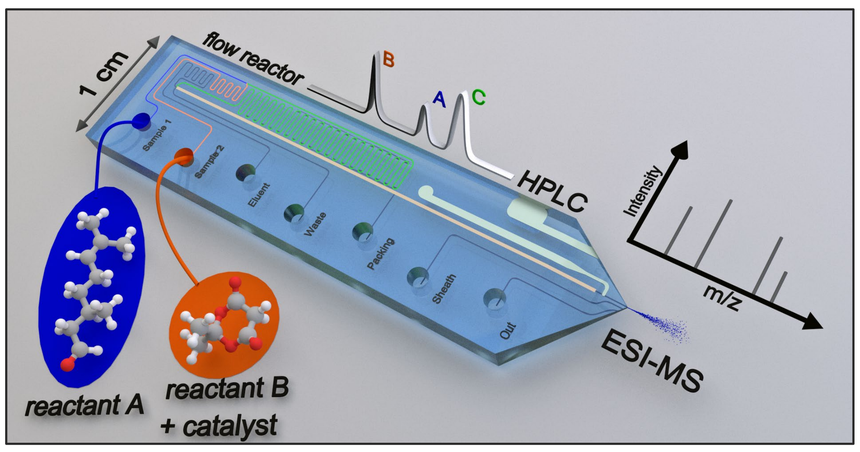
Belder Research Group: Chemical Micro Laboratories

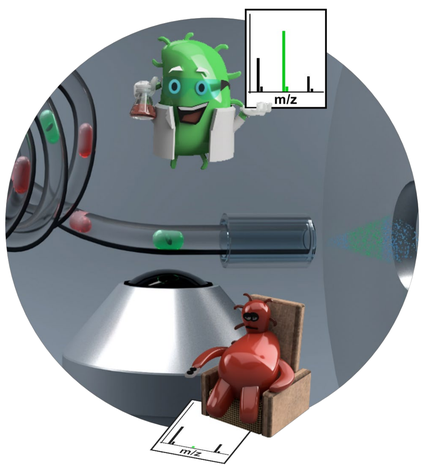
UNIVERSITÄT LEIPZIG

The Belder group focuses on research in lab-on-a-chip technology as an enabling science in chemistry. In this context, a number of different topics relating to this multidisciplinary research field are in the focus of the current academic research. The Belder lab is known for miniaturized separation techniques such as chip electrophoresis and chip-HPLC. Another important research topic is the development of novel detection techniques such as the coupling of microfluidic chips with mass spectrometry and ion mobility spectrometry, or based on optical techniques such as fluorescence, IR-, or Raman microscopy. A particular focus in recent years has been on integrated chip laboratories that combine chemical reactors and analysis units on one chip for applications like:

