

Science and Research Number 1 in Germany



Tiny giants – Microsystems on the move

Prominent Examples

Optical technologies from Berlin are currently orbiting the planet Mars. Sensational 3-D images from the red planet are supplied by the space camera HRSC (high resolution stereo camera), which was developed at the German Aerospace Centre (DLR) at the Berlin-Adlershof City of Science, Technology and Media. DLR camera technology is also used in the early recognition of forest fires. The IHP in Frankfurt (Oder) achieved a world record in silicon electronics speed – a pulse cycle of 3.6 pico seconds – with its new generation of bipolar transistors. The capital region's science infrastructure is attractive to international investors. The Danish company Hymite set up its German headquarters at Berlin-Adlershof due to the location's optimal surroundings for the production of optic-electronic elements. With its participation in the Teltow company Celon AG, the Japanese optics giant Olympus has established one of its three international research and development centers in Brandenburg.

Know-how

With seven universities, 12 technical colleges and 70 non-university research institutes, the Berlin-Brandenburg region boasts the highest research density in Germany. Universities offer outstanding study programs in basic subjects and engineering sciences. New course of studies such as the "Masters of Engineering in Photonics", jointly offered by three technical colleges in Berlin and Brandenburg, take into account all current developments in the field. Special emphasis is placed on support for start-up companies from the academic field. In addition to the largest German start-up competition at the university level ("The Business Plan Competition"), well-aimed support for the field of optical technology exists in the form of the "Optics Accelerator".

Networks

Well-organized networks promote the close cooperation of research and business in the region. These include the Berlin-Brandenburg Optical Technologies Network (OptecBB) – with over 80 members, it is the largest of the nine state-wide networks – the Centre for Microsystems Technology (ZEM), the Berlin-Brandenburg Laser Association, the Centre for Microelectronics Frankfurt (Oder), and the Rathenow Centre for Optics KOR. The Institute for Solid State Physics at the Technical University Berlin (TU) supports and coordinates the national Nano-Optical Technology Centre ("NanOp"). With their program "JointLab", the IHP Frankfurt (Oder) and the Cottbus Technical College in Brandenburg bring together basic research and university-level instruction.

Institutes: A Selection

Optics

Cottbus Technical College
www.physik.tu-cottbus.de

German Aerospace Centre (DLR)
www.dlr.de/Berlin

Ferdinand Braun Institute for High Frequency Technology
www.fbh-berlin.de

Fraunhofer Institute for Telecommunications HHI
www.hhi.fraunhofer.de

ISAS Institute for Analytical Sciences
www.ansci.de

Max Born Institute
www.mbi-berlin.de

PTB National Institute of Standards and Technology
www.ptb.de

Potsdam University
www.physik.uni-potsdam.de

Microtechnology

Bessy Assistance in Microsystem Engineering (AZM)
www.azm.bessy.de

Cottbus Technical College
www.physik.tu-cottbus.de

Fraunhofer Institute for Reliability and Microintegration (IZM)
www.izm.fhg.de

IHP Innovations for High Performance Microelectronics
www.ihp-microelectronics.com

Nanotechnology

BAM Federal Institute for Materials Research and Testing
www.bam.de

FMP Research Institute of Molecular Pharmacology
www.fmp-berlin.de

Fraunhofer Institute for Applied Polymer Research IAP
www.iap.fraunhofer.de

Fraunhofer Institute for Reliability and Microintegration IZM
www.epc.izm.fraunhofer.de

Fritz Haber Institute
www.fhi-berlin.mpg.de

Max Planck Institute of Colloids and Interfaces
www.mpikg-golm.mpg.de

PTB National Institute of Standards and Technology
www.ptb.de

TU Technical University Berlin, Stranski Laboratory
www.tu-berlin.de

Strategic Location The Berlin-Brandenburg Capital Region

- 1 Quadriga and Dome of the Reichstag in Berlin
- 2 Potsdamer Platz in Berlin
- 3 Sanssouci Palace in Potsdam
- 4 Bridges near Frankfurt (Oder)

Title:
100 µm solder bumps from the firm Pac Tech GmbH – Packaging Technologies, Nauen

Economic Facts that Count

- Central location in the booming European market
- Highest research density and largest university location in Germany
- Modern infrastructure (airports, highways, train, telecommunications)
- Highest potential of flexible and well-trained specialists
- Well-situated and low-priced commercial space
- Favorable tax rates and high investment assistance
- Dynamic start-up landscape

