IN SEARCH OF EXCELLENCE!

The German Federal Ministry of Education and Research (BMBF) is supporting the establishment of fast-track research groups at eight new Centres for Innovation Competence. Scientists with excellent references and international expertise are invited to send in their applications by 5 Sept. 2008.

Women are especially invited to apply. Preference will be given to disabled applicants with equal qualifications. For further details on the application requirements please see: www.unternehmen-region.de

B CUBE – Molecular Bioengineering Dresden
Dresden Technical University

Nature offers an enormous arsenal of functional systems and properties that could answer a wide range of unmet technological needs. The vision of the newly founded Centre for Innovation Competence Molecular Bioengineering, B CUBE, is to identify natural functional units, characterise them at the molecular level, and adapt them to specific needs and design the materials and technologies of the future. The centre will initially comprise three complementary Junior Research Groups that will closely interact with three newly created B CUBE professorial chairs and be supported by a pool of state-of-the-art technology platforms. B CUBE, in collaboration with the German Federal Ministry of Education and Research, invites applications for the following positions:

Research Group Leader "Bionanotechnological Analysis and Manipulation" or "Biofunctional Nanostructures"
Equivalent to Junior (DE) or Assistant (USA) Professorship

The successful candidate will establish an international team of young, talented scientists to investigate biomolecules and complexes to unlock adaptive functional units. This requires the continual development of bionanotechnological methods to characterise and manipulate biomolecular structures and functions. Applicants should possess a PhD in biomaterials science. The project leader should have documented experience in these fields at postgraduate and postdoctoral level.

Research Group Leader "Reconstitution of Membrane Proteins"
Equivalent to Junior (DE) or Assistant (USA) Professorship

The successful candidate will establish a team to develop technologies for the reconstitution of membrane proteins and the analysis of their interactions with membrane components. The applicant will have received training in physical chemistry/membrane biochemistry and have demonstrated postdoctoral experience in membrane protein reconstitution and membrane protein-carbohydrate interactions.

Research Group Leader "Recombinant Expression of Membrane Proteins"
Equivalent to Junior (DE) or Assistant (USA) Professorship

The successful candidate will establish a team to develop technologies for recombinant expression of functional membrane proteins (preferentially in prokaryotes) suitable for structural biology. The applicant will have received training in physical chemistry and/or biophysics, and have documented experience in these fields at postgraduate and postdoctoral level.

Or:

The successful candidate will establish an international team of young, talented scientists to study and imitate adaptive processes observed in natural systems. The goal of this research group is to establish novel synthetic pathways for innovative nanomaterials that may lead to future technological applications. Applicants should possess a PhD in biochemistry and/or polymer chemistry and demonstrate postdoctoral experience in the analysis and control of biomolecular processes and/or supramolecular chemistry.

Research Group Leader "Bioresponsive Materials"
Equivalent to Junior (DE) or Assistant (USA) Professorship

The successful candidate will establish an international team of young, talented scientists to transfer adaptive principles seen in nature into synthetic polymer materials. The aim of the group is to combine biomolecules, bioanalogous components and synthetic polymer architectures to yield reversible, self-regulating systems. Applicants should possess a PhD in chemistry and demonstrate postdoctoral experience in preparative biochemistry and/or organic or macromolecular chemistry.

The positions are initially funded for a period of five years. The salary is aligned to TV-L and commensurate with age and experience. Candidates are required to demonstrate a commitment to excellence in both research and teaching. B CUBE offers a unique research environment with excellent facilities and an internationally recognised expertise in biology, biotechnology and materials research.

Applications should be addressed to:
B CUBE
Technische Universität Dresden
Professor Carsten Werner
Tatzberg 47
01307 Dresden
Germany

For further information please contact:
office@bcube-dresden.de; http://www.bcube-dresden.de

HALOmem
Martin Luther University Halle-Wittenberg

The Centre for Innovation Competence HALOmem at the Martin Luther University Halle-Wittenberg seeks to initiate an expertise platform for the determination of membrane protein structure. In this context, two independent research groups are to be established: "Recombinant Expression of Membrane Proteins" and "Reconstitution of Membrane Proteins". Both groups will have the opportunity to work and collaborate within a stimulating multidisciplinary environment that has established Halle as an internationally recognised centre for pure and applied protein biochemistry, biotechnology and biophysics.

HALOmem seeks highly motivated and outstanding junior scientists for the positions of:

Research Group Leader "Recombinant Expression of Membrane Proteins"

The successful candidate will establish a team to develop technologies for recombinant expression of functional membrane proteins (preferentially in prokaryotes) suitable for structural biology. The applicant will have received training in physical chemistry and/or biophysics covering a wide array of methods. Documented experience in these fields at postgraduate and postdoctoral level is expected.

