

## Positions Available



**Indian  
Institute  
of Science**

Bangalore, India



## POSTDOCTORAL POSITION

The Indian Institute of Science seeks postdoctoral applicants to work in an interdisciplinary research programme between materials and mechanical engineering on nanotribology and high temperature coatings. Suitable candidates will have core expertise in one or more of the following fields: mechanical behaviour of materials, microscopy (TEM, AFM), mechanics modeling, or tribology. Facilities available include nanoindenters, SPMs, FIB, FEG-TEM, SEM, nanotribometers, and excellent computing resources.

Positions are available with immediate effect and carry a monthly remuneration of about Rs 25,000/-.

Applications with a CV and list of three referees may be sent to Professors:

S. K. Biswas at [skbis@mecheng.iisc.ernet.in](mailto:skbis@mecheng.iisc.ernet.in)  
V. Jayaram at [qjayaram@materials.iisc.ernet.in](mailto:qjayaram@materials.iisc.ernet.in)

[www.iisc.ernet.in](http://www.iisc.ernet.in)



**BIOTECH AND CHEMICAL  
IP ATTORNEYS**  
**Sterne, Kessler, Goldstein &  
Fox P.L.L.C.**

Sterne, Kessler, Goldstein & Fox P.L.L.C. has immediate opportunities for Chemical and Biotech patent attorneys. Successful candidates must possess a Bachelor's degree in Chemistry, Biology, or the related engineering fields. An advanced degree in the above listed fields is preferred.

We are looking for motivated candidates with excellent credentials and at least two years of experience. Experience in the Nanotech or Materials areas is a plus.

Position offers the chance for major responsibilities. Candidates who seek to break out of a team and have the opportunity for leadership are encouraged to apply. Position entails direct client contact and all phases of patent practice. This will include preparation, prosecution, licensing, client counseling, and litigation. Competitive salary commensurate with experience and excellent benefits package are offered.

Please use **Reference Number SKGFBMRS31708** when applying for this position. Visit our website at [www.skgf.com](http://www.skgf.com) or contact Tacie Steidel, Recruitment Coordinator, Sterne, Kessler, Goldstein & Fox P.L.L.C., by e-mail at [legalcareers@skgf.com](mailto:legalcareers@skgf.com) or 202-371-2600.

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

## Imperial College London

UK Centre for Structural Ceramics

### Joint Chair in the Departments of Materials and Mechanical Engineering

Salary is currently £63,000 p.a. (subject to a pay review in October)

*Imperial College is ranked the fifth best university in the world (Times Higher QS World University Rankings 2007).*

The Departments of Materials and Mechanical Engineering at Imperial College London have been awarded £5.5 million by the EPSRC to set up the UK Centre for Structural Ceramics, which aims to develop strong links to energy, aerospace and defence, transport and healthcare industries.

The UK Centre for Structural Ceramics within the Department of Materials and the Department of Mechanical Engineering is seeking dynamic, enthusiastic and highly-qualified applicants for the joint post of a Chair in Materials and Mechanical Engineering. You will be a scientist working in the area of Structural Ceramics ideally with a particular interest in measurement of mechanical properties of structural ceramics, particularly at high temperatures and at various length scales.

You will have an international standing, an outstanding publication record, an established record of raising research funding, experience in managing and delivering research programmes and substantial experience of supervising (and inspiring) junior researchers.

Your main duties will be to contribute to the research undertaken in the Centre. In addition, the appointee will be expected to contribute to teaching in the departments, and to the administrative duties associated with a busy academic and research-active environment. Training students and Research Fellows, as well as fundraising through successful research grant applications, will be important aspects of the role.

You will have a proven track record of high quality innovative research and a desire to see the results of your work applied in the public engineering arena.

The post is full-time (not normally less than 35 hours per week), permanent and available immediately.

For informal enquiries, please contact the Director of the Centre, Professor Bill Lee, email: [w.e.lee@imperial.ac.uk](mailto:w.e.lee@imperial.ac.uk)

A Job Description and Further Particulars can be obtained from:  
<http://www3.imperial.ac.uk/employment/academic>

Applicants have a choice of two application forms, which are available from: <http://www3.imperial.ac.uk/employment/applicationformchairreaderlincresearch>

A full curriculum vitae, application form and a recruitment monitoring form should be sent to: Maria Monteiro, Senior Appointments Co-ordinator (Professors and Readers), Human Resources Division, Level 3, Faculty Building, Imperial College London, Exhibition Road, South Kensington, London SW7 2AZ. Email: [m.monteiro@imperial.ac.uk](mailto:m.monteiro@imperial.ac.uk)  
Please quote reference number **EN20080152**.