A Great Place to Live

- Berlin, pulsating capital city with international flair
- Brandenburg, fascinating region with great development potential
- Over 170 museums, 150 stages, diverse music and art scenes
- Excellent nature locations for sport and recreation
- Important German and European historical sites
- Famous castles and gardens

www.blc.berlin.de

www.invest-in-brandenburg.com



Contacts in Berlin-Brandenburg

 **Wirtschaftsförderung Berlin**
INTERNATIONAL
Berlin Business Development Corporation

Berlin Business Development Corporation
Ludwig Erhard Haus | Fasanenstrasse 85 | 10623 Berlin
Tel +49-30/3 99 80-0 | Fax +49-30/3 99 80-239
info@wfb.de | www.wfb.de

ZAB
ZukunftsAgentur
Brandenburg

Brandenburg Economic Development Board (ZAB)
Steinstrasse 104-106 | 14480 Potsdam
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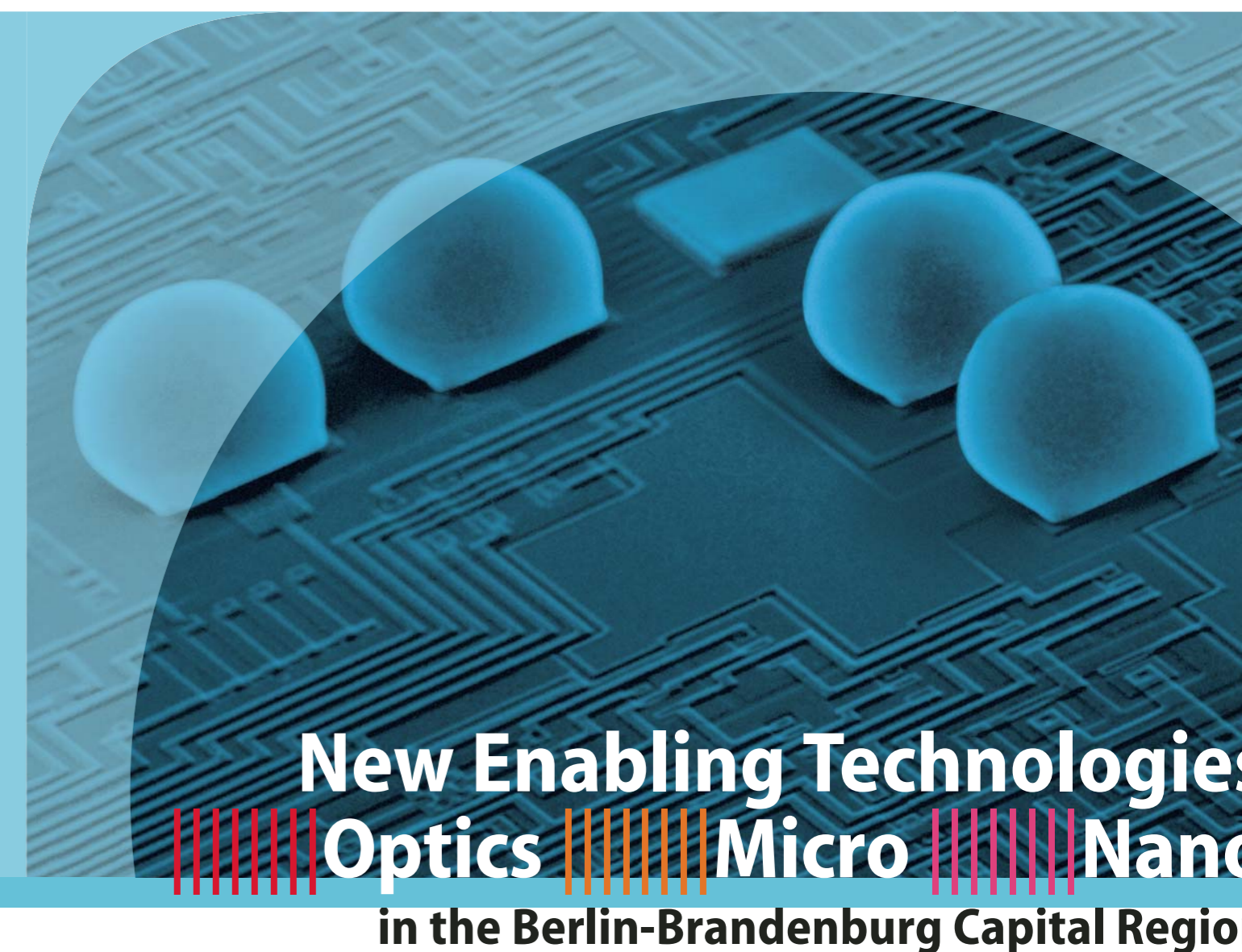
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 **LAND
BRANDENBURG**

