

# Forum Innovations for Industry MicroTechnology Hall 6, Stand D16



**HANNOVER  
MESSE**  
21.-25. APRIL 2008

**Montag / Monday, 21. 4. 2008**

**Keynote Day**

**Moderation:** Dr. Uwe Kleinkes, IVAM Microtechnology Network, Dortmund (D)

- 11:00 Uhr** **Opening of the Forum**  
Manfred Kutzinski, Deutsche Messe, Hannover (D)  
Dr. Frank Bartels, President of IVAM, Dortmund (D)
- 11:05 Uhr** **Carbon Nanotubes – Chances and Challenges**  
Dr. Peter Krüger, Bayer MaterialScience AG, Leverkusen (D)
- 11:35 Uhr** **MEMS Inertial Sensors: A Comparison of the Consumer and Automotive Markets**  
Louis Ross, Virtus Advanced Sensors, Pittsburgh (USA)
- 12:05 Uhr** **Lasers in Microtechnology – What is the chicken, what is the egg?**  
Dr. Lutz Aschke, LIMO Lissotschenko, Mikrooptik GmbH, Dortmund (D)
- 12:35 Uhr** **Microfluidics for Industrial Applications**  
Prof. Dr. Roland Zengerle, HSG-IMIT, Villingen-Schwenningen (D), (A member of IVAM Advisory Council)
- 13:05 Uhr** **Ultra precision diamond machining - enabling processes for high tech optics and mechanical components**  
Dr. Christian Wenzel, Fraunhofer-Institute for Production Technology IPT, Aachen (D)
- 13:35 Uhr** **Start-ups in Micro-/Nanotechnology: processes, strategies and perspectives**  
Dr. Heiko Kopf, MST.factory dortmund GmbH, Dortmund (D)
- Moderation:** André van Hall, BioMedizinZentrum, Dortmund (D)
- 14:05 Uhr** **Overview about Micro and Nanotechnology in Brazil – Trends in Technologies and Markets**  
Hernan Valenzuela, SUFRAMA - Superintendence of the Manaus Free Trade Zone, Manaus - Amazonas, BRA
- 14:35 Uhr** **Evolvable production Systems**  
Dr. Christoph Hanisch, Festo AG Co. & KG, Esslingen (D)
- 15:05 Uhr** **From Research to Business: Nanotechnological Coatings for Industrial Application**  
Prof. Dr. Helmut Schmidt, EPG Engineered, nanoProducts Germany AG, Zweibrücken (D)
- 15:35 Uhr** **Microfactory - Still a Dream or Already a Reality?**  
Prof. Reijo Tuokko, Tampere University of Technology, Tampere (FIN)

**Dienstag / Tuesday, 22. 4. 2008**

**Japan Day**

**Moderation:** Dr. Ryutaro Maeda, Tsukuba (J)

- 9:55 Uhr** **Opening Japan-Day**  
Keiichi Aoyagi, Micromachine Center, Tokyo (J)
- 10:00 Uhr** **Keynote-Lecture: Smart Systems Integration – Successful networking between Japan and Germany**  
Prof. Dr. Thomas Gefner, Fraunhofer-Institute for Reliability and Microintegration IZM, Chemnitz Department MDI, Chemnitz (D)
- 10:30 Uhr** **Roadmap driven micro-nano technology development in Japan**  
Junji Adachi, Micromachine Center, Tokyo (J)
- 10:50 Uhr** **Nanoimprint Research and Applications in AIST**  
Dr. Masaharu Takahashi, National Institute of Advanced Industrial Science and Technology, Tsukuba (J)
- 11:10 Uhr** **Highly Integrated, Complex MEMS, Production Technology Development Project: Nano-mechanical structure fabrication technology**  
Dr. Tetsuo Kan, University of Tokyo, Tokyo (J)
- 11:30 Uhr** **MEMS and Packaging Technology in Matsushita Electric Works**  
Takeshi Okamoto, Matsushita Electric Works, Ltd., Osaka (J)
- Moderation:** Junji Adachi, Micromachine Center, Tokyo (J)
- 11:50 Uhr** **AIST R&D for commercialization of MEMS and Nano fabrication**  
Dr. Ryutaro Maeda, National Institute of Advanced Industrial Science and Technology, Tsukuba (J)
- 12:10 Uhr** **MEMS Technologies in Mitsubishi Electric**  
Dr. Yukihisa Yoshida, Mitsubishi Electric Corporation, Amagasaki (J)
- 12:30 Uhr** **Optical and Bio MEMS development in Olympus**  
Ryo Ota, OLYMPUS Corporation, Tatsuno (J)
- 12:50 Uhr** **Business in Japan – From a German perspective**  
Frank Kaiser, Industrie- und Handelskammer Düsseldorf, Düsseldorf, (D)
- 13:10 Uhr** **Technology Development Program Based upon Strategic Technology Roadmaps in MEMS and Microtechnology in Japan**  
Hideaki Watanabe, New Energy and Industrial Technology Development, Organization NEDO, Kawasaki (J)
- 13:30 Uhr** **Pause / Break**

