



# NANOTECHNOLOGY **FORUM** 2005

making connections and associations





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## FOREWORD



**Sir David King**

**Chief Scientific Adviser (CSA) to HM Government**

The opportunities for both the UK and Saxony from emerging science and technology are huge. We can expect continuing fast-paced developments in areas such as biotechnology, genetically modified organisms and materials, and this forum will cover nanotechnology in relation to each of these.

It is important that we focus our strengths to ensure economic benefit and competitive advantage flow from our investments in the science base. Collaborative effort across international boundaries is now more important than ever, and I am sure that all today's participants will find the forum both stimulating and ultimately mutually beneficial for our work together in the future.

A handwritten signature in black ink that reads "David King". The signature is written in a cursive, flowing style.

# WELCOME



**Professor Georg Milbradt**  
**Prime Minister of Saxony**

Nanotechnology is increasingly becoming a decisive factor for Europe's economic competitiveness, whilst offering enormous opportunities for business. In Saxony we have focussed on developing Nanoelectronics, Nanomaterials / Nanosurfaces and Nanobiotechnology, not only in research but also in industry. Our excellent research infrastructure facilitates close collaboration between academia and business, a key factor for future success.

At the NanoForum, companies and research institutions from Great Britain and Saxony have the opportunity to share their knowledge about the state of the art in Nanotechnology and to join forces in future collaborations. I am sure that both sides will benefit greatly from this day of presentations, workshops and discussions.

I wish all participants an interesting and successful day.

A handwritten signature in black ink, reading "Georg Milbradt". The signature is written in a cursive style with a large initial 'G' and 'M'.



# KEYNOTE SPEAKERS

## **Prof. Georg Milbradt**

### **Free State of Saxony**

#### **Prime Minister**

Prof. Milbradt has been Minister-President of Saxony since April 2002. After an academic career in public finance, he became head of the City of Münster's Treasury Department. In 1990, after German reunification, he was appointed Saxon Minister of Finance. For more than a decade, his sound fiscal policy helped shape Saxony into a leading European high-tech region.

## **Sir David King**

### **Office of Science and Technology (OST)**

#### **Chief Scientific Advisor to HM Government**

Sir David was appointed Chief Scientific Adviser (CSA) to HM Government and Head of the Office of Science and Technology (OST) in October 2000. OST is responsible for developing and coordinating Government policy on science and technology both nationally and internationally. Sir David advises the Prime Minister directly on scientific issues. Prior to these appointments, Sir David was head of the Department of Chemistry and Master of Downing College, University of Cambridge. He continues as Professor of Chemistry at Cambridge University.

## **Prof. Dr.-Ing. habil. Prof. e.h. Dr. h. c. Hans-Jörg Bullinger**

### **Fraunhofer-Gesellschaft, Corporate Management and Research**

#### **President**

Dr. Hans-Jörg Bullinger began his career working as a manufacturer for the Daimler-Benz company in Stuttgart, after which he read a degree at the University of Stuttgart, graduating with a Master's degree and Ph.D. in Manufacturing.

Besides his role as chairman of the University of Stuttgart until 2002, Dr. Bullinger was also the head of the Institute for Human Factors and Technology Management (IAT) and the Fraunhofer-Institute for Industrial Engineering (IAO). Since October 2002 he is President of the Fraunhofer-Gesellschaft, Corporate Management and Research. During these years, Dr. Bullinger has written in excess of 1.000 articles and books regarding industrial engineering.

[www.fraunhofer.de](http://www.fraunhofer.de)

## **Dr. Hans Deppe**

### **AMD in Dresden, Germany**

#### **Corporate Vice President & General Manager**

Hans Deppe is responsible for all production, engineering and administrative functions at the Dresden site. Prior to joining AMD in 1997, he spent 22 years with Siemens Semiconductor Group. At Siemens, he was in charge of both research & development and quality management and held manufacturing responsibilities in Europe and Asia. Hans Deppe holds a doctorate degree in physics from the Westfaelische Wilhelms University in Muenster, Germany.

AMD designs and produces innovative microprocessors, Flash memory devices and low-power processor solutions for the computer, communications and consumer electronics industries. AMD has been one of the largest international investors in Germany since the mid-1990s; at present, AMD collectively employs approximately 2,500 people in its AMD Fab 30 and AMD Fab 36 semiconductor facilities and the Dresden Design Center, AMD's product development group in Europe.

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

[hans.deppe@amd.com](mailto:hans.deppe@amd.com)

### **Prof. Kai Simons**

#### **Max Planck Institute of Molecular Cell Biology & Genetics, Dresden**

**CEO**

Kai Simons received his MD degree from the University of Helsinki and then conducted postdoctoral research with A. G. Bearn at Rockefeller University in New York. In 1975, he became a Group Leader at the European Molecular Biology Laboratory (EMBL) in Heidelberg, Germany and he started the Cell Biology Program, which became the focal point for molecular cell biology in Europe. He is the President of the European Life Scientist Organization. Dr. Simons moved 2001 to Dresden to build up the new Max Planck Institute for Molecular Cell Biology and Genetics. His early research interests were concerned the life cycle of Semliki Forest virus. This virus had the simplest biological membrane known. From this work he moved to studies of epithelial polarity and intracellular protein and lipid transport. These studies laid the ground work for the lipid raft concept that now is dominating his research interests. This concept has changed our views on the lipid bilayer.

It is no longer a boring solvent for the membrane proteins but has turned into a fascinating liquid with an inbuilt capacity for dynamic compartmentalization.

[www.mpi-cbg.de](http://www.mpi-cbg.de) [simons@mpi-cbg.de](mailto:simons@mpi-cbg.de)

### **Prof. Hugh Clare**

#### **MNT Network**

**Director**

Professor Hugh Clare has been Director of the UK Micro and Nanotechnology (MNT) Network since January 2004. He was one of the founder members of the UK Microsystems and Nanotechnology Manufacturing Association, of which he was chairman for four years. Hugh is passionate about the importance of Microsystems and Nanotechnology to the future of UK industry and society.

[www.mntnetwork.com](http://www.mntnetwork.com) [hugh.clare@pera.com](mailto:hugh.clare@pera.com)

### **Dr. Peter Kücher**

#### **Fraunhofer-Center Nanoelectronic Technology, Dresden**

**Vice President , Infineon and Director of CNT**

Prior to this assignment he was President of Infineon Flash and till end of 2002 Managing Director of Infineon SC300, former SEMICONDUCTOR300 – the world's first 300mm line. Dr Kücher held various positions in process engineering with Siemens Corporate Research and managed several European projects within ESPRIT and JESSI. He was also the Siemens project manager in the TRIAD project with IBM and Toshiba in East Fishkill, NY to develop 0,25um technology based on a 256M DRAM from 1993 - 1996. He has a PhD in Applied Physics from the University of Regensburg, Germany.

[www.fraunhofer.de](http://www.fraunhofer.de) [peter.kuecher@infineon.com](mailto:peter.kuecher@infineon.com)



# WORKSHOP SPEAKERS

## Workshop I: Nanoelectronics and Photonics

### Prof. Will Stewart, FREng, FInstP

#### Innos

#### Chairman

Currently Chairman of Innos, visiting Professor at the ORC at Southampton and expert advisor to Foresight projects. His personal interests have been in optical fibre communications and optoelectronics, recently including nanophotonics, micro-structured photonic materials (photonic crystals), optical slow-wave structures, and nanomechanical systems. He is on the advisory board of Antenova, OfCom's Spectrum Advisory Board, co-chair of ECOC and many others. Previously the Chief Scientist at Marconi.