 **Berlin**

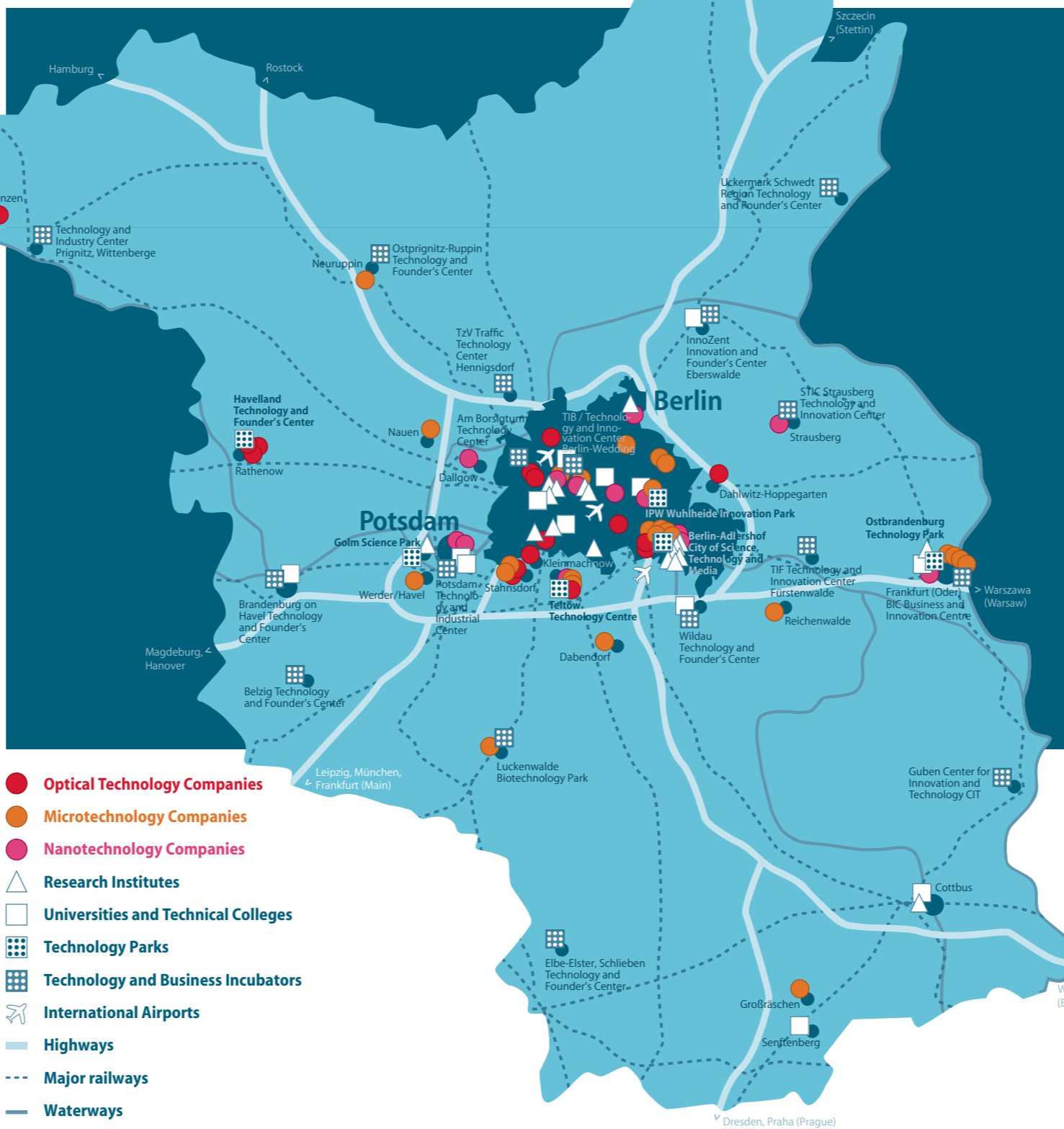


New Enabling Technologies
Optics | Micro | Nano
in the Berlin-Brandenburg Capital Region

New Enabling Technologies Impulses for the Growth Markets of the Future

- 1 **Photonics Centre at Berlin-Adlershof, City of Science, Technology and Media**
www.adlershof.de
- 2 **NLG New Laser Generation at Teltow Technology Centre**
www.tz-teltow.de
- 3 **Wuhlheide Innovation Park, Berlin**
www.ipw-berlin.de
- 4 **Synthetic engineering at the Fraunhofer Institute for Applied Polymer Research (IAP) at Golt Science Park**
www.wpgolm.uni-potsdam.de
- 5 **Technology and Founder's Center Havelland, Rathenow**
www.tgz-havelland.de
- 6 **IHP Innovations for High Performance Microelectronics at Ostbrandenburg Technology Park in Frankfurt (Oder)**
www.technologiepark-ostbrandenburg.de