**Closing date: 19 September 2008.**

*Valuing diversity and committed to equal opportunities*

## Positions Available

## UNIVERSITY OF MINNESOTA


**3M Harry Heltzer Multidisciplinary Chair  
in Science and Technology**

The Graduate School and the Institute of Technology at the University of Minnesota—Twin Cities invites applications and nominations for the position of 3M Harry Heltzer Multidisciplinary Chair in Science and Technology. This is a tenured endowed position at the rank of associate or full professor (dependent upon qualifications/experience) in the area of physical and biological structures characterization utilizing microscopy and imaging. Candidates must have a distinguished academic and research record in this area, with several years of successful research and teaching experience. A Ph.D. degree and dedication to teaching, graduate student advising, and regular and sustained interaction with industry are required. Candidates are sought whose research agenda will contribute to building cross-disciplinary and cross-college collaboration in one or more areas of strategic importance university-wide, including within the Institute of Technology and with other units at the University of Minnesota. This endowed chair is intended to foster industry-university research interaction and collaboration while advancing scientific and technological expertise in new frontiers of knowledge relevant to the Institute of Technology and 3M. Candidates with a background in any relevant areas of science or engineering are encouraged to apply. Department affiliation will depend on the candidate's area of expertise, with the possibility of a joint appointment with one or more units in the University.

Applications should be submitted online at: <https://employment.umn.edu>, under Reg. # 154636, and include a cover letter, curriculum vitae (including list of publications), research description/plan, statement of teaching interest, and contact information for three references. Review of applications will begin June 1, 2008, and continue until the position is filled. For further information, contact Douglas Ernie at [ernie@umn.edu](mailto:ernie@umn.edu).

*The University of Minnesota is an equal opportunity educator and employer.*

**MATERIALS SCIENCE ASSOCIATE  
Center for Functional Nanomaterials  
Brookhaven National Laboratory**

The Center for Functional Nanomaterials Department at Brookhaven National Laboratory seeks to fill a Materials Science Associate. Requires Master's degree in Physics, Chemistry, Material Science, Electrical Engineering, or closely related field. PhD degree highly desirable. Minimum five (5) years of experience with lithography and thin film processing in a clean-room environment. Expertise developing high-resolution plasma etch processes, including use of the Bosch process, is highly desirable. Must have good communication and interpersonal skills.

The successful candidate will join an interdisciplinary team working on photovoltaic materials and other functional nanomaterials, and on the development of advanced nanofabrication processes using state-of-the-art equipment (e.g., electron-beam, ion-beam, nanoimprint lithography, thin-film deposition, and plasma etching) housed in a class-100 facility. Will work closely with Brookhaven National Laboratory (BNL) scientists and Center for Functional Nanomaterials (CFN) users, and will have an opportunity to develop an independent research program aligned with the group's interest in nanofabrication processes.

Please go to [www.bnl.gov](http://www.bnl.gov), click on Job Opportunities and then Search Job List to apply for this position. Please apply to **Job ID# 14536**.

*Brookhaven National Laboratory is an equal opportunity employer committed to building and maintaining a diverse workforce.*


**POSTDOCTORAL POSITION**
**Optimization of Porous Metal Structures  
Made by Powder Metallurgy**
**RISØ DTU**

*Do you want to help develop innovative and environmentally friendly energy technologies for the future?*

The Fuel Cells and Solid State Chemistry Department at Risø DTU is among the world's research leaders in solid oxide fuel cells (SOFCs)—a technology for clean and efficient conversion of chemical energy (e.g., in the form of natural gas, hydrogen, bio-gas, ammonia, or methanol) into electricity and heat. In addition, we have activities within a number of related topics in functional ceramics, including high-temperature electrolysis, oxygen and hydrogen separation membranes, electrochemical flue gas purification, and magnetic refrigeration.

**Job Description**

You will be involved in the development of the next generation of fuel cells that are mechanically supported by a porous metal support. This metal support is currently formed by a conventional shaping technique using atomised metal powder, and then consolidated by high temperature treatment in reducing atmosphere. Your work will be to optimise the metal support by tailoring its composition, the shaping parameters as well as the sintering conditions. A focus will be the correlation between the manufacturing parameters and the mechanical properties and corrosion resistance of the support.

**Qualifications**

- PhD degree in engineering, materials science, chemistry, geology, physics, or similar
- Experience with powder metallurgy and sintering
- Preferably experience within one or more of the following areas: ceramic shaping techniques such as tape casting and screen printing, database, corrosion of metals, mechanical properties, or advanced microscopy
- Ability to work independently, to plan and carry out complicated tasks, and to be a part of a large, dynamical group
- Good communication skills in English, both written and spoken

**We Offer**

We offer an exciting and challenging job in an international environment. Good possibilities for professional and personal growth. A family friendly organisation with flexible working hours.

**Terms of Employment**

The terms of employment will be in accordance with those of the scientific staff at Risø DTU. Salary will depend on qualifications and experience. The position is for a fixed duration.

**Application Procedure**

We must have your online application by **24 August 2008**. Apply online at [www.dtu.dk/vacancy](http://www.dtu.dk/vacancy). Please open the link "apply online" and fill in the application form and attach your application and CV.