**Presentations of MASMICRO**

**Moderation:** Helmut Kergel, VDI/VDE Innovation + Technik GmbH, Berlin (D)

- 14:00 Uhr** **Advances in Micro-manufacturing Research and their Industrial Application Perspectives**  
Dr. Yi Qin, University of Strathclyde Glasgow (UK)
- 14:20 Uhr** **Micro/nano-materials for micro products and manufacturing**  
Dr. Ioannis Chronakis, Swerea IVF form, The Swedish Institute for Fibre and Polymer Research IFP, Mölndal (SE)
- 14:40 Uhr** **In-situ micro/nano-material testing**  
Dr. Johann Michler, Swiss Federal Laboratories for Materials Testing and Research (EMPA), Thun (CH)
- 15:00 Uhr** **Micro-sheet forming and the machine**  
Dr. Yi Qin, University of Strathclyde, Glasgow, (UK)
- 15:20 Uhr** **Micro-hydroforming and the machine**  
Dr. Christoph Hartl, University of Applied Science Cologne, Köln (D)
- 15:40 Uhr** **Micro-bulking forming and the machine**  
Dr. Mogens Arentoft, IPU, Kgs Lyngby (DK)
- 16:00 Uhr** **Design of Ultra  $\mu$  Mill: a 5 axis micro milling machine**  
Prof. Kai Cheng, Brunel University, Uxbridge, (UK)
- 16:20 Uhr** **Laser System for micro manufacturing**  
Dr. Christoph Hartl, University of Applied Science Cologne, Köln (D)
- 16:40 Uhr** **Micro-EDM and process optimisation**  
Markus Röhner, Fraunhofer-Institute for Production Systems and Design Technology, IPK, Berlin (D)
- 17:00 Uhr** **Micro handling and the component sorting system**  
Prof. Antonio-José Sánchez-Salmerón, Polytechnic University of Valencia, Valencia (ES)
- 17:20 Uhr** **MASMICRO micro inspection system**  
Issa Ibraheem, Carinthian Tech Research AG, Villach/St. Magdalen (AT)
- 17:40 Uhr** **MASMICRO system integration and manufacturing software**  
Matthias Meier, Fraunhofer-Institute for Manufacturing Engineering and Automation, IPA, Stuttgart (D)

**Mittwoch / Wednesday, 23. 4. 2008**

**Laser Day**

**Moderation:** Dr. Heinz Brückelmann, MST.factory dortmund GmbH, Dortmund (D)

- 10:00 Uhr** **Keynote Lecture, Laser Technology in Photovoltaics**  
Dr. Aart Schoonderbeek, Laser Zentrum Hannover e.V., Hannover (D)
- 10:30 Uhr** **Microprocessing with Lasers – Advantages of Beam Shaping**  
Dr. Paul Harten, LIMO Lissotschenko, Mikrooptik GmbH, Dortmund (D)
- 10:50 Uhr** **Recent Applications in Precision – Machining with the Laser MicroJet® Technology**  
Roy Housh, SYNOVA SA, Ecublens (CH)
- 11:10 Uhr** **Ablating with Short Pulse Lasers in Micromachining**  
Tino Petsch, 3D-Micromac AG, Chemnitz (D)
- 11:30 Uhr** **Microjoining of metals, polymers and dielectrics with laser radiation for advanced packaging solutions**  
Dr. Arnold Gillner, Fraunhofer-Institute for Laser Technology ILT, Aachen (D)
- 11:50 Uhr** **Pause / Break**
- Moderation:** Dr. Gabi Fernholz, VDI/VDE Innovation + Technik GmbH, Berlin (D)
- 12:30 Uhr** **Optical Characterization of Dynamic and Topography Properties of Microsystems**  
Dr. Heinrich Steger, POLYTEC GMBH, Waldbronn (D)
- 12:50 Uhr** **Micromachining with picosecond-Lasers**  
Bernhard Klimt, Lumera - Laser GmbH, Kaiserslautern (D)
- 13:10 Uhr** **The smaller the laser!**  
Richard Steinbrecht, ROFIN/Baasel Lasertechnik, Starnberg (D)
- 13:30 Uhr** **Laser Micromachining Services for Microtechnology Applications**  
Dr. Nadeem Rizvi, Laser Micromachining Ltd., Denbighshire (UK)
- 13:50 Uhr** **Pause / Break**
- Moderation:** Dr. Christine Neuy, IVAM Microtechnology Network, Dortmund (D)
- 14:00 Uhr** **Multi-Sensor Metrology for Production Control and QA**  
Dr. Thomas Fries, Fries Research & Technology GmbH, Dortmund (D)
- 14:20 Uhr** **How micro and nanotechnology shape the competitiveness of "old industries"**  
Dr. Uwe Kleinkes, IVAM Microtechnology, Network, Dortmund (D)
- 14:40 Uhr** **LIGA and Micro Patterned Components**  
Dr. Bernd Löchel, Bessy GmbH – Anwenderzentrum für Mikrotechnik (AZM), Berlin (D)
- 15:00 Uhr** **Business Activities of the Application – Center for Micro-Optical Systems – amos**  
Dr. Olaf Brodersen, CiS Institut für Mikrosensorik GmbH, Erfurt (D)
- 15:20 Uhr** **On-line drinking and effluent water quality analysis with Capillary Electrophoresis**  
Henk Leeuwis, Lionix BV, Enschede (NL)