### Prof. Thomas Geßner

#### Chemnitz University of Technology, Center for Microtechnologies (ZfM), Fraunhofer Institute for Reliability and Microintegration (IZM)

#### President ZfM and Vice Director Fraunhofer IZM

Thomas Geßner received Doctor degrees from the Technical University Dresden, Germany (1983) and from Technical University Karl-Marx-Stadt, Germany (1989). From 1983 to 1990 he worked within the semiconductor industry in projects on metallization technologies for IC production. Professorships at Universities Chemnitz (1993) and Freiburg (1997) were offered to him and he was appointed as a professor at Chemnitz University of Technology at the 1st of February 1993.

His current major fields of research are advanced metallization technologies for microelectronics as well as technology and system development for MEMS. Prof. Geßner published more than 410 papers in these fields and holds 14 patents.

[www.zfm.tu-chemnitz.de](http://www.zfm.tu-chemnitz.de) &

[www.pb.izm.fraunhofer.de/mdae](http://www.pb.izm.fraunhofer.de/mdae)

[thomas.gessner@zfm.tu-chemnitz.de](mailto:thomas.gessner@zfm.tu-chemnitz.de)

### Dr. Torsten Müller

#### Infineon Technologies SC300 GmbH & Co. KG TwinFlash Technology Predevelopment

#### Device Engineer

Torsten Müller received his diploma in physics from the Dresden University of Technology in 2000 and worked since 2001 as research assistant at the Institute of Ion Beam Physics of the Research Center Rossendorf on self-organized Si nanocluster growth for nonvolatile memories. The results of this work were submitted as PhD thesis in 2005 and acknowledged by the European Materials Research Society with the young scientist award as well as with the technology award of the Research Center Rossendorf in 2002. In 2004, he joined Infineon Technologies working as device engineer in the TwinFlash predevelopment group on future cell concepts.

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

[torsten.mueller1@infineon.com](mailto:torsten.mueller1@infineon.com)

## Prof. Jeremy Baumberg

University of Southampton

Director of NanoScience/Nanotechnology

Prof. Jeremy J. Baumberg is Professor of both Physics and Electronics, and previously led research at Hitachi and IBM. He is an established innovator in NanoPhotonics, has a \$14M spin-off company, Mesophotonics, and was awarded the 2004 Royal Society Mullard Prize, the 2004 Mott Lectureship of the Institute of Physics as well as the Charles Vernon Boys Medal in 2000.

[www.nanomaterials.soton.ac.uk](http://www.nanomaterials.soton.ac.uk)  
[baumberg@phys.soton.ac.uk](mailto:baumberg@phys.soton.ac.uk)

## Prof. Karl Leo

Dresden University of Technology Institute of Applied Photophysics

Professor of Optoelectronics

Karl Leo obtained a degree in physics in 1985 and the PhD degree from the University of Stuttgart in 1988. From 1989 to 1991, he was postdoc at AT&T Bell Laboratories in Holmdel, NJ, U.S.A and from 1991 to 1993, he was with RWTH Aachen, Germany. Since 1993, he has been full-time professor of optoelectronics at the Technische Universität Dresden. Since 2002, he has also been at the Fraunhofer-Institute for Photonic Microsystems. His main current interests are novel semiconductor systems like semiconducting organic thin films. His work was recognized e.g. by the Leibniz-Award (2002).

[www.iapp.com](http://www.iapp.com) [leo@iapp.de](mailto:leo@iapp.de)

## Dr. David Williams

Hitachi Cambridge Laboratory, Hitachi Europe Ltd

Laboratory Director

Awarded BA and PhD degrees in physics from Cambridge University in 1984 and 1987 respectively, and a fellowship from 1987-1989 in the Cavendish. Currently head of Hitachi Cambridge Laboratory, of which he was a founding member in 1989, and Visiting Professor at Nottingham University. Present research interests include quantum information processing, mesoscopic quantum electron transport, novel silicon memory and nanospintronics.

[www.hitachi-eu.com/r&d/rdcentres/cambridge.htm](http://www.hitachi-eu.com/r&d/rdcentres/cambridge.htm)  
[www.williams@phy.cam.ac.uk](mailto:williams@phy.cam.ac.uk)

## Dipl.-Phys Wolfgang Hentsch

FHR Anlagenbau GmbH

CEO

**1975 - 1979** Studies of Solid State Physics at Technical University Dresden

**1979 - 1991** Project engineer and product manager for PVD technologies and equipment for semiconductor applications at ELEKTROMAT Dresden (within Zeiss group)

**Since 1991** Founder and Managing Director of FHR Anlagenbau GmbH

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## Workshop II: Nanomaterials, -surfaces & -layers

### Dr. Andreas Leson

**Fraunhofer-Institute for Material and Beam Technology (IWS) & Nano-Technology Center for Competence “Ultrathin Functional Films” (NCC)**

Vice Director of IWS and Head of NCC

**NCC:** This nationwide network has been established by 51 enterprises, 10 university institutes, 22 research institutes and 5 corporations, thereby pooling know-how in order to maximise the exploitation of nanotechnology in research and industry.

[www.nanotechnology.de](http://www.nanotechnology.de) & [www.iws.fraunhofer.de](http://www.iws.fraunhofer.de)  
[andreas.leson@iws.fraunhofer.de](mailto:andreas.leson@iws.fraunhofer.de)

### Dr. Johannes Strümpfel

**Von Ardenne Anlagentechnik GmbH, Dresden**

Chief Scientist

After finishing his studies and graduation in physics at the Technical University in Dresden, Germany, he joined the former VON ARDENNE research institute in 1973. He firstly dealt with production coaters of optical multilayers provided by thermal evaporation. Already in the seventies at the very beginning of inventing the magnetron technique, he investigated the basics of reactive sputtering.

He developed the main features of the Plasma Emission Monitor (PEM®) a device to control the reactive processing in transition mode. This knowledge was the basis for related technologies concerning sputter deposition of compound films like oxides and nitrides at higher rates.

Dr. Strümpfel developed related production technologies for large area optical coatings on glass and webs. Based on his long term experienced work in reactive sputtering he is also an expert in coatings for transparent conductive oxide films.

Today he works as Chief Scientist at VON ARDENNE in Dresden. He is responsible for customer contacts at conferences and exhibitions to highlight technological developments and applications of vacuum coatings.

[www.ardenne-at.de](http://www.ardenne-at.de)  
[struempfel.johannes@vonardenne.biz](mailto:struempfel.johannes@vonardenne.biz)

### Dr. Paul Reip

**QinetiQ Nanomaterials Limited,  
Farnborough, Hampshire**

Paul has a PhD in Materials from Brunel University. He joined the UK MOD in 1982 working on the Electromagnetic Gun programme and then in RF research, collaborating with the USA, Europe and NATO. In 1995 he took over the Electro Optic Warfare Department and in 1998 moved back to the Guns and Warheads Department as Business Area Manager. Here he founded QNL and is currently the MD.