**Further Information**

Please contact acting Head of Program Peter Vang Hendriksen at 45 4677-5725 for further information. Additional information about Risø DTU and the Fuel Cells and Solid State Chemistry Department can be found on [www.risoe.dtu.dk](http://www.risoe.dtu.dk).

**Positions Available**

**FACULTY POSITION**  
**Department of Mechanical and Aerospace Engineering**  
**University of California, San Diego**

The Department of Mechanical and Aerospace Engineering (<http://maeweb.ucsd.edu>) at the University of California, San Diego, invites applications for a tenure-track or tenured faculty position at the Assistant, Associate, or Full Professor levels in all research areas relevant to the department. We seek candidates with strong demonstrated research interests and excellent teaching skills. The successful candidates are expected to work within one of the following research groups: energy and environment, fluid mechanics, mechanics and materials, dynamic systems and control, and design. Successful candidates will be expected to teach undergraduate and graduate courses in Mechanical and Aerospace Engineering and to establish a vigorous extramurally funded research program.

A PhD or equivalent degree required. Level of appointment commensurate with qualifications; salary based on published UC pay scales. Send detailed resume, personal statement, and list of three professional references to: Chair of the MAE Search Committee/phy, Attn: Brandy Carrasco, UCSD, Department of MAE, 9500 Gilman Drive #0411, La Jolla, CA 92093-0411. Inquiries should be directed to [maerecruitment@ucsd.edu](mailto:maerecruitment@ucsd.edu). Closing Date: **October 1, 2008**.

*UCSD is an EOE/AA with a strong institutional commitment to the achievement of excellence and diversity (<http://diversity.ucsd.edu>).*



**At the Montanuniversität Leoben, Austria**  
**a position is available for a**  
**UNIVERSITY PROFESSOR FOR MECHANICS**  
**a successor for Prof. F.D. Fischer**

Prospective candidates should have an international reputation as a researcher in subject fields related to the core activities of the University, a demonstrated ability to work collaboratively with industry in an interdisciplinary fashion, and a strong drive to pursue their research.

Candidates are also expected to be academically well qualified, to have a track record of teaching at university level in the subject of the mechanics of solid materials and fluids, and should be prepared to teach the fundamentals of these subjects to engineering students. A working ability in the German language is essential.

The university operates an equal opportunities policy, and both male and female candidates will be considered.

Interested candidates will find more information on the University website at <http://www.unileoben.ac.at>, or by contacting:

o.Univ.-Prof. Dr. Robert Danzer  
 Montanuniversität Leoben, Franz-Josef-Strasse 18, A-8700 Leoben  
 Tel: 43 3842 402-4100; Fax: 43 3842 402-4102; E-mail: [robert.danzer@unileoben.ac.at](mailto:robert.danzer@unileoben.ac.at)

**POSTDOCTORAL POSITION**  
**Metal Oxide Thin Films**  
**National Renewable Energy Laboratory**

**Project Description**

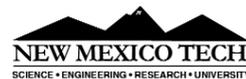
A postdoctoral research position in the area of metal oxide thin films for photoelectrochemical (PEC) applications is available in the National Center for Photovoltaics at the National Renewable Energy Labs (NREL). The successful candidate will carry out deposition (by RF sputtering) and characterization (structural, optical, and electrical) of metal oxide thin films. Collaboration with NREL's PEC group is expected.

**Qualifications**

PhD degree in physics, materials science, or a closely related field. Experience in thin film deposition by sputtering and other methods, electrical and optical properties measurements, and x-ray characterization is required. Experience in SEM, TEM, and PEC measurements will be plus.

The National Renewable Energy Laboratory ([www.nrel.gov](http://www.nrel.gov)), located in the foothills of the Rocky Mountains in Golden, Colorado, is the nation's primary laboratory for research, development, and deployment of renewable energy and energy efficiency technologies. Please send CVs and names of three references to: Dr. Yanfa Yan at [yanfa\\_yan@nrel.gov](mailto:yanfa_yan@nrel.gov) and Dr. Mowafak Al-Jassim at [mowafak\\_aljassim@nrel.gov](mailto:mowafak_aljassim@nrel.gov).

*NREL is an equal opportunity employer committed to diversity and a drug-free workplace.*



**POSITIONS AVAILABLE**  
**Materials and Metallurgical**  
**Engineering Department**  
**New Mexico Institute of**  
**Mining & Technology**

The New Mexico Institute of Mining & Technology, Socorro, New Mexico, invites applications for the following positions:

**Research Associate for FESEM**

We are seeking a Research Associate to provide leadership and technical support in electron and scanning microscopy. This 12-month, ¾ time permanent position includes standard benefits and allows an additional 25% salary through increased microscope usage, research, and/or teaching. The main job function is the supervision, maintenance, operation, and user training of FESEM plus at least one of Scanning Auger Microscope (preferred), TEM, or AFM. MS or PhD degree in Engineering/Science with a Materials degree is preferred. Experience operating, troubleshooting, and making minor repairs to an SEM with EDS, sample preparation, and evaluating metals and/or ceramics is required.