**Donnerstag / Thursday, 24. 4. 2008**

**Moderation:** Bernhard Wybranski, VDI/VDE Innovation + Technik GmbH, Berlin (D)

- 10:00 Uhr** **mp6 - The New Micropump Generation from Bartels Mikrotechnik**  
Severin Dahms, Bartels Mikrotechnik GmbH, Dortmund (D)
- 10:20 Uhr** **Microdispensing in Industrial Applications**  
Wilhelm Meyer, Microdrop Technologies GmbH, Norderstedt (D)
- 10:40 Uhr** **MEMS Components for Massflow, Measurement and Gas Detection**  
Rolf Meisinger, Leister Process Technologies, Axetris Division, Kägiswil (CH)
- 11:00 Uhr** **High Throughput Hot Embossing and Nano Imprinting**  
Enrico Piechotka, JENOPTIK Laser, Optik, Systeme GmbH, Jena (D)
- 11:20 Uhr** **Virtus Sensors Technology and Product Introduction for 2008**  
Louis Ross, Virtus Advanced Sensors, Pittsburgh (USA)
- 11:40 Uhr** **Pause / Break**
- 12:00 Uhr** **Customized specific piezomotor solutions based on standard Elliptec Module R40**  
Jens Dinkelbach, Elliptec Resonant Actuator AG, Dortmund (D)
- 12:20 Uhr** **Software support for technology development and knowledge transfer**  
Dr. Jens Popp, Process Relations GmbH, Dortmund (D)
- 12:40 Uhr** **Pause / Break**
- Moderation:** Dr. Matthias Künzel, VDI/VDE Innovation + Technik GmbH, Berlin (D)
- 13:00 Uhr** **Modular  $\mu$ -assembly solutions (m $\mu$ s)**  
Gerard Huiberts, IMS, Almelo (NL)
- 13:20 Uhr** **Micro-Parts Mass Production**  
Shaun Mason, Tecan Ltd, Weymouth, Dorset (UK)
- 13:40 Uhr** **Increased functionality of metal micro parts by micro injection molding**  
Dr. Natalie Salk, Fraunhofer-Institute for Manufacturing Technology and Applied Materials Research IFAM, Bremen (D)
- 14:00 Uhr** **Application Center for Microsystem Technologies – Core Competences and Services**  
Thomas Link, MicroMountains Applications AG, Villingen-Schwenningen (D)
- 14:20 Uhr** **Application of Glass for Disposable, Lab-on-a-Chip Devices**  
Ronny van't Oever, Micronit Microfluidics BV, Enschede (NL)
- 14:40 Uhr** **IVAM Summer School as a Tool for Recruiting New Employees: Engineers and Scientists**  
Dr. Christine Neuy, IVAM Microtechnology Network, Dortmund (D)
- 15:00 Uhr** **ISS-Lab: Space meets MicroTechnology – Space-based opportunities at IVAM forum**  
Organisation: ISS Lab Ruhr GmbH  
During the session "Space meets MicroTechnology" experts from the European Space Agency (ESA), research institutes, and industry will present unique opportunities offered by space to optimise company-specific processes and products. The speakers will present examples of research in space and space-derived innovations, and will inform how microtech-companies can access business opportunities on the International Space Station and other space infrastructures.

**Freitag / Friday, 25. 4. 2008**

**Energie aus Algen**

**Moderation:** Ute Ackermann, VDI/VDE Innovation + Technik GmbH

- 10:30 Uhr** **Neue Technik für alte Idee: Energie aus Algen – hocheffizient durch Miniaturisierung**  
Ute Ackermann, VDI/VDE-IT
- 10:50 Uhr** **Grünes Gold: 3-D-Matrix zur Algenmassenproduktion für die Biodieselerstellung**  
Prof. Dr. Otto Pulz, IGV Institut für Getreideverarbeitung
- 11:10 Uhr** **Es geht voran: Die neue Generation des Flat Panel Airlift-Reaktors zur Algenproduktion**  
Dr. Peter Ripplinger, Subitec GmbH
- 11:30 Uhr** **Makro-Mikro-Nano: Der erste Algenreaktor mit Mikro- und Nanostrukturen**  
Frank Messelhäuser, SPOSolar
- 11:50 Uhr** **Licht ins Dunkle: Der faseroptische Photo-Bioreaktor**  
Prof. Hilmar Franke, Uni Duisburg-Essen
- 12:10 Uhr** **Interaktiv: Adsorptionsversuch zur Anreicherung von CO<sub>2</sub>**  
Prof. Frank Rößner, Uni Oldenburg

Weitere Informationen unter [www.mstonline.de/algenbioverfahrenstechnik](http://www.mstonline.de/algenbioverfahrenstechnik)

MicroTechnology wird unterstützt von / MicroTechnology is supported by:



[www.hannovermesse.com](http://www.hannovermesse.com)