[www.nano.QinetiQ.com](http://www.nano.QinetiQ.com)  
[pwreip@qinetiq.com](mailto:pwreip@qinetiq.com)

### **Prof. Dr. Bernd Büchner**

**Doctorate, University of Cologne**

#### **Scientific stations**

- 1999** Habilitation University of Cologne
- 03/2000 - 12/2000** Guest Professor for Experimental Physics, TU Braunschweig
- 12/2000 - 09/2003** Professor for Experimental Physics, TU Aachen

**Current position** Director of the Institute of Solid State Research, IFW Dresden and Professor for Experimental Physics at the Technical University Dresden.

[www.ifw-dresden.de](http://www.ifw-dresden.de)

[b.buechner@ifw-dresden.de](mailto:b.buechner@ifw-dresden.de)

### **Mr. Harry Swan**

**Thomas Swan & Co Ltd, Consett, County Durham**

Harry graduated from Durham University with a degree in Plant Sciences in 1998 and started working life as the Scientific Affairs Manager in the London Office of Monsanto Plc, the international biotechnology company. He subsequently worked for two years at a London-based consultancy as a specialist public relations consultant on crisis and reputation risk management. He joined Thomas Swan in 2002 to launch the new carbon nanomaterials business.

[www.thomas-swan.co.uk](http://www.thomas-swan.co.uk)

[hswan@thomas-swan.co.uk](mailto:hswan@thomas-swan.co.uk)

### **Dr. Nigel Pickett**

**Nanoco Technologies Ltd, Manchester**

Nigel Pickett (PhD) – Nigel Pickett is a co-founder and Technical Director of Nanoco Technologies Ltd and has over 10 years experience in organometallic and materials chemistry, 6 of which have been spent working on the synthesis of nanoparticles in the U.K., U.S. (Georgia Tech – Naval Research) and Japan (JSPS Fellowship) prior to joining the Chemistry Department of Manchester University and becoming a founding member of Nanoco.

[www.nanoco.biz](http://www.nanoco.biz)

[nigel.pickett@nanoco.biz](mailto:nigel.pickett@nanoco.biz)



## Workshop III: Bionanotechnologies

### Dr. Julie Deacon

Julie Deacon is a specialist in diagnostic, pharmaceutical and bio-defence markets with over 23 years industrial experience in technology validation, development and commercialisation, IP generation, and market assessment. She is an expert in systems development incorporating biosensors, fluidics, optical systems, assay signal enhancement and surface plasmon resonance, primarily for Pharmaceutical development and Diagnostics applications. Her role on the executive panel of the MNT Network is to represent leading UK Bio Nanotechnologies initiatives, to develop strategic initiatives for the industrial applications of NanoMedicine, support facilities for MNT fabrication and to catalyse MNT inward investments.

[www.microandnanotech.info](http://www.microandnanotech.info) [julie.deacon@pera.com](mailto:julie.deacon@pera.com)

### Prof. Andrea Robitzki

**Centre for Biotechnology and Biomedicine, University of Leipzig**

**Chair of the Management Board and Director of the Institute of Biochemistry**

Prof. Andrea Robitzki studied pharmacy and biology in Frankfurt, Darmstadt and Stockholm, got her PhD in molecular biology and her qualification in cancer research (Heidelberg/ Barcelona). Until 2002 she was head of the department "Biohybrid Systems" at the Fraunhofer Institute of Biomedical Engineering. Since then, she holds the chair for molecular biological-biochemical processing technology at the University of Leipzig. There she develops cell and tissue-based biosensors (multi-array-chips) for the analysis of cellular properties.

Furthermore, laser-based microdissection and catapulting are other applications used in order to obtain information on cellular processes.

[www.uni-leipzig.de/~dmpt](http://www.uni-leipzig.de/~dmpt) & [www.uni-leipzig.de/bbz](http://www.uni-leipzig.de/bbz)  
[andrea.robitzki@bbz.uni-leipzig.de](mailto:andrea.robitzki@bbz.uni-leipzig.de)

### Prof. Michael A Horton

**Chair of Medicine, University College London & Director of Life Sciences, the London Centre for Nanotechnology**

Mike Horton qualified in medicine with research in the biology of cell adhesion and developing drugs for osteoporosis. His current work focuses on applications of atomic force microscopy in cell biology. He manages the life science portfolio of the joint UCL/Imperial College London Centre for Nanotechnology,, and is co-director of the IRC in Nanotechnology.

[www.london-nano.ucl.ac.uk/](http://www.london-nano.ucl.ac.uk/) [m.horton@ucl.ac.uk](mailto:m.horton@ucl.ac.uk)

### Dr. Stefan Diez

**Max Planck Institute of Molecular Cell Biology and Genetics, Dresden**

**Research Group Leader**

Stefan Diez studied Physics in Jena, Berlin (Germany) and Seattle (USA). He received his PhD for work on ultra-fast all-optical switching in telecommunication networks from the Technical University in Berlin in 2000. In the same year he joined the Max-Planck-Institute of Molecular Cell Biology and Genetics (MPI-CBG) in Dresden as Head of Optical Technology Development. Since 2004 he has been leading the Bionanotechnology Group at MPI-CBG.

**General interests:** Nano-Biophysics and Biophotonics

**More specifically:**

- Optical imaging of single biomolecules, mainly motor proteins (single molecule biophysics and biochemistry)
- Application of biomolecular motors for nanotechnology (nanotransport, molecular sorting, structure formation and manipulation)
- Coupling of biological molecules to inorganic surfaces (polymer interfaces, stimuli-responsive, switchable surfaces)

[www.mpi-cbg.de/research/groups/diez/diez.html](http://www.mpi-cbg.de/research/groups/diez/diez.html)

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## Prof. John Ryan

**Bionanotechnology Interdisciplinary  
Research Centre (IRC), Oxford University**

**Director**

John Ryan is Director of the Bionanotechnology IRC and Professor of Physics at Oxford University. His main research activities have been in the area of quantum optoelectronics and ultrafast processes in nanostructures. His interests in biological physics include molecular motors, membrane proteins and single-molecule electronics and photonics. He is a member of the UK National Strategy Advisory Group on Micro- and Nanotechnology, and he is Editor-in-Chief of the IEE journal Nanobiotechnology.

## Mr. Jens Struckmeier

**nAmbition GmbH, Dresden**

**CEO**

Jens Struckmeier finished his PhD Thesis in Biophysics at the University of Marburg in 2001 exploring intracellular signal transduction. From 2001 to 2004 Jens Struckmeier worked at Veeco Instruments (USA) and was responsible for the development of the Digital Instruments PicoForce AFM. Since 8/2004 he has been a junior group leader at the TU Dresden working on the investigation of trans-membrane proteins using the Atomic Force Microscope. He is also CTO and co-founder of nAmbition.

[www.nambition.de](http://www.nambition.de) [struckmeier@nambition.de](mailto:struckmeier@nambition.de)

## Prof. Tony Cass

**Imperial College, London, Institute of Biomedical  
Engineering**

**Deputy Director, Director of Bionanotechnology, Professor  
of Chemical Biology**

Tony Cass trained as a chemist with degrees from the Universities of York and Oxford. His early career was in biotechnology with a focus on biosensors and enzyme technology. Subsequently he developed new methods and reagents for bioanalysis in both fundamental biological science and clinical applications. Much of his current work combines protein engineering with micro- and nanotechnology.

