

5 Cooperations with industry and universities

Partnerships with the following institutes and companies were continued and / or established in 2003:

- Advanced Micro Devices (AMD), Sunnyvale & Austin, USA and Dresden, Germany
- Aktiv Sensor GmbH, Stahnsdorf, Germany
- Alpha Microelectronics GmbH, Frankfurt (Oder), Germany
- AMTEC GmbH, Chemnitz, Germany
- Applied Materials, Santa Clara, USA and Dresden, Germany
- Atmel GmbH, Germany
- BASF AG, Ludwigshafen, Germany
- BMW AG München, Germany
- Robert Bosch GmbH, Reutlingen, Germany
- CAD-FEM GmbH Grafing, Germany
- CiS Institut für Mikrosensorik gGmbH, Erfurt, Germany
- Colour Control Farbmeßtechnik GmbH, Chemnitz, Germany
- Conti Temic microelectronic GmbH , Ingolstadt, Germany
- DaimlerCrysler Research Lab Ulm, Germany
- Digital Instruments – Veeco Instruments, Mannheim, Germany
- DILAS Diodenlaser GmbH
- Dynamit Nobel Fürth, Germany
- Endress und Hauser
- FACRI , Research Institute, Xi´an, China
- Fahrzeugelektrik Pirna GmbH, Pirna, Germany
- FHR Anlagenbau GmbH, Ottendorf-Okrilla, Germany
- First Sensor Technology GmbH, Berlin, Germany
- FLEXIVA automation & robotics, Amtsberg, Germany
- Forschungszentrum Rossendorf, Germany
- Fujitsu Microelectronic GmbH, Dreieich-Buchschlag, Germany
- GEMAC mbH Chemnitz, Germany
- GF Messtechnik Teltow, Germany
- Gesellschaft für Prozeßrechnerprogrammierung mbH (GPP) Chemnitz, Germany
- GHF IWM Halle
- Heinrich-Hertz-Institut Berlin, Germany
- Hitachi Ltd., Japan
- Institut für Festkörper- und Werkstoffforschung e.V. IFW Dresden, Germany
- IMEC, Leuven, Belgium
- Infineon Technologies AG, Munich and Dresden, Germany
- InfraTec GmbH, Dresden
- ITIM International Training Center for Material Science, Vietnam
- Jenoptik-LDT GmbH, Gera , Germany
- Kyocera Fineceramics GmbH
- L.A.A.S-C.N.R.S Toulouse, Prof. Dr. D. Esteve, France
- LETI, Grenoble, France
- LG Thermo Technologies GmbH
- Lionix, Enschede, Netherlands
- LITEF GmbH, Freiburg, Germany
- Massachusetts Institute of Technology, Cambridge / Boston, Mass., USA
- Material Research Corp. (MRC), Orangeburg N.J. ,USA
- Max-Planck-Institut (MPI) für Mikrostrukturphysik Halle, Germany

- Mechanical Engineering Laboratory AIST, MITI, Dr. Mitsuro Hattori and Chisato Tsutsumi, Tsukuba, Ibaraki, Japan
- Merck KGaA, Darmstadt, Germany
- Mesa Research Institute, Prof. J. Fluitman, Twente, The Netherlands
- Mitsui Engineering and shipbuilding Co. Ltd., Japan
- Motorola, Phoenix, Arizona ,USA / Munich, Germany
- Nex Systems, Wilmington, MA. , USA and Berlin, Germany
- NICO Pyrotechnik, Trittau, Germany
- NMRC, Cork, Ireland
- OEC GmbH, Germany
- PANALYTIK GmbH, Dresden, Germany
- Physikalisch-Technische Bundesanstalt Braunschweig (PTB), Germany
- Roth & Rau Oberflächentechnik GmbH, Wüstenbrand, Germany
- RWE Schott Solar GmbH, Alzenau, Germany
- Schott Mainz & Schott Glas Landshut, Germany
- Seiko Epson, Japan
- Sentech Instruments GmbH, Berlin, Germany
- SICK AG, Waldkirch & Ottendorf-Okrilla, Germany
- Siegert TFT GmbH, Hermsdorf
- Siemens AT Regensburg, Germany
- Institut für Solarenergieforschung Hameln-Emmerthal, Germany
- Solid State Measurements, Pittsburgh, PA., USA
- ST Microelectronics, Crolles, France
- Suss Microtec AG Vaihingen, Germany
- Karl Suss KG GmbH & Co., Munich and Sacka, Germany
- Dr. Teschauer AG, Chemnitz, Germany
- Thales-Avionics, Valence and Orsay, France
- Trikon Technologies, UK
- TRW Airbag Systems GmbH & Co. KG, Aschau/Inn, Germany
- X-Fab Gesellschaft zur Fertigung von Wafern mbH, Erfurt, Germany
- Yole Developpement, Lyon, France
- ZMD Dresden, Germany
- 3D-Micromac AG, Chemnitz, Germany