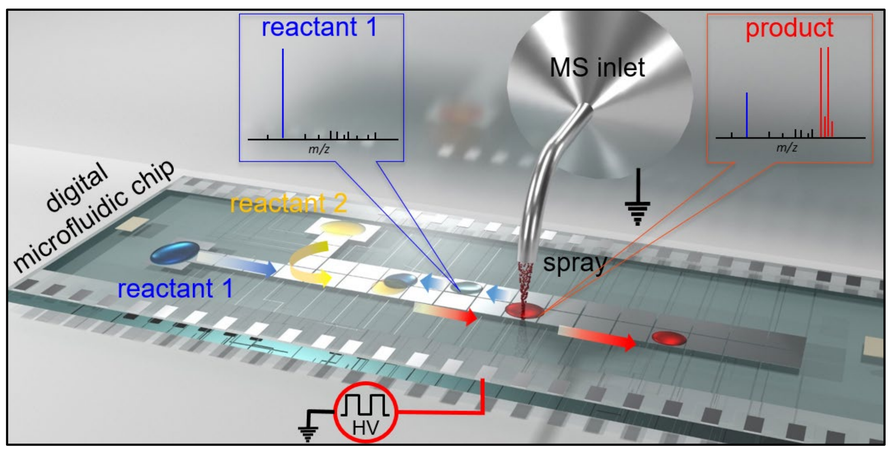
Detlev Belder



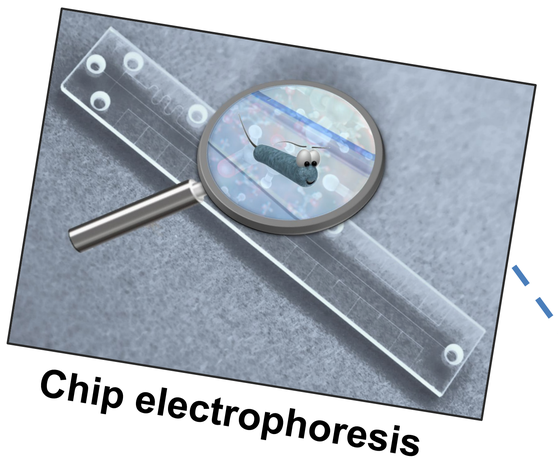
Catalyst screening



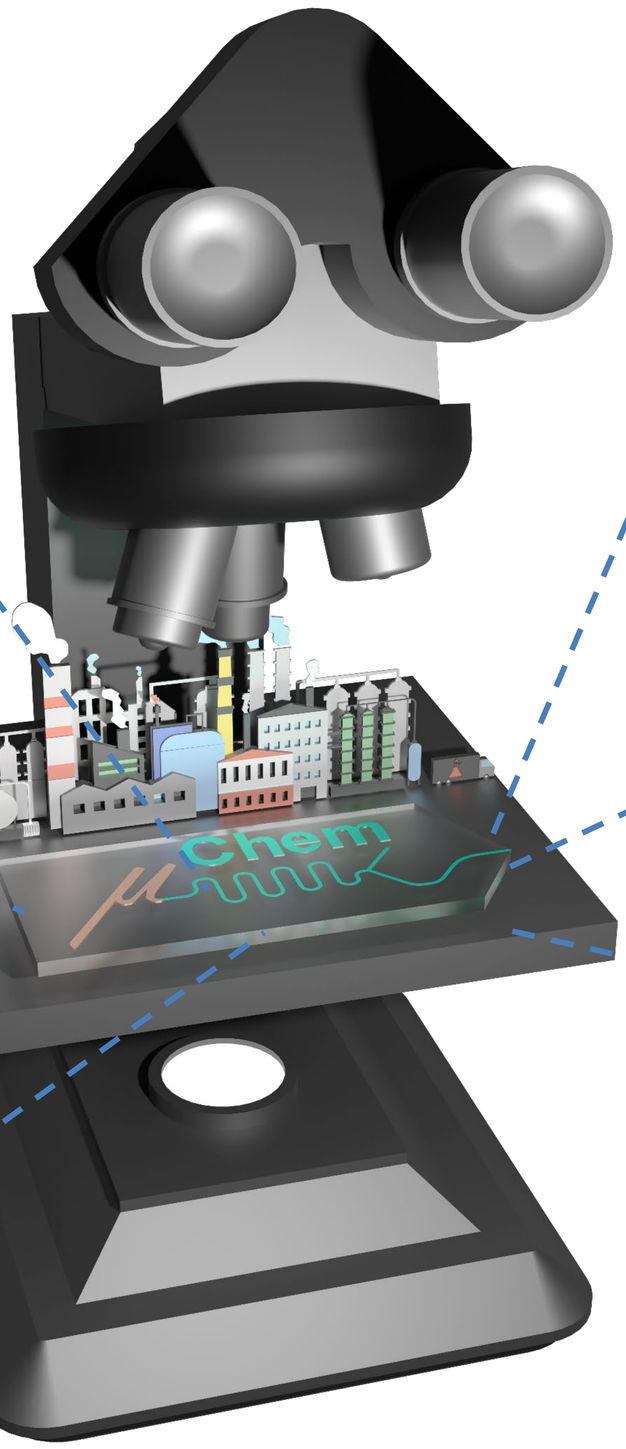
Single-cell catalysis

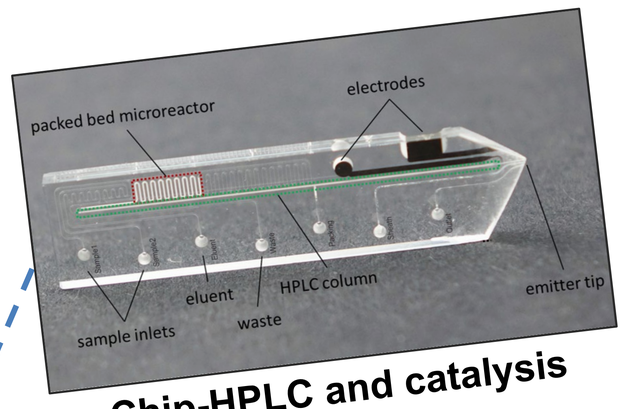


Automated multidimensional reaction monitoring

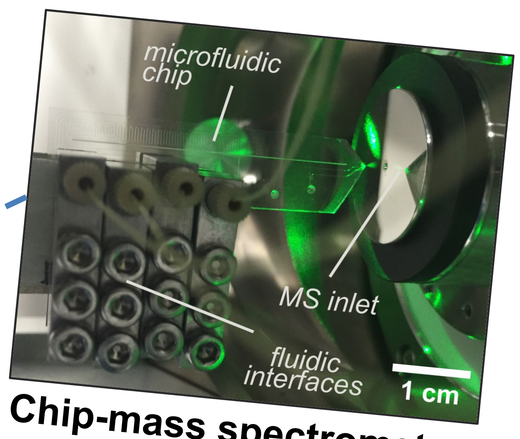


Chip electrophoresis

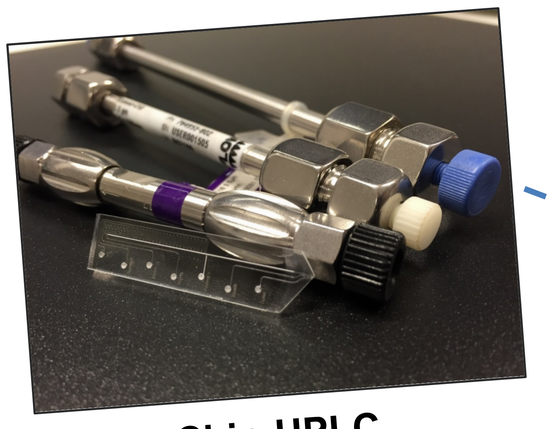