For more information, contact Dr. Deidre Hirschfeld; [hirsch@nmt.edu](mailto:hirsch@nmt.edu); 575-835-5129. Additional details are available at <http://externalweb.nmt.edu/hr/jobs/ResAssocMat.htm>. The job is available immediately and will be posted until filled.

**Assistant/Associate Professor**

We are seeking to fill a 9-month tenure-track faculty position starting January, 2009. Candidates must have a PhD degree in Materials Science/Engineering or a related field and have expertise in electron microscopy. Preference will be given to candidates with specialization in biomaterials, energetic materials, physical metallurgy, or surface science. Candidates are expected to teach TEM and SEM courses. Applications must include a cover letter, current vita including list of publications, a summary of research interests and teaching interests/philosophy, plus at least three references.

For more information contact Dr. Bhaskar Majumdar; [majumdar@nmt.edu](mailto:majumdar@nmt.edu); 575-835-5152. Additional details are available at <http://externalweb.nmt.edu/hr/jobs/asstassocprofmate08-084.htm>.

**Applications for either position should be submitted to:**

Human Resources  
 New Mexico Institute of  
 Mining & Technology  
 801 Leroy Place, Wells Hall, Box 159  
 Socorro, NM 87801-4796

*New Mexico Tech is an Equal Opportunity/  
 Affirmative Action Institution.*

**Positions Available**



**DEAN, SCHOOL OF ENGINEERING  
Rutgers  
The State University of New Jersey**

Rutgers, The State University of New Jersey, invites applications and nominations for the position of Dean of the School of Engineering (SOE). Located on Rutgers' Busch Campus in Piscataway, the School has an enrollment of over 2,400 undergraduates and approximately 250 master's students and 350 doctoral degree students. The dean of the SOE provides vision and academic leadership to the school's faculty, students, staff, and instructional and research programs. (For more information about the SOE visit the School's website at <http://www.soe.rutgers.edu/>.) The dean also serves on the New Brunswick Deans Council and other advisory and management groups for the entire university, leads collaborations with academic disciplines outside of engineering, and works with department chairs to attract new faculty of the highest caliber. The dean is expected to play a leading role in representing the SOE at the state level and in attracting funds from alumni, industry, and state and federal agencies.

The dean of the SOE should be a scholar and an entrepreneur capable of building strong synergies with industry, and should have a demonstrated ability to develop and implement a strategic plan that results in vigorous growth of the school. We seek a candidate with an earned doctorate, and a record of distinction in engineering, including significant accomplishments in teaching and research. The ideal candidate will qualify for tenure as a full professor in one of the departments of the school. The expected starting date is July 1, 2009. For more information about how to submit nominations/applications for the position, visit [http://www.president.rutgers.edu/search\\_soe.shtml](http://www.president.rutgers.edu/search_soe.shtml).

*An Affirmative Action/Equal Opportunity Employer*



**The Helmholtz-Zentrum Berlin für Materialien  
und Energie GmbH (HZB)**

Member of the Hermann von Helmholtz-Gemeinschaft  
Deutscher Forschungszentren e.V.  
and the

**Technische Universität Berlin (TUB)**

invite applications for a joint appointment in the field

**„Materials Research for Photovoltaics“**

as

**Head of Department**

“Materials Research”

in the Division Solar Energy Research of HZB and

**University Professor (W3)**

at the Fakultät II “Mathematik und Naturwissenschaften”  
of the Technische Universität Berlin.

Solar Energy Research at the HZB focuses on the development of thin-film solar cells. It builds upon a rather unique variety of analytical methods, a basis which will get even stronger by the merger of the HZB and BESSY to the Helmholtz-Zentrum Berlin für Materialien und Energie, scheduled for January 1, 2009. Presently, research at the HZB is mainly covering inorganic absorbers based upon compound semiconductors or polycrystalline silicon, supplemented by activities aiming for new materials and novel concepts and process technologies.

HZB and TUB aim to promote research and academic education towards innovative, in particular organic and/or nano-structured absorbers and corresponding solar cell concepts. We therefore search for a distinguished physicist, chemist or materials scientist with an outstanding international reputation and expertise in the field of organic semiconductors and/or nano-structures of functional systems relevant for photovoltaics. He/she is supposed to develop a long-sighted research program for the HZB-department “Materials Research”, with a special focus on materials science supporting the development of innovative photovoltaic devices. We expect him/her to be committed to the general program of teaching and examining of students at the TUB, to inspire the scientific work in his/her department and to encourage internal and external collaborations.

Applications should include a curriculum vitae, a list of publications and previously taught courses, a statement of research and teaching interests, and up to five selected publications and are to be sent until 31 August 2008 to Prof. Dr. Michael Steiner, Scientific Director, HZB, Glienicker Straße 100, 14109 Berlin, Germany. Who for further information may also be contacted by phone (+49 (0) 30 8062 2762) or e-mail [steiner@helmholtz-berlin.de](mailto:steiner@helmholtz-berlin.de).