[www.imperial.ac.uk/biomedeng](http://www.imperial.ac.uk/biomedeng) [t.cass@imperial.ac.uk](mailto:t.cass@imperial.ac.uk)



# GERMAN DELEGATION

**amtec** ^

## **Advanced Machinery and Technology for Experimental Chemistry**

**Michael Krusche, Managing Director**

Location: Chemnitz

Number of employees: 12

Laboratory automation & high-throughput-experimentation (HTE) equipments:

- Microreactors & MEMS
- Automated parallel reactors for materials test and synthesis for chemical and pharmaceutical Industries
- Batch and flow-through systems operating at elevated pressure and temperature for homogeneous and heterogeneous catalysis

[www.amtec-chemnitz.de](http://www.amtec-chemnitz.de)

[michael.krusche@amtec-chemnitz.de](mailto:michael.krusche@amtec-chemnitz.de)

ADVANCED MASK TECHNOLOGY CENTER

## **Advanced Mask Technology Center GmbH & Co. KG**

**Dr. Paul Ackmann, Director**

**Integration and Yield**

Location: Dresden

Number of employees: 150

The Advanced Mask Technology Center GmbH & Co. KG (AMTC) is an equally owned joint venture of Advanced Micro Devices Inc., Infineon Technologies AG and Toppan Photomasks Inc.. AMTC was established by the three partners to become a world-leading mask center for R&D and pilot production of optical photomasks for the most advanced lithography technology generations (193nm and 193nm immersion lithography), as well as for EUV-lithography.

This will be accomplished by applying most advanced mask processes including new resists, new tools, new materials and new IT methods.

[www.amtc-dresden.com](http://www.amtc-dresden.com)

[paul.ackmann@amtc-dresden.de](mailto:paul.ackmann@amtc-dresden.de)



## AXO Dresden GmbH

**CEO: Reiner Dietsch, CEO**

**Location: Heidenau, Dresden**

**Number of employees: 7**

**Business area:** Multilayer X-ray optics, high precision deposition.

**Main products:** parallel beam X-ray optics, focussing X-ray optics, X-ray optical systems, application in X-ray analysis (XRR, XRD, XRF), high precision deposition.

[www.axo-dresden.de](http://www.axo-dresden.de) [reiner.dietsch@axo-dresden.de](mailto:reiner.dietsch@axo-dresden.de) [thomas.holtz@axo-dresden.de](mailto:thomas.holtz@axo-dresden.de)



## Biosaxony

**Dr. Ann De Beuckelaer, Director**

**Location: Dresden**

**Number of employees: not relevant (network)**

Biosaxony is the One-Stop-Shop for biotechnology and the life sciences for the State of Saxony in Germany. Our services include partnering, consulting, information regarding R&D, innovative technologies, and availability of financial incentives and funding programs. Biosaxony presents companies, research institutes and networks. Step into biosaxony and discover biotech business at its best!

[www.biosaxony.com](http://www.biosaxony.com) [debeuckelaer@biosaxony.com](mailto:debeuckelaer@biosaxony.com)



## Chemnitz University of Technology

Department of Electrical and Information Engineering

**Prof. Christian Radehaus**

**Chair of Opto- & Solid State Electronics**

**Location: Chemnitz**

**Number of employees: 11 group members**

**Research areas:** nanostructures by electron beam lithography, nanoelectronics, atomic scale modelling of micro/nanoelectronic materials and high k-gate materials, integrated optics.

[www.tu-chemnitz.de/etit/opto/](http://www.tu-chemnitz.de/etit/opto/) [christian.radehaus@zfm.tu-chemnitz.de](mailto:christian.radehaus@zfm.tu-chemnitz.de)





## City of Dresden

Department of Economic Development

**Birgit Monßen, Head of Department**

**Location:** Dresden

**Number of employees:** 41

**Activity:** Promotion of the advancement of the Saxon capital Dresden as technology-oriented economics -, science and state of research place with a focus on:

- Microelectronics, information and communication technologies, nanotechnology, innovative materials, biotechnology/bioengineering/pharmacy, mechanical engineering and equipment construction, automotive engineering, aircraft industry
- Public services for private investors, business enterprises and scientific institutions in Dresden.

[www.dresden.de/index.html?node=2212](http://www.dresden.de/index.html?node=2212) [bmonssen@dresden.de](mailto:bmonssen@dresden.de)



## Dresden University of Technology

Institute of Macromolecular Chemistry and Textile Chemistry

**Prof. Hans-Juergen Adler**

**Location:** Dresden

**Number of employees:** 28

**Research main topics:**

- Synthesis, Characterisation and Application of Nano-Polymer-Hybrid-Particles
- Synthesis and Application of ultrathin nano-structured self-assembled monolayers with conductive polymers for applications in corrosion protection, sensors, OFET
- Nano- and microstructured responsive hydrogels for applications in micro devices and bio- applications
- Expertises in Synthesis and characterisation of functional polymers, Corrosion protection, Layers on metals and textiles.

[www.tu-dresden.de](http://www.tu-dresden.de) [hans-juergen.adler@chemie.tu-dresden.de](mailto:hans-juergen.adler@chemie.tu-dresden.de)





## Dresden University of Technology

Institute of Physical Chemistry

**Prof. Alexander Eychmueller**

Location: Dresden

Number of employees: 5+

**Research topics:** nanochemistry – chemical creation of nanostructures, semi-conducting nanocrystals and metals for applications in LEDs, fluorescence marking, biomedical applications, labelling, transformation of solar energy.

[www.chm.tu-dresden.de/pc](http://www.chm.tu-dresden.de/pc) [alexander.eychmueller@chemie.tu-dresden.de](mailto:alexander.eychmueller@chemie.tu-dresden.de)



## Dresden University of Technology

Institute of Applied Physics

**Dr. Gunter Zschornack**

Location: Dresden

Number of employees: 40

**Research topics:** ion beam physics, materials research.

**Core competencies:** sources of highly charged ions, ion beam facilities, ion micro and nano beams.

[www.physik.tu-dresden.de/apg/index.html](http://www.physik.tu-dresden.de/apg/index.html) [g.zschornack@fz-rossendorf.de](mailto:g.zschornack@fz-rossendorf.de)



## FHR Anlagenbau GmbH

**Dr. Reinhard Fendler, CEO**

Chair of Opto- & Solid State Electronics

Location: Germany

Number of employees: 65

**Business area:** thin film equipment and technologies

**Main products:** sputtering equipment, sputtering targets.

[www.fhr.de](http://www.fhr.de) [fendler@fhr.de](mailto:fendler@fhr.de)





## Fraunhofer CNT

### Fraunhofer-Center Nanoelectronic Technologies CNT

**Dr. Peter Kücher, CEO**

**Location:** Dresden

**Number of employees:** up to 100 (depending on projects)

The Fraunhofer-Center Nanoelectronic Technologies CNT in Dresden is an institution of the Fraunhofer-Gesellschaft created as a public-private partnership with industrial partners Infineon Technologies AG and Advanced Micro Devices AMD and other research partners. The new Center was established with the aim of rapidly transferring innovative, unit process solutions for the fabrication of nanoelectronic systems on 300-mm wafers into the industrial manufacturing environment. Given the short product cycles in the semiconductor industry, this platform gives the industrial partners an accelerated means of supplying their customers with affordable products.