Furthermore, applicants should ideally have experience in:
- Working in an interdisciplinary environment
- Project coordination and leadership
- Obtaining third party funding
- Interacting within an interdisciplinary milieu

Each group will receive funding from the German Federal Ministry of Education and Research, including laboratory set-up, consumables and additional personnel of 4-5 co-workers for five years. Successful candidates are expected to participate in undergraduate teaching to a limited extent and to contribute to the "Graduate School of Molecular Life Sciences". Both positions offer the possibility of subsequent tenure at the Martin Luther University, which may or may not be submitted for tender depending on the success of the group leader.

The Martin Luther University Halle-Wittenberg strives to promote equal opportunities in science. Female and disabled applicants, qualified according to the above criteria, will be given preference over other candidates with equivalent relevant qualifications.

Applications and enquiriess should be addressed to:
Professor Milton T. Stubbs
ZIK HALOmem
ZIB Institut für Biochemie und Biotechnologie
Martin-Luther-Universität Halle-Wittenberg
Kurt-Mothes-Strasse 3
06120 Halle (Saale), Germany
E-mail: k.-d.husemann@fz-juelich.de

For further information please contact:
info@halomem.de; http://www.halomem.de
Humoral Immune Reactions in Cardiovascular Diseases

Ernst Moritz Arndt University Greifswald

The Ernst Moritz Arndt University Greifswald is a traditional German university located in the beautiful region of West Pomerania on the Baltic Sea coastline. Life Sciences constitute one of its major research areas. The university is setting up a new interdisciplinary Centre for Innovation Competence. Its establishment is supported by the German Federal Ministry of Education and Research through the funding of two research groups. The focus of the centre is the humoral immune response in cardiovascular diseases. It will elucidate nanostuctures of antigens in cardiovascular diseases and the reactions of the immune system upon contact with these complex structures.

For this purpose, two research groups will be established: "Nanostructure" (applying biochemical, biophysical and nanotechnological methods) and "Cell Response" (modern immunological techniques), with both groups collaborating closely. The research group leaders will build a team of 4–5 scientists each. Both groups will be funded initially for five years, with about 3 million euros each. This includes personnel, laboratory set-up and consumables.

Research Group Leader "Nanostructure"

We seek to recruit an outstanding scientist with experience in separation and analysis of proteins, especially in structural changes of proteins and protein aggregates. Candidates should be familiar with nanotechnological structures such as atomic force microscopy or photon correlation spectroscopy. Knowledge of immunology is considered an advantage.

Candidates should possess a PhD, preferably in biology, biochemistry or medicine (immunology, haematology) and should be experienced in advanced immunological techniques in cooperation with medical and natural science that offers young scientists optimal working conditions in the scenic surroundings of West Pomerania in the close vicinity of the Baltic Sea, its islands of Ruegen and Usedom. The two junior research group leaders to be appointed have the opportunity to form their own research group and realise their own research concept within the framework of the goals of plasmatis.

Research Group Leader "Cell Response"

The leader, along with 4–5 staff members, is responsible for the investigation of the direct impact of growth and the vitality of cells and tissues under the influence of physical plasmas.

Applicant expectations:
- Distinguished PhD (e.g., in biology, biochemistry, pharmacy, medicine)
- Core competence in the field of cell biology
- Experience with project management and management of personnel
- Work experience abroad in an advantage

Research Group Leader "Extracellular Effects"

The leader, along with 4–5 staff members, is responsible for the investigation of the indirect impact on cells and tissues of mutations of the vital environment through physical plasma.

Applicant expectations:
- Distinguished PhD (e.g., physics, engineering)
- Core competence in the field of plasma physics or biophysics
- Internationally accounted publication list
- Experience with project management and management of personnel
- Work experience abroad in an advantage

InnoFSPEC Potsdam

innoFSPEC Potsdam, the Centre for Innovation Competence for Fibre-Optical Spectroscopy and Sensing, is established as a joint initiative of the Astrophysical Institute Potsdam (AIP) and the University of Potsdam (UPPC). The centre’s research focus is the unique combination of multichannel spectroscopy and fibre-optical chemical sensing.

innoFSPEC Potsdam invites applications for:

Research Group Leader “Multichannel Spectroscopy”

Both positions are equivalent to Junior (DE) or Assistant (USA) Professorship. Tenure track option.

We are seeking outstanding candidates with strong research records in one or several of the following fields: astronomical instrumentation, physical chemistry, photonics, laser spectroscopy, fibre-optical sensing. Successful candidates should have several years of postdoctoral experience, preferably in an international context.

Both group leaders will head teams of 4–5 postdoctoral researchers or doctoral students with secured funding for an initial period of five years. They will be supported by a dedicated centre manager and by administrative and scientific staff of the two hosting institutions.