To accelerate the process, applicants are kindly requested to send their application materials both in written form as well as electronically via e-mail. Application materials will not be returned. Therefore, you are requested to send only copies of all documents. Applicants must meet the legal requirements for appointments of professors in accordance with § 100 of the “Berliner Hochschulgesetz”. Habilitation or documented evidence of equivalent scientific qualifications is required.

HZB and TU are equal opportunity employers, committed to the advancement of individuals without regard to race, colour, religion, sex, age, national origin, ethnicity, disability or any other protected status. HZB and TU seek to increase the proportion of female faculty members. Thus qualified women are particularly encouraged to apply.

This appointment will be decided in close co-ordination with the appointment „Charge Carrier Dynamics in Solar Cells”.

*Place Your Ad Today!*

Contact **Mary E. Kaufold** at  
**724-779-8312**  
or [kaufold@mrs.org](mailto:kaufold@mrs.org)

Positions Available

**RESEARCH SCIENTIST**

**Laboratory for MultiScale Imaging  
Stevens Institute of Technology**

The Stevens Institute of Technology, Hoboken, New Jersey USA, seeks to fill a newly created position of Research Scientist for its Laboratory for Multiscale Imaging (LMSI). The LMSI is a 3000 sq. ft. laboratory housing an analytical FEG TEM/STEM, a FEG SEM, a confocal microscope, and an AFM, among other instrumentation. More information can be found at [www.stevens.edu/hydrogel/libera/research/LMSI/LMSI.html](http://www.stevens.edu/hydrogel/libera/research/LMSI/LMSI.html). The LMSI serves a growing community of research students and staff from Materials Science, Chemical Engineering, Mechanical Engineering, Environmental Engineering, Biomedical Engineering, Chemistry, and Chemical Biology, among others, as well as a range of academic and industrial users from off-campus. Current research themes include soft materials, cell-material interactions, biofilms, self assembly, patterning, and nanostructured particulate/surfaces.

In addition to pursuing collaborative research, the LMSI Research Scientist will oversee all aspects of running the LMSI including training, maintenance, research execution, and educational outreach. He/she will participate in the development of new LMSI initiatives in concert with an interdisciplinary LMSI Advisory Board and the LMSI Director, Prof. Matthew Libera. The initial appointment will be for two years. Qualified candidates will hold a PhD degree or have equivalent experience in either a physical science/engineering or a life-science discipline.

Interested candidates should submit by email, with the subject heading of **LMSI RESEARCH SCIENTIST**, a detailed resume that includes a clear description of the candidate's experience with various microscopies as well as the contact details of at least three references to Ms. Nancy Webb at [Nancy.Webb@stevens.edu](mailto:Nancy.Webb@stevens.edu).

AA/EEOE



The Helmholtz-Zentrum Berlin für Materialien und Energie GmbH (HZB)

Member of the Hermann von Helmholtz-Gemeinschaft  
Deutscher Forschungszentren e.V.  
and the

Freie Universität Berlin (FU)

invite applications for a joint appointment in the field

**„Charge Carrier Dynamics in Solar Cells“**

as

**Head of Department**

“Charge Carrier Dynamics”

in the Division Solar Energy Research of HZB and

**University Professor (W3)**

in the Department of Physics of the FUB

Solar Energy Research at the HZB focuses on thin-film photovoltaics. A large variety of analytical methods including experiments at the synchrotron source BESSY II and at the HZB research reactor BER II offers excellent prerequisites to control the interdependence of the properties of a material and its inner structure. The situation will be further improved when HZB und BESSY merge to the Helmholtz-Zentrum Berlin für Materialien und Energie, by January 1, 2009.

A crucial task for any type of solar cell is the detailed understanding of how the optically induced charge carriers are separated and move through the complex structures of the cell. The new department “Charge Carrier Dynamics” should integrate the relevant expertise already existing at the HZB and develop and provide new experimental techniques, in particular those using synchrotron radiation. A better understanding of the interdependence of structural and electronic properties should help in identifying the processes, which are relevant for limiting the efficiency of a solar cell.

To head the new department, we search for a distinguished physicist, chemist or material scientist with an international reputation based upon relevant contributions to thin-film photovoltaics. Expertise in spectroscopic methods, in particular those utilizing synchrotron radiation, will be especially appreciated. The successful candidate is expected to develop a convincing future-oriented research program within the frame sketched above.

We expect the successful applicant to be committed to the general program of teaching and examining of students at the Freie Universität (the compulsory amount of teaching will be 2 hours per week per semester), to inspire the scientific work in his department and to foster internal and external collaborations.