[www.fraunhofer.de](http://www.fraunhofer.de) [peter.kuecher@infineon.com](mailto:peter.kuecher@infineon.com)



## Fraunhofer IKTS

### Fraunhofer-Institute for Ceramic Technologies and Sintered Materials (IKTS)

**Prof. Dr. Alexander Michaelis, Head of Institute,**

**Dr. Andreas Schönecker**

**Location:** Dresden

**Number of employees:** 150

**Research topics:** High-performance ceramics

**Core competencies:**

- Structural ceramics, hardmetals/cermets, specialty materials: component and technology development
- Functional ceramics: dielectric components, microsystems and energy systems, adaptronics
- Special layering technologies, integration technologies, process and state characterisation.

[www.ikts.fraunhofer.de](http://www.ikts.fraunhofer.de) [alexander.michaelis@iks.fraunhofer.de](mailto:alexander.michaelis@iks.fraunhofer.de)  
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## Fraunhofer IWS

Fraunhofer-Institute for Material and Beam Technology (IWS)

**Prof. Eckhard Beyer, Executive Director**

**Location:** Dresden & external project groups in Dortmund and USA

**Number of employees:** 190

The Fraunhofer IWS conducts application-oriented research and development in the areas of laser and surface technology.

**Key points are:** laser beam welding, cutting and ablation, surface treatment as well as the deposition of thin films. A special feature of the IWS is the experience in beam and coating technologies in combination with a profound know-how in materials and comprehensive capabilities of material characterization.

[www.iws.fraunhofer.de](http://www.iws.fraunhofer.de)

[eckhard.beyer@iws.fraunhofer.de](mailto:eckhard.beyer@iws.fraunhofer.de)



## Fraunhofer IPMS

Fraunhofer-Institute for Photonic Microsystems

**Prof. Hubert Lakner, Director**

**Location:** Dresden

**Number of employees:** 180

Fraunhofer Institute for Photonic Microsystems has 180 employees working in Research, Development and Fabrication of Micro-Electro-Mechanical Systems (MEMS) and Micro-Opto-Electro-Mechanical Systems (MOEMS). The core competencies of the Fraunhofer IPMS surpass the single device up to the development of complete systems including software.

**Competencies:** circuit design, micro scanning mirrors, micro mirror arrays, adaptive optics, organic materials and systems, sensor and actuator systems, microelectronics for lifescience.

[www.ipms.fraunhofer.de](http://www.ipms.fraunhofer.de)

[hubert.lakner@ipms.fraunhofer.de](mailto:hubert.lakner@ipms.fraunhofer.de)





## Leibniz Institute for Solid State and Materials Research (IFW)

**Prof. Helmut Eschrig, Prof. Bernd Büchner**

**Location:** Dresden

**Number of employees:** 400

**Research topics:** solid state and materials research

**Core competencies:** R&D in solid state and materials research, analytical methods for materials micro/nanotechnology.

[www.ifw-dresden.de](http://www.ifw-dresden.de) [h.eschrig@ifw-dresden.de](mailto:h.eschrig@ifw-dresden.de)



## Leibniz Institute of Polymer Research (IPF)

**Prof. Manfred Stamm**

**Location:** Dresden

**Number of employees:** 350

**Research topics:** Research on Nanotechnology

**Core competencies:** polymers for nanoelectronics and nanostructured materials.

[www.ipfdd.de](http://www.ipfdd.de) [stamm@ipfdd.de](mailto:stamm@ipfdd.de)



## Max Planck Institute for Chemical Physics of Solids

**Dr. Paul Simon**

**Location:** Dresden

**Number of employees:** 150-170

The Max Planck Institute for the Chemical Physics of Solids (MPI CPFS) was found in 1996 and consists of three departments: Solid-State Physics, Inorganic Chemistry and Chemical Metals Science. The vocation of the is the experimental investigation and synthesis of intermetallic phases displaying novel chemical and physical properties such as magnetism, super conductivity and metal-semiconductor transitions.

[www.cpts.mpg.de](http://www.cpts.mpg.de) [simon@cpts.mpg.de](mailto:simon@cpts.mpg.de)



## Nanoparc GmbH

**Dr. Thoralf Gebel, CEO**

Location: Dresden

Number of employees: 7

Business area: Micro- and optoelectronics

Main products: ion implantation services, optical microsystems, miniaturised light sources for lab-on-chip systems, flash lamp services, flash lamp systems.

[www.nanoparc.de](http://www.nanoparc.de)

[info@nanoparc.de](mailto:info@nanoparc.de)



## SAW Components Dresden GmbH

**Mr. Rüdiger Kannbley, CEO**

Location: Dresden

Number of employees: 20

Production and development of Surface Acoustic Wave (SAW) Devices:

SAW-filters, SAW-resonators, SAW sensors

[www.sawcomponents.de](http://www.sawcomponents.de)

[support@sawcomponents.de](mailto:support@sawcomponents.de)



## Saxony Economic Development Corporation (WFS)

**Mr. Markus Loetzsch, CEO**

**Location:** Dresden

**Number of employees:** 45

The WFS as a state owned company promotes business relations between Saxon and foreign companies and advises potential investors on their projects from the idea through to its implementation.

**Services:** supply of economic data, compilation of customised location offers, procurement of contacts to regional decision-makers, information on opportunities for financial support and subsidy programs, support in network development, assistance in opening up new markets and initiation of international co-operations.

[www.wfs.saxony.de](http://www.wfs.saxony.de)

[markus.loetzsch@wfs.saxony.de](mailto:markus.loetzsch@wfs.saxony.de)



## University of Applied Sciences Mittweida

Department of Mechanical Engineering

**Prof. Petra Radehaus**

Chair of Environmental Technology

**Location:** Dresden

**Number of employees:** 40

**Research areas:** nanobiotechnology, biosensors by nanostructured electrodes, cell motility in microchannels, application of biosensors to environmental treatment technologies.

[www.htwm.de/hsm-int/](http://www.htwm.de/hsm-int/)

[radehaus@htwm.de](mailto:radehaus@htwm.de)

VON ARDENNE 

## Von Ardenne Anlagentechnik

**Dr. Peter Lenk, CEO**

**Location:** Dresden

**Number of employees:** 246 **Business area:** Photovoltaics, metal strip and web coating, coating of architecture glass

**Core competencies:** Electron beam and plasma technology.

[www.ardenne-at.de](http://www.ardenne-at.de) [office@ardenne-at.de](mailto:office@ardenne-at.de)



## VTD Vakuumtechnik Dresden GmbH

**Mr. Thomas Schmidt**

**Location:** Dresden

**Number of employees:** 75

**Business area:** Vacuum coating plants and Technologies

**Main products:** metallisation plants, hard material coating plants, optical coating plants.

[www.vtd.de](http://www.vtd.de) [thomas.schmidt@vtd.de](mailto:thomas.schmidt@vtd.de)



## ZMD AG

**Mr. Richard Gibbs, Director of Business Dev**

**Location:** Dresden

**Number of employees:** approx 800 (worldwide)

Growth markets for ZMD include sensor interface solutions and wireless chipsets and modules.