The Berlin-Brandenburg Capital Region Location for New Enabling Technologies



- **Optical Technology Companies**
- **Microtechnology Companies**
- **Nanotechnology Companies**
- △ **Research Institutes**
- **Universities and Technical Colleges**
- **Technology Parks**
- **Technology and Business Incubators**
- ✈ **International Airports**
- **Highways**
- - - **Major railways**
- **Waterways**

Networks, Companies, Events A Selection

Optics Network

Optec Berlin Brandenburg (OpTecBB)
optecbb@optecbb.de
www.optecbb.de

Companies

Berliner Glas KGaA
www.berlinerglas.com

eagleyard photonics GmbH
www.eagleyard.com

Essilor GmbH
www.essilor.de

Highyag Lasertechnologie GmbH
www.highyag.de

HOLOEYE Photonics AG
www.holoeye.de

Jenoptik Diode Lab GmbH
www.diodelab.com

Katana Technologies GmbH
www.katanalaser.com

Krone GmbH
www.krone.com

LTB Lasertechnik Berlin GmbH
www.ltb-berlin.de

Merge Optics GmbH
www.mergeoptics.de

NLG – New Laser Generation Teltow
www.new-laser.com

OECA Opto-Elektronische Komponenten und Applikations GmbH
www.oeca.de

OEG Gesellschaft für Optik, Elektronik, Gerätetechnik mbH
www.oeg-messtechnik.de

OPTPOTEC Optotechnischer Gerätebau GmbH
www.optotec-rathenow.de

Osram GmbH
www.osram.de

RO Rathenower Optik GmbH
www.fielmann.com

SIEMENS Department Communications Com FN T M PE 3
www.networks.siemens.de

Spectra Physics GmbH
www.spectra-physics.com

Microtechnology Network

ZEMI – Zentrum für Mikrotechnik Berlin-Adlershof
zemi@zemi-berlin.de
www.zemi-berlin.de

Companies

AEMtec GmbH
www.aemtec.com

Aktiv Sensor GmbH
www.aktiv-sensor.de

alpha microelectronics GmbH
www.alpha-microelectronics.de

AVM Computersysteme Vertriebs GmbH
www.avm.de

ELBAU GmbH
www.elbau-gmbh.de

First Sensor Technology GmbH
www.first-sensor.com

GED Gärtner-Electronics-Design GmbH
www.ged.de

Hymite GmbH
www.hymite.com

IXYS Berlin GmbH
www.ixys.de

MAF Microelectronic Assembly Frankfurt (Oder) GmbH
www.maf-gmbh.de

MAZ Brandenburg GmbH
www.mazbr.com

microtech GmbH electronic
www.microtech-teltow.de

MSF Microtechnology Services Frankfurt (Oder) GmbH
www.msfg.de

Nanotron Technologies GmbH
www.nanotron.de

Pac Tech GmbH
www.pactech.de

SeCoS Halbleitertechnologie GmbH Stahnsdorf
www.secosgmbh.com

SENTECH Instruments GmbH
www.sentech.com

Silicon Sensor GmbH
www.silicon-sensor.com

Spree Hybrid- und Kommunikationstechnik GmbH
www.spree-hybrid.de

Swissbit Germany AG
www.swissbit.com

TELE FILTER GmbH
www.vectron.com

Nanotechnology Network

NanOp – Nanotechnologie für die Optoelektronik
nanop@sol.physik.tu-berlin.de
www.nanop.de

Companies

Allresist GmbH
www.allresist.de

Atugen AG
www.atugen.com

Capsulation Nano Science AG
www.capsulation.de

IDM Institut für Dünnschichttechnologie und Mikrosensoren e.V.
www.idm-teltow.de

IHP Innovations for High Performance Microelectronics GmbH
www.ihp-microelectronics.com

JPK Instruments AG
www.jpk.com

micro resist technology GmbH
www.microresist.com

Nanolytics Gesellschaft für Kolloidanalytik mbH
www.nanolytics.de

PharmaSol GmbH
www.pharmasol-berlin.de

PlasmaChem GmbH
www.plasmachem.com

Schering AG
www.schering.de

Triple-O-Microscopy GmbH
www.triple-o.de

W. C. Heraeus GmbH, Facility Potsdam (Welco Finest Solder Powders)
www.4cmd.com

Trade Fairs and Congresses

AMAA 2005
www.amaa.de

Microsys Berlin
www.microsys-berlin.com

Electronic goes Green
www.egg2004.izm.fraunhofer.de

IHP Wissenschaftstag
www.ihp-microelectronics.com