To be appointed, he/she must meet the requirements of the Berlin Higher Education Act (§ 100 BerIHG, more detailed information available on request). HZB and FU are equal opportunity employers, committed to the advancement of individuals without regard to race, colour, religion, sex, age, national origin, ethnicity, disability or any other protected status. HZB and FU seek to increase the proportion of female faculty members. Thus qualified women are particularly encouraged to apply. Handicapped applicants will be given preference over others of equal qualification.

Applications should be received until 31 August 2008 and should be addressed to Prof. Dr. Michael Steiner, Scientific Director, HZB, Glienicker Straße 100, 14109 Berlin, Germany, who for further information may also be contacted by phone (+49 (0) 30 8062 2762) or e-mail ([steiner@helmholtz-berlin.de](mailto:steiner@helmholtz-berlin.de)).

This appointment will be decided in close co-ordination with the appointment „Materials Research for Photovoltaics”.

*Influence the Future of Your Society...*

**VOTE ONLINE!**

**MRS**  
Election of MRS Officers and Board Members

Voting Deadline  
**12 Noon ET**  
**September 25, 2008**

Visit [www.mrs.org/2008\\_election](http://www.mrs.org/2008_election) for details on the candidates

## Positions Available



# SR. ENGINEER METALLIZATION/METALLURGY

## BSST LLC

BSST, a leader in Climate Control and Power Generation applications in high efficiency thermoelectric (TE) technology, works in partnership with their customers to create the most effective solutions to meet their needs. The BSST team develops a thorough understanding of the technical, physical, environmental and economic aspects of the subject application. Proprietary advanced temperature control technology is applied to develop and provide innovative TE assemblies and subassemblies. For more information on the company, access [www.bsst.com](http://www.bsst.com). BSST's parent company, Amerigon, Inc., is the world's largest user of TE materials for automotive applications. Visit [www.amerigon.com](http://www.amerigon.com) for more information.

### Summary:

BSST is seeking a highly motivated experienced individual to join their team in Irwindale, California. The Sr. Metallurgy Engineer will focus on two primary areas: developing low contact resistance metallization solutions for thermoelectric materials, and developing joining techniques for thermoelectric materials and other device elements.

The scope of the job will address diverse semiconductor and metal material systems and wide temperature ranges. This is a challenging opportunity for a material scientist/engineer who will be contributing to core competency, high value-added technology component strategically important for the success of the company.

### Essential Duties and Responsibilities:

- Devise metallization procedures for rapid turnaround device-level testing of prospective thermoelectric materials.
- Source and manage rapid metallization and bonding of prospective TE materials by outside services.
- Devise chemical compositions and specify processes for diffusion, contact and bonding layers.
- Arrange outside services for reliable, fast testing of suggested metallization schemes.
- Analyze the results using internal facilities and external analytical labs.
- Assure the availability of cost-effective production feasibility of chosen metallization approaches.
- Contribute metallurgy expertise to the team engineering activities in thermoelectric engine development.

### Supervisory Responsibilities:

The Sr. Metallurgy Engineer will report to the Director, Emerging Materials and will work within a matrix organization with a team comprised of functional skills specialists. This individual may have direct supervisory responsibility for one or more technicians.

### Qualifications:

1. Experience with low contact resistance metallization of semiconductors, preferably with elevated usage temperature, with emphasis on thermocycling stability.
2. Experience with translating information from phase diagrams of diverse material systems into potential metallization recipes.
3. In-depth understanding of current technologies in the solder and brazing industries and experienced in the development of new techniques and processes to facilitate these joining processes.
4. Experience in metallization and surface activation methods, and the use and development of active brazing, soldering and hot pressing processes.
5. Hands-on experience with metallization of semiconductors, bonding and analysis.
6. External resource management when partnering with outside entities for services outsourcing.

### Education and/or Experience:

Masters degree in Material Sciences, Metallurgy, Metallurgical Engineering or Semiconductor Manufacturing is required; advanced science or engineering degrees highly desired. Ten years experience in the semiconductor, photovoltaic, thermoelectric or similar industry is required. Must have a demonstrable, quantifiable track record of success in efficiently and rapidly developing metallization solutions. Experience in high temperature (600 to 1000°C) materials systems is desired.

### Application Procedure:

If you are interested in exploring this opportunity please submit your resume (Microsoft Word files preferred) via e-mail or feel free to contact us at the phone numbers below. We will make arrangements to interview you as soon as possible.

Carol Lowe Raymer, President • CONNECTIONS EXECUTIVE SEARCH • [carol@connections-search.com](mailto:carol@connections-search.com)  
714-674-0420 Office • 714-928-2004 Cell

## Positions Available



**FACULTY POSITIONS**  
**Institute of Metal Research**  
**Chinese Academy of Sciences**

The Institute of Metal Research, Chinese Academy of Sciences (IMR, CAS) was founded in 1953 and the current director is Prof. Lu Ke. The IMR, CAS has firmly established itself as an indispensable base for materials science and engineering research in China. The IMR, CAS focuses mainly on high performance metallic materials, new types of inorganic nonmetallic materials, advanced composite materials, as well as materials engineering such as materials synthesis and fabrication, processing, application exploration, and corrosion and protection.