ZMD AG has successfully specialised in the design, production and marketing of heavy duty, mixed analogue-digital, application-specific circuits (ASICs) and application specific standard products (ASSPs) with low energy consumption. ZMD manufactures application-specific chip sets, memories and processors. ZMD innovations are used in automotive and industrial electronics, medical technology and for infrared interfaces, for example in mobile phones and remote controls.

[www.zmd.biz](http://www.zmd.biz) [gibbs@zmd.de](mailto:gibbs@zmd.de)



## BRITISH DELEGATION

### Accelrys

**Dr. Gerhard Goldbeck-Wood**

**Nanotechnology Consortium Director**

Accelrys is the leading computational science company, providing software and services for R&D in pharmaceuticals, biotechnology, chemicals and nanotechnology. Accelrys European headquarter is based in Cambridge.

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### Advanced Energy Industries GmbH

**Mr. Kamel Ferdi**

**Director**

Advanced Energy is a global leader in the development and support of technologies critical to high-technology manufacturing processes used in the production of semiconductors, flat panel displays, data storage products, compact discs, digital video discs, architectural glass and other advanced product applications.

AE operates in regional centers in North America, Asia and Europe and offers global sales and support through direct offices, representatives and distributors. Founded in 1981, AE is a publicly held company traded on Nasdaq National Market under the symbol AEISE.

[www.advanced-energy.com](http://www.advanced-energy.com)

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### Applied Nanodetectors Ltd

**Sir Victor Higgs**

**Managing Director**

Applied Nanodetectors Ltd is developing IP and new products utilizing the benefits of nanotechnology. This company will focus its developments on products that can be developed in the near future for a consumer-orientated market.

[www.applied-nanodetectors.com](http://www.applied-nanodetectors.com)

[vhiggs@applied-nanodetectors.com](mailto:vhiggs@applied-nanodetectors.com)

### Avacta Ltd

**Prof. Alastair Smith**

**CEO**

- Avacta is developing chemical and biological detection technology for the pharmaceutical, homeland security and healthcare sectors.
- Within a wider IP portfolio Avacta is developing bio-nanoparticles for screening and diagnostics using fluorescence and fluorescence free assays.
- Avacta has core expertise in bionanotechnology, biophysics, biotechnology, optical spectroscopy and surface analysis.

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

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## **BT**

### **Dr. Edward Cole Licensing**

**Executive- IPR Exploitation**

BT is a leading provider of communications solutions serving customers throughout the world.

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## **Cambridge Technology Transfer (CTT)**

### **Mr. Adrian Horne**

**Principal**

CTT guides SMEs to develop and implement license IP rights to large companies strong in manufacturing and marketing. We have set up licensing programmes achieving worldwide penetration. An active member of the Cambridge high-tech cluster.

[www.cam-techtran.com](http://www.cam-techtran.com)

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## **CENAMPS / ONE**

### **Mr. Andy Bateman**

**Dir Bus Dev / RDA rep.**

Regional Development Agency funded Centre for Emerging Small Scale Technologies (includes Nano) Working with Industry & Academia to secure sustainable businesses through the management of Small Scale Technologies for the NE Establishing viable facilities for the exploitation of Flexible Functional Materials using Direct Write processing technologies.

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

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## **CSMA Ltd**

### **Dr. Justine Bentley**

**Technical Sales Consultant**

CSMA specialise in surface analysis performing routine analysis and problem solving. CSMA has over 25 years experience and works with companies validating products and processes. CSMA has recently merged with MATS-UK forming the largest materials characterisation company in Europe.

[www.csma.ltd.uk](http://www.csma.ltd.uk)

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## CSMA Ltd

**Dr. Hamid Kheyrandish**

**Director Business Development**

CSMA -MATS is a leading independent European Laboratory, providing consultancy and analytical services for characterization of nanomaterials, microelectronics, pharmaceutical products and medical devices to a range of clients world wide.

[www.csma.ltd.uk](http://www.csma.ltd.uk) and [www.mats-uk.com](http://www.mats-uk.com)

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## Deben Venture Consulting

**Mr. Barry Butler**

**Managing Consultant**

Deben Ventures is a technology commercialisation consultancy specialising in nano-technology, photonics and ICT.

**We undertake:**

- Business Planning
- Fund raising
- Follow through project management and delivery.

We also work with Seraphima Ventures [www.seraphimaventures.com](http://www.seraphimaventures.com)

[www.debenventures.co.uk](http://www.debenventures.co.uk)

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## Epigem Limited

**Prof. Tim Ryan**

**CEO**

Manufacture of integrated function and materials platforms enabling nanotechnology (functional surfaces, microelectrodes, replicated microoptics, microfluidics). Polymer micro-engineering facilities. Collaborative MNT research activity.

[www.epigem.co.uk](http://www.epigem.co.uk)

[tim.ryan@epigem.co.uk](mailto:tim.ryan@epigem.co.uk)

## European Nanotechnology Trade Alliance

**Mr. Del Stark**

**CEO**

Remit – Created to represent the interests of nanotechnology businesses across Europe, ENTA will act to bridge gaps between governments, science and industry policy makers and business. It will also openly interface with the public and watchdog organizations to promote transparency and ensure that new nanotechnologies are developed in a safe, and responsible manner. ENTA will become a first port of call for the media to express the industry view on nanotechnology.

[www.euronanotrade.org](http://www.euronanotrade.org)

[info@euronanotrade.org](mailto:info@euronanotrade.org)

## **Euspen Ltd.**

**Dr. Silvia Marson**

**Technical coordinator**

Euspen (European Society for Precision Engineering and Nanotechnology, [www.euspen.com](http://www.euspen.com)) links industrialists to researchers in the field of precision, micro and nanotechnologies to promote, develop and exploit such technologies.

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## **Faraday Advance**

**Dr. Colin Johnston**

**Technology Translator**

Future materials for low pollution, high efficiency, cost-effective transport.

[www.faraday-advance.net](http://www.faraday-advance.net)

[colin.johnston@materials.ox.ac.uk](mailto:colin.johnston@materials.ox.ac.uk)

## **FirstCapital**

**Mr. Amer Vohora**

**Associate**

Corporate finance house advising technology companies on fundraising and M&A. Advised Oxonica, nano-materials company, on venture capital fundraising. Six successful transactions in 2005

[www.firstcap.co.uk](http://www.firstcap.co.uk)

[amer.vohora@firstcap.co.uk](mailto:amer.vohora@firstcap.co.uk)

## **Fluent Europe Ltd**

**Dr. Atul Karanjkar**

**Business Development Manager**

Fluent is the world's leading provider of Computational Fluid Dynamics (CFD) simulation software, training and consultancy services.

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

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## German British Chamber of Industry & Commerce

### Dr. Bernd Atenstaedt

Deputy Director General of the German British Chamber of Commerce

The German-British Chamber of Industry & Commerce in London is a business to business organisation of some 700 British and German member firms. The Chamber helps around 10,000 companies each year start or expand their export activities through providing business contacts, information and advice.