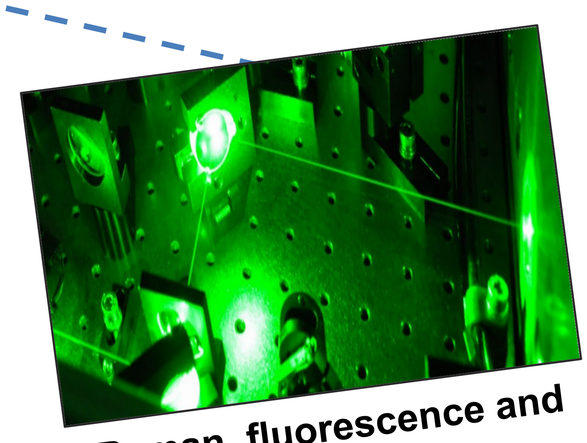
Chip-HPLC and catalysis



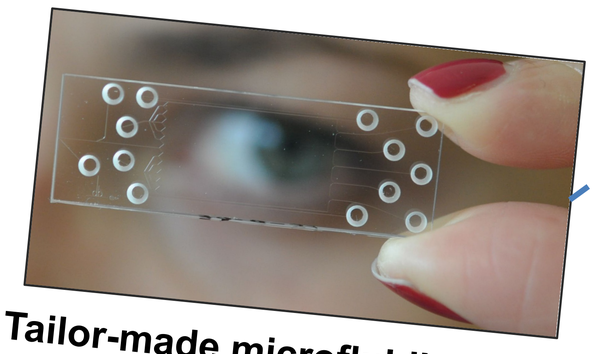
Chip-mass spectrometry and chip-IMS



Chip-HPLC



Raman, fluorescence and IR microscopy



Tailor-made microfluidic chips

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Contact

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