The IMR, CAS whole-heartedly invites inland and overseas scholars to apply for the following faculty positions:

**HUNDRED TALENTS PROGRAMME posts in the following and related fields:**

1. Design of multifunctional alloys and composites;
2. Preparation and properties of nanostructured materials;
3. Chemical stability of nanostructured materials;
4. Design and synthesis of magnetic thin films;
5. Design and synthesis of materials for new energy sources;
6. Mechanical behavior of biomaterials;
7. Design, preparation, and characterization of advanced coatings;
8. Fabrication and evaluation of structural materials for nuclear energy;
9. Damage and life prediction of materials under high temperature and high pressure.

A qualified candidate should have a PhD degree in the related fields, and be under 40 years old. The international candidates should hold an assistant professor/above or equivalent positions, with a minimum of four years relevant working experience in overseas research institutions. For applicants from China, a successful candidate should have a professor title and have published numerous high-level academic papers, or is a winner of the National Science Fund for Distinguished Young Scholars.

**T.S. KÊ RESEARCH FELLOWSHIP posts in materials and related fields:**

The T.S. KÊ research fellowship aims to offer outstanding young scientists and engineers from all over the world the possibility of carrying out high-level research in areas of materials science and engineering at IMR, CAS. A prospective fellow must have a doctorate completed less than three years prior to the date of application and be under 35 years old, and will be required to conduct full-time research. Typically the Fellowship is for a three-year duration. Each Fellow will receive a fellowship of RMB 10,000 to 15,000 per year and a research grant amounting to RMB 500,000.

Further information can be found at <http://www.imr.ac.cn/IMRWeb/Job.aspx> or <http://english.imr.ac.cn/IMRWeb/eng/>. Interested persons should please contact Mr. Dehui Guan at [dhguan@imr.ac.cn](mailto:dhguan@imr.ac.cn), or Ms. Sufang Tang at [sftang@imr.ac.cn](mailto:sftang@imr.ac.cn).

**RESEARCH ENGINEER**  
**Washington State University**

Washington State University's Applied Sciences Laboratory (ASL) is seeking a Research Engineer with expertise in electronics packaging, to undertake research projects related to the work of one of our corporate partners. For more information and application procedures, please visit [www.asl.wsu.edu/site/careers.html](http://www.asl.wsu.edu/site/careers.html).

EEO/AA/ADA

## Imperial College London

UK Centre for Structural Ceramics

### Lecturer in the Department of Materials and Joint Lecturer in the Departments of Materials and Mechanical Engineering

Salary: £40,050 - £42,320 p.a.

*Imperial College is ranked the fifth best university in the world (Times Higher QS World University Rankings 2007).*

The Departments of Materials and Mechanical Engineering at Imperial College London have been awarded £5.5 million by the EPSRC to set up the UK Centre for Structural Ceramics, which aims to develop strong links to energy, aerospace and defence, transport and healthcare industries.

The UK Centre for Structural Ceramics is seeking dynamic, enthusiastic and highly-qualified applicants for the posts of a Lecturer based in the Department of Materials and a joint Lecturer in the Departments of Materials and Mechanical Engineering. You will be a scientist working in the area of Structural Ceramics, ideally with a particular interest in high temperature processing and fabrication or modelling and life prediction methods.

You will have a proven track record of high quality innovative research and a desire to see the results of your work applied in the public engineering arena.

Your main duties will be to contribute to the research undertaken in the centre for Structural Ceramics. In addition, the appointee will be expected to contribute to teaching in the department/s, and the administrative duties associated with a busy academic and research-active environment. Training students and Research Fellows, as well as fundraising through successful research grant applications will be important aspects of the role.

The posts are full-time (not normally less than 35 hours per week), permanent and available immediately.

For informal enquiries, please contact the Director of the Centre, Professor Bill Lee, email: [w.e.lee@imperial.ac.uk](mailto:w.e.lee@imperial.ac.uk)

A Job Description and Further Particulars can be obtained from:  
<http://www3.imperial.ac.uk/employment/academic>

Applicants have a choice of two application forms, which are available from:  
<http://www3.imperial.ac.uk/employment/applicationformchairreaderclinlecresearch>

Please post 5 copies of your application form together with your CV, list of publications, a short research plan and contact details for three referees to: Mrs Darakshan Khan, Department of Materials, Imperial College London, Exhibition Road, London SW7 2AZ. Email: [d.khan@imperial.ac.uk](mailto:d.khan@imperial.ac.uk) You can also email your application package to Mrs D. Khan. Please quote reference number **EN20080151**.

**Closing date: 19 September 2008**

*Valuing diversity and committed to equal opportunities*

## Positions Available

# WORLD CLASS UNIVERSITY PROJECT

The Korean Ministry of Education, Science and Technology (MEST) is inviting excellent scholars and researchers from around the world to establish new academic projects and conduct joint research at Korean universities in the field of emerging technologies.