The innoFSPEC headquarters will be located at AIP in Potsdam-Babelsberg. Research will take place on the thriving, attractive campuses of AIP and the University of Potsdam. In addition to the existing research infrastructure of modern laboratories, computer facilities and workshops, new buildings will provide dedicated lab space for the centre. innoFSPEC will be embedded in an active academic and student environment and will build upon the existing research and the dynamic teams of AIP and UPPC.

Potsdam, the capital of Brandenburg, is a beautiful city with Prussian castles and attractive lakes, featuring an outstanding scientific environment with about 25 research institutions. Moreover, the federal capital Berlin provides unique benefits in terms of science, culture, education and leisure.

Applications should be addressed to:

Universität Potsdam and

Project Management

Professor Andreas Greinacher
Sauерbruchstraße 17
10969 Berlin, Germany
E-mail: k.-d.husemann@fz-juelich.de

Institute for Immunology and Transfusion Medicine

plasmatis – Leibniz Institute for Plasma Science and Technology (INP) Greifswald

With “plasmatis – plasma plus cell”, an interdisciplinary Centre for Innovation Competence for the investigation of interactions between plasma and living matter is established as a cooperation between INP Greifswald and Greifswald University. The centre seeks the potential of plasma applications in medicine. plasmatis will conduct fundamental research with the goal of understanding the complex mechanisms of the impact of plasma on cellular structures in order to derive systematic therapy options, particularly for wound healing. With plasmatis, a modern and well-equipped research centre arises on a new university campus coupled by medical and natural science that offers young scientists optimal working conditions in the scenic surroundings of West Pomerania in the close vicinity of the Baltic Sea, its islands of Ruegen and Usedom. The two junior research group leaders to be appointed have the opportunity to form their own research group and realise their own research concept within the framework of the goals of plasmatis.

Research Group Leader “Cellular Effects”

The leader, along with 4–5 staff members, is responsible for the investigation of the direct impact of growth and the vitality of cells and tissues under the influence of physical plasmas.

Applicant expectations:
- Distinguished PhD (e.g., in biology, biochemistry, pharmacy, medicine)
- Core competence in the field of cell biology
- Internationally accounted publication list
- Experience with project management and management of personnel
- Work experience abroad in an advantage

Research Group Leader “Extracellular Effects”

The leader, along with 4–5 staff members, is responsible for the investigation of the indirect impact on cells and tissues of mutations of the vital environment through physical plasma.

Applicant expectations:
- Distinguished PhD (e.g., physics, engineering)
- Core competence in the field of plasma physics or biophysics
- Internationally accounted publication list
- Experience with project management and management of personnel
- Work experience abroad in an advantage

Silicon and Light: from macro to nano – Sili-nano

Martin Luther University Halle-Wittenberg

We are establishing a leading centre for light conversion processes in silicon: Silicon and Light: from macro to nano – Sili-nano. The topic of "Optoelectronic Reciprocity" will be covered by two research groups – "Silicon-to-Light" and "Light-to-Silicon" – in close collaboration with the Institute for Physics of the Martin Luther University Halle-Wittenberg, the Fraunhofer Institute for Microstructure Physics, the Fraunhofer Institute for Materials and the Fraunhofer Centre for Silicon Photovoltaics. Sili-nano will be largely independent and organised as an interdisciplinary interdisciplinary institutional scientific entity under the roof of the Martin Luther University Halle-Wittenberg.

Research Group Leader/Assistant Professor “Silicon-to-Light”

The group leader should be an outstanding expert in the field of silicon technology, in particu lar, silicon photonics and non-linear optics. The scientific focus of the group is a broad range of optical solid state spectroscopy as well as the preparation of nanostructured silicon. Candidates should have a PhD (preferably in physics). Experience in leading a research group and in university teaching is desirable.

Research Group Leader/Assistant Professor “Light-to-Silicon”

The group leader is expected to be an outstanding expert in the field of phosphors and fluorescing glasses and glass ceramics. The scientific focus of the group is a broad range of solid state spectroscopy as well as the preparation of fluorescent glasses and glass ceramics. Experience in the field of photon management for solar cells is necessary. Candidates should have a PhD (preferably in physics) and experience in leading a research group and in university teaching.

After five years of funding from the German Federal Ministry of Education and Research and a positive evaluation, a tenure track position will be provided for the two group leaders (Associate Professorship at the Institute for Physics at the Martin Luther University Halle-Wittenberg or a leading position at the Fraunhofer Institute for Materials, please send your application to:

Professor Heinrich Graener
Dekan der Fakultät für Naturwissenschaften II
Martin-Luther-Universität
Friedemann-Bach-Platz 6
06180 Halle (Saale), Germany
E-mail: k.-d.husemann@fz-juelich.de

For further information please contact:
heinrich.graener@physik.uni-halle.de; http://www.sili-nano.de
**SEPTOMICS**

**Friedrich Schiller University Jena**

The newly founded Centre for Innovation Competence SEPTOMICS in Jena will be established as an integrated research centre with the vision to improve the molecular understanding of life-threatening infections and the ensuing host response. Three complementary and interacting groups of scientists will be established. They will benefit from close collaboration within an academically well-established cluster of sepsis research in Jena allowing translational and early clinical proof of concept studies.