Universities:

- TSINGHUA University, Beijing, China
- State University of New York at Binghamton, USA
- TU Budapest, Hungary
- University of California at Berkeley, Berkeley Sensor and Actuator Center, USA
- Case Western Reserve University, Cleveland, Ohio, USA
- Chongqing University, Chongqing, China
- University of Colorado at Boulder, USA
- University of Delaware, Newark, USA
- University of Delft, Netherlands
- TU Dresden, Germany
- Universität Erlangen, Germany
- Universität Essen, Institut für anorganische Chemie, Germany
- Universität Hannover, Germany
- Hanoi University of Technology, Vietnam
- University of Hertfordshire, UK
- Johannes Kepler Universität Linz, Austria
- HTW Mittweida, Laserapplikationszentrum, Germany

- University of Nevada, Reno, USA
- Nowosibirsk State University, Russia
- University of West Bohemia, Pilsen , Czech Republic
- Portland State University, Portland, Oregon, USA
- Fudan University, Shanghai, China
- Technological University Singapore, Singapore
- Royal Institute of Technology, Stockholm, Sweden
- University of Tokyo, Res. Ctr. for Adv. Science & Technology (RCAST), Japan
- Rensselaer Polytechnic Institute (RPI), Troy, N.Y., USA
- University of Twente – MESA, Netherlands
- Warsaw University of Technology (WUT), Warsaw, Poland
- Atominstytut Universität Wien, Austria
- Xiamen University, Xiamen, China

6 Equipment and service offer

- Laseroptical instrumentation for surfaces utilizing a resolution down to 4 nm (computer controlled laseroptical measuring system with autofocussensor and interference microscope)
- Light-section microscope
- Zeiss-two-coordinate inspection microscope
- Instrumentation for recording of oscillations in the direction vertical to the surface (laser vibrometer)
- Two-channel analyzer
- Instrumentation for stimulation of micro objects and for measuring of the amplitude-frequency response
- Program system for modal analysis
- Instrumentation for recording of electrical values and for generation of stimuli functions based on VXI- respectively GPIB-Bus
- Fischerscope for measuring hardness and recording of spring characteristics
- Electronic Speckle Pattern Interferometer for static and dynamic deformation analysis of microstructures in the nanometer range
- Instrumentation for pressure-measuring
- Scanning Probe Microscope D 3000
- Nanolithographysystem LEO
- Optoelectronic laboratory equipment
- Rapid Prototyping with FPGAs
- Design of integrated high-voltage circuits
- Characterization and modelling of devices from high-voltage microtechnologies
- Design of low power and low noise analogue-mixed signal integrated circuits
- Characterization of analogue-mixed signal circuits up to 500 MHz
- Development of solar cells with appropriate price-performance ratio
- Simulator for silicon wet etching SIMODE
- Etch mask design tool EMAD
- FEM-Analysis with commercial ANSYS-Version on HP-workstation for simulation of mechanical behaviour and coupled fields
- Different CAD tools: EMS, PC- Draft, Microstation PC, ProEngineer, HFSS, EESOF