[www.ahk-london.co.uk](http://www.ahk-london.co.uk)

[dr.atenstaedt@ahk-london.co.uk](mailto:dr.atenstaedt@ahk-london.co.uk)

State-of-the-art PVD coating systems for process development.

## German British Chamber of Industry & Commerce

### Mr. Ulrich Hoppe

Director General

The German-British Chamber of Industry & Commerce in London is a business to business organisation of some 700 British and German member firms. The Chamber helps around 10,000 companies each year start or expand their export activities through providing business contacts, information and advice.

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## Gibson Index Ltd

### Mr. Marcus Gibson

Managing Director

The 'Gibson Index' is the world's first comprehensive truly National Database of High Technology Small Companies (SMEs), numbering more than 20,000, across all of the 24 main technology sectors. The DTI, many other state agencies, financial bodies and innovation organisations are our customers and subscribers. Gibson Index Ltd has undertaken a series of ground-breaking innovation consultancy and confidential enterprise studies for major UK, and Irish, organisations.

[www.gibson-index.com](http://www.gibson-index.com)

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## Hamamatsu Photonics

### Mr. James Owens

Sales Engineer

Hamamatsu are one of the leading global suppliers of high quality opto-electronic components. We are continually developing new system products for applications in emerging technologies eg. Quantum Yield Measurement System for OLEDs.

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

[jowens@hamamatsu.co.uk](mailto:jowens@hamamatsu.co.uk)

## HealthTech

**Mr. James Love**

**Certification Advisor**

HealthTech is partially funded by ERDF with a focus on helping SMEs in the West Midlands who are either entering the healthcare market or developing new products for that sector. Eligible companies can get 5 days of free consultancy.

[www.health-tech.org.uk](http://www.health-tech.org.uk)

[james@health-tech.org.uk](mailto:james@health-tech.org.uk)

## Hertfordshire Business Incubation Centre

**Mr. Armando Villasmil**

**Business Incubation Exec**

HBIC provide technology and business support to rapid growth knowledge-based SME HBIC aim is to create wealth and employment, and to stimulate innovation and entrepreneurship. Incubation services include business planning, mentoring, networking, entrepreneur development, project management, technology transfer and access to finance.

[www.hertsbic.co.uk](http://www.hertsbic.co.uk)

[armandov@hertsbic.co.uk](mailto:armandov@hertsbic.co.uk)

## IDB Technologies Ltd

**Mr. Ian Burnett**

**Managing Director**

- Manufacture plasma systems able to deposit special coatings for surface energy modification.
- Specialised in R+D applications with flexibility of precursors and process conditions enabling MEMS surface antistiction and hydrophobic layers for repellency.
- Scale up systems for volume production and large substrates.

[www.idbtechnologies.co.uk](http://www.idbtechnologies.co.uk)

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## Iles Limited

**Mr. See Lip Sim**

**Managing Director**

Iles Limited is a technology development company and its main innovation is a Highly reliable electronic control gear for HID and fluorescent lighting. We also manufactures a range of innovative lighting control products.

[www.ileslimited.co.uk](http://www.ileslimited.co.uk)

[sim@ilesltd.freemove.co.uk](mailto:sim@ilesltd.freemove.co.uk)



## **IMPACT Faraday Ltd**

### **Mr. Malcolm Wilkinson**

#### **Managing Director**

IMPACT Faraday Ltd is a knowledge transfer company which is part of the UK governments flagship Faraday programme facilitating the uptake of innovative technology in key business sectors.

IMPACT's focus is in colloid science and particle, including nanoparticle, technology. We have a research portfolio of over 50 projects and lead the + £5 mil. LINK scheme ACORN collaborative research project in nanoparticles.

[www.impactfaraday.org](http://www.impactfaraday.org)

[m.wilkinson@impactfaraday.org](mailto:m.wilkinson@impactfaraday.org)

## **INEX**

### **Prof Ken Snowdon**

#### **Director**

INEX – MNT fabrication services

- product development
- prototyping
- small volume manufacturing
- consultancy
- training

[www.inex.org.uk](http://www.inex.org.uk)

[k.j.snowdon@ncl.ac.uk](mailto:k.j.snowdon@ncl.ac.uk)

## **Innos**

### **Dr. Alec Reader**

#### **Manager**

Innos is the UK's leading research and development company for innovations in nanoscale technology. We provide industry and academic institution with a full processing capability for nanoscale devices.

[www.innos.co.uk](http://www.innos.co.uk)

[donna.welsh@innos.co.uk](mailto:donna.welsh@innos.co.uk)

## **JEMI (UK) Ltd**

### **Mr. William Revolta**

#### **Director**

JEMI (UK) Ltd is the association of the manufacturers and Suppliers of equipment and service providers to the electronics industry.

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

[revolta@btinternet.com](mailto:revolta@btinternet.com)

## **JEMI UK**

### **Mr. Iain Hyslop**

#### **Chairman**

Jemi UK Ltd stands for the Joint Equipment and Materials Initiative. We represent over 60 companies within the UK and Europe. Our aim is to create business opportunities for our members.

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

[iain.hyslop@ee.ed.ac.uk](mailto:iain.hyslop@ee.ed.ac.uk)

## London South Bank University

### Prof. Hari Reehal

#### Professor

Research is being carried out on thin film materials for opto-electronic devices and functional coatings. The main themes are:1 Photovoltaic devices2 Thin film growth using microwave plasmas3 Nanostructured functional coatings4 Characterisation of materials and devices.

[reehalhs@lsbu.ac.uk](mailto:reehalhs@lsbu.ac.uk)

## National Physical Laboratory

### Dr. Catherine Halliwell

#### National Contact Point

NPL is the UK national standards laboratory. NPL has knowledge and expertise in metrology for biomeasurement and nano-technology UK industry. The UK National Contact Point for Nanotechnologies, Materials and Production in FP6 is located at NPL.

[www.npl.co.uk](http://www.npl.co.uk)

[catherine.halliwell@npl.co.uk](mailto:catherine.halliwell@npl.co.uk)

## Oxford Innovation

### Mrs. Eileen Modral

#### Project Manager

- Business Support including toolkits using templates and best practice guides.
- Raising Finance through our investment networks.
- Technology Commercialisation including support and guidance for selected entrepreneurs and innovators.

[www.oxin.co.uk](http://www.oxin.co.uk)

[e.modral@oxin.co.uk](mailto:e.modral@oxin.co.uk)

## Oxford Instruments Plasma Technology

### Dr. John Burgoyne

#### Marketing Manager – Innovative Products

**Oxford Instruments is a provider of:** tools and processes for engineering nanostructures and devices- low temperature and high magnetic field environments for nanoscale phenomena- X-ray analysis and characterisation tools.

[www.oxford-instruments.com](http://www.oxford-instruments.com)

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## **Oxford Instruments Plasma Technology**

### **Dr. Ian Barkshire**

#### **Nanotechnology Programme Manager**

A global leader in advanced instrumentation, providing the tools, processes and solutions for nanoscience research and its transfer into commercial nanotechnology applications.

Offering solutions for the fabrication and characterisation of nanoscale materials, structures and devices, and environments in which to perform fundamental nanoscience.

Oxford Instruments today employs over 1,200 people, operating globally, and is listed on the London Stock Exchange (OXIG).