**Research Group Leader (Associate Professor, W2)**

**“Fungal Septomics”**

The position is available for an outstanding young scientist with PhD/MD background and experience in molecular biology and functional genomics of human pathogenic fungi, preferentially candida albicans. The group leader is expected to possess a strong publication record. He/She is to establish a scientific team that utilises tools of systems biology to identify and characterise molecular patterns in the response of the fungus to the innate immune system.

**Research Group Leader (Associate Professor, W2)**

**“Host Septomics”**

The position is available for an outstanding young scientist with PhD/MD background and experience in molecular biology, functional genomics, immunoology and the general field of host response. He/She is expected to possess a strong publication record. He/She is expected to establish a team of scientists that utilises tools of systems biology to improve understanding of innate and adaptive immune responses to bacterial and fungal infections.

Funding of the groups will include laboratory set-up, consumables and additional personnel (postdoctoral as well as technical positions) for five years. A successful group leader will be offered a tenure track by the university. The Friedrich Schiller University Jena aims to increase the number of women in those areas in which they are underrepresented and therefore urges them to apply. Suitably qualified disabled individuals will be preferred and are especially encouraged to apply.

Jena has been elected “Science City 2008” and is a friendly university town with excellent cultural, recreational and living facilities.

Applications should be addressed to:

- **RG Fungal Septomics:**
  Friedrich Schiller University Jena
  Dean of the Biological-Pharmaceutical Faculty
  Professor J. Lehmann
  Fürstengraben 26
  07743 Jena, Germany

- **RG Host Septomics:**
  Friedrich Schiller University Jena
  Dean of the Medical Faculty
  Professor K. Benndorf
  Bachstrasse 18
  07743 Jena, Germany

For further information please contact:

- axel.brakhage@hki-jena.de (RG Fungal Septomics), konrad.reinhart@med.uni-jena.de (RG Host Septomics); [http://www.septomics.de](http://www.septomics.de)

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**Virtuhcon**

**Freiberg Technical University**

The Freiberg Technical University holds a leading position worldwide in the fields of metallurgy and fuel conversion, both topics ranking among the core themes of the university’s research profile. Scientific top-rate performances in these fields are pushed by extending the excellent infrastructure. A further leap in quality will be achieved by the establishment of the Centre for Innovation Competence Virtuhcon (Virtualisation of High Temperature Conversion Processes).

The centre will focus on the improvement of sustainability of the most resource- and energy-intensive processes in the energy conversion and material supply sector. High temperature conversion processes will be modelled, simulated and virtualised on a new scientific level by using high-performance computing.

**Research Group Leader “Multiphase Systems”**

The group leader sets up an international team of young scientists. The tasks of the team are the comprehensive analysis of material systems of real high temperature conversion processes and the development of consistent property data sets allowing the thermodynamic description of complex material systems and the creation of mathematical and natural scientific models.

Requirements for engagement are:

- PhD (e.g. process engineering, metallurgy, technical/physical chemistry, technical mineralogy)
- Experience in R&D and high temperature conversion processes technology
- Scientific professional experience abroad and experience in international cooperation
- Managerial skills, capacity for teamwork, motivation and interdisciplinarity

**Research Group Leader “Reactive Flow Systems”**

The research group leader and his team will investigate the characteristics of reactive flows at different reaction room geometries for high temperature conversion processes. The team will analyse and develop models of flow behaviour under different conditions. The combination of those models serves as a basis for realistic numerical simulation and virtualisation of high temperature conversion processes for diverse applications. The tasks include the utilisation of CFD software and visualisation and the virtualisation of a large amount of data.

Applicants should possess:

- PhD (fluid dynamics, mechanical process engineering, physics, numerical mathematics)
- Experience in one or various fields of reactive flows simulation, modelling and numerical simulation of highly particle loaded turbulent flows, visualisation and virtualisation as well as research, development and engineering of high temperature conversion processes
- Experience in project coordination and in leading an interdisciplinary, international team
- Team spirit, ability to work under pressure and high motivation

The initial appointments are for a period of five years and renewable upon satisfactory performance and continuation of funding for another five years.

Applications and enquiries should be addressed to:

- **TU Bergakademie Freiberg** and
  **Dezernat für Personalangelegenheiten**
  09596 Freiberg
  Germany
  E-mail: k.-d.husemann@fz-juelich.de

For further information please contact:

Professor Meyer (bmeyer@iarc.tu-freiberg.de); [http://www.virtuhcon.de](http://www.virtuhcon.de)