[www.oxford-instruments.com](http://www.oxford-instruments.com)

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## **Oxford Instruments Plasma Technology**

### **Mr. Simon Durrant**

#### **Marketing Director**

Oxford Instruments Plasma Technology (OIPT) provides manomaterial growth and processing equipment to the commercial and academic research and development markets. OIPT products include plasma deposition and etch, MBE and Ion Beam systems, soon to be joined by innovative thin film deposition and nanofabrication tools.

[www.oxford-instruments.com](http://www.oxford-instruments.com)

[simon.durrant@oxinst.co.uk](mailto:simon.durrant@oxinst.co.uk)

## **Oxford Materials Characterisation Service**

### **Dr. Alison Crossley**

#### **Manager**

Oxford Materials Characterisation Service (OMCS) deals with the commercial services offered by the Department of Materials. A dedicated team of experts provide fast and reliable turnaround of confidential and quality assured services.

[www.materials.ox.ac.uk](http://www.materials.ox.ac.uk)

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## **Panchromos Limited**

### **Mr. Marc Bax**

#### **Managing Director**

Panchromos works with clients to define, design and engineer technology-based tangible products.

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

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## **Plasma Quest Limited**

### **Prof. Mike Thwaites**

#### **CEO**

Plasma Quest Limited has developed a novel sputter deposition technology that: Deposits optical thin film dielectric materials at high rate and near bulk properties. Can sputter ferromagnetic materials at high rate from thick ferromagnetic sputter targets. Sputter target utilisation can be greater than 90%.

[www.plasmaquest.co.uk](http://www.plasmaquest.co.uk)

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## **Psi-ense Limited**

**Mr Chris Budleigh**

**Managing Director**

Psi-ense Ltd provide commercialisation services to start-up companies in nanotechnology and photonics instrumentation. Key services include market research, fundraising, provision of distribution channels and early stage management. Psi-ense have a number of active projects with companies and universities across the UK.

[www.psi-ense.co.uk](http://www.psi-ense.co.uk)

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## **Queen Mary University of London**

**Prof. Ton Peijs**

**Prof. in Materials**

**Dr. Mike Reece**

**Reader in Materials**

The Department of Materials at Queen Mary, University of London is the oldest Materials Department in the country and since its establishment in 1967. The department now enjoys an international reputation for excellence for its research into metals, polymers, composites, biomaterials, ceramics and nanomaterials.

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## **Queen Mary, University of London**

**Dr. Roger Nix**

**Senior Lecturer**

Surfaces & Interfaces Research Group. Fundamental research in the fields of surface functionalisation, protective coatings, barrier layers and catalytic chemistry. Applied surface analysis (especially XPS, UPS, surface IR spectroscopy).

[www.chem.qmul.ac.uk/staff/nix/](http://www.chem.qmul.ac.uk/staff/nix/)

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## **Queen Mary, University of London**

**Prof. Pankaj Vadgama**

**Director of the IRC in Biomed. Mats**

The Interdisciplinary Research Centre (IRC) in Biomedical Materials has established research groups. The IRC plans to be in the vanguard of developments in Biomedical Materials with a platform for high quality, interdisciplinary research. There is collective expertise within the IRC providing an exciting focus for development of leading edge, novel interdisciplinary problem solving research.

[www.irc-biomed-materials.qmw.ac.uk](http://www.irc-biomed-materials.qmw.ac.uk)

[p.vadgama@qmul.ac.uk](mailto:p.vadgama@qmul.ac.uk)



## Richard Thomson Associates

### Mr. Richard Thomson

#### Managing Director

The European specialists in the thin film and epitaxy markets for research, development and production. Our focus is on thin films grown by molecular beam epitaxy (MBE), pulsed laser deposition (PLD) and metallorganic vapour phase epitaxy (MOVPE).

[www.rt-associates.com](http://www.rt-associates.com)

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## School of Computing, Engineering and Information Sciences

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## SEEDA & MNT Network

### Dr. Jason Wiggins

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SEEDA is one of the 9 Regional Development Agencies.

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## Smiths Aerospace

### Dr. Chris Ovenden

#### Advanced Technology Business Development Manager

Smiths Aerospace is part of the Smiths Group – a UK company. It is a manufacturer of aircraft equipment including avionics, electrical power distribution systems, displays, flight management and control systems, equipment health management systems and aero- structures.

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## Syrris Ltd

### Mr. Mark Gilligan

#### Managing Director

- Syrris is focussed on productivity tools for chemistry.
- Syrris has a product stream and R&D activity in Microreactors.
- Syrris is on the brink of starting a new Microfabrication business called Dolomite.

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## The IEE

### Mr. Len Lewell

#### Professional Network Manager

The Microsystems & Nanotechnology Professional Network is a special interest group of the IEE – Europe largest professional engineering organisation – set up to forward the IEE mission statement of capturing a disseminating knowledge to the wider engineering community in the areas of micro/nanotechnologies.

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## The Oxis Partnership

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Surveying skills and training needs in MNT- high throughput technologies for product and process development- innovation support for emerging technologies

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## TTP

### Dr. David Anderson

#### VP Advanced Projects

TTP builds and applies intellectual property to create new products and businesses. Helping clients explore and commercialise current nanotechnology opportunities. Managing DTI's £40M MNT Facilities and Network Programme for the future.

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#### Consultant

Since its foundation in 1987, TTP has grown to become Europe's leading independent technology development and licensing company. Our primary objective is to create new business based on advances in technology. Evidence of our success exists in the development and market launch of many new products based on significant advances in technology. TTP operates internationally. We are particularly active in continental Europe, the Far East and the USA.

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## Unilever R&D

### Dr. Yiton Fu

#### Microsystems Specialist

Unilever is a multi-national organisation with a long established understanding about the dynamic and diverse consumer market. It has world-class expertise of processing high standard materials into valuable consumer products. In the recent years, the internal interest of applying Microsystems Technology to benefit the Food and HPC products has been increasing.

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## University of Portsmouth

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Reader in Molecular Biotechnology

EU grant – Mol Switch, to link biological and silicon worlds through a single molecule molecular switch. Coordinator NanoNet Network – molecular machines. Biosensor development.

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## University of Warwick

### Prof. Julian Gardner

Dean of the School of Engineering

Warwick University is a leading UK centre of research. The School of Engineering is one of the largest in the UK and has a long record of expertise in nanotechnology and MEMs.

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## Visteon UK Ltd

### Dr. Morris Roseman

Material Engineer

Visteon Corporation is a leading, full-service supplier that delivers consumer-driven technology solutions to automotive manufacturers worldwide and through multiple channels within the global automotive aftermarket. Visteon has about 70,000 employees and a global delivery system of more than 200 technical, manufacturing, sales and service facilities located in 24 countries.

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## Welsh Development Agency

### Mr. Anthony Armitage

MNT Manager

- The Welsh Development Agency is coordinating the setting up in Wales of a non-silicon polymer based nano fabrication and tooling capability specialising in Microfluidic devices.
- The UK Laser Machining Centre is at Bangor and the Micro Bridge ProFIB tooling facility is at Cardiff.
- Cardiff University is leading the development of a networked UK wide NMT academy for the training of NMT technicians.

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