## What is the World Class University (WCU) project?

The WCU project is a higher education subsidy program of the Korean government, which invites international scholars who possess advanced research capacities to collaborate with Korean faculty members and establish new academic programs in key growth-generating fields.

## Which fields does the WCU project support?

Focus is placed on supporting new growth-generating technologies that will spearhead national development. The ministry will give priority to interdisciplinary studies that consolidate the fields of basic sciences and humanities and social sciences which will contribute to national, social and academic development.

## How does the WCU project work?

### Type 1: Establishing new academic departments or specialized majors

Under this type, high-quality foreign scholars are employed at Korean universities as full-time faculty members, on a contract of three years minimum, to establish new academic departments or specialized majors at the universities. Undergraduate degree programs should be established and opened by the spring semester of 2010 at the latest, and graduate programs should be in operation by the fall semester of 2009 at the latest.

### Type 2: Recruiting foreign scholars to existing academic projects

Under this type, foreign scholars are employed as full-time faculty members at existing departments of Korean universities to conduct joint research with Korean academics. Recruited foreign scholars are expected to be capable of developing new growth-generating technologies and also creating interdisciplinary studies.

### Type 3: Inviting distinguished world-class scholars

The third type invites distinguished scholars (including pioneering high-tech engineers) as part-time faculty members to conduct academic or research activities in a Korean university for a period of at least two months per academic year.

## Who is eligible for WCU participation (foreign scholars)?

All faculty members/researchers employed at a university, research institute or enterprise outside Korea are eligible to apply, including scholars of foreign nationality, ethnic Koreans who hold foreign nationality or citizenship, and scholars of Korean nationality.

## What does the WCU subsidy cover?

For types 1 and 2, the Korean government provides a competitive annual salary, research grants, lab establishment expenses, etc. for each foreign scholar.

For type 3, the government provides an annual salary for foreign scholars and also provides research grants for joint research projects carried out with Korean scholars.

## Where can applicants find further details?

Interested scholars are invited to view details and post questions about the WCU project on KOSEF's website at [http://www.kosef.re.kr/english\\_new](http://www.kosef.re.kr/english_new).

## Positions Available



**PROGRAM MANAGER**  
**Material Science**  
**American Chemical Society**

The American Chemical Society is one of the world's oldest and largest scientific membership associations and science publishers.

The PRF Program Manager oversees the design, development, execution, and program assessment/evaluation of a significant grant program expected to have an important impact on the research and education communities both nationally and globally. The Program Manager is responsible for evaluation of proposals and ultimately responsible for the successful operation of this grants program.

**Qualifications**

- Advanced college degree (PhD) in chemistry or engineering, or equivalent experience.
- Candidate must have at least five years of progressively important experience in the administration of research and/or program development/assessment.
- A thorough knowledge of heterogeneous and homogeneous material science is required along with a keen understanding of national trends in research/training is mandatory.

**Job Responsibilities**

1. Develops the overall program direction for a nationally focused research/training grants program.
2. Develops the proposal review standards and sets the framework for the review process.
3. Assesses the work undertaken against established metrics to assess progress against program goals and objectives.

The ACS offers truly competitive salaries and an outstanding benefits package; health, retirement, and transportation benefits are only some of those provided. To apply, please send resume and cover letter to [employment@acs.org](mailto:employment@acs.org). Please reference **08-80** in the subject line.

*ACS is a drug-free/smoke-free,  
 equal opportunity employer*

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



**DIRECTOR**  
**Materials Science Division**  
**Argonne National Laboratory**

Argonne National Laboratory invites applicants for the position of Director of the Materials Science Division (MSD) to lead the division's research efforts in areas that include discovery synthesis; condensed matter and materials physics; materials chemistry; biocomposite materials; superconductivity; magnetism; catalysis, solar energy research; nanoscience; electron, neutron, and x-ray scattering; and electron microscopy. The Division Director will: (1) enhance the strengths and visibility of existing basic and applied research programs, and grow new research programs that use state-of-the-art equipment and approaches; (2) recruit, hire, and retain world-class researchers; (3) promote interactions with other programmatic directorates (with particular emphasis on x-ray science and high performance computing), other divisions, and programs at Argonne National Laboratory; (4) interface with programmatic sponsors at the Department of Energy; and (5) foster and maintain high standards in Environment, Safety, and Health (ES&H) and quality assurance for all of the division's activities.

The successful candidate should have a PhD degree, an internationally recognized research stature, 10+ years of relevant experience in the materials sciences and/or closely related fields, and experience in managing a multi-program, multidisciplinary research organization. Candidates must either have or be able to obtain/maintain a DOE "Q" level security clearance. For a description of Divisional programs, please visit MSD's Home Page on the internet at <http://www.msd.anl.gov>.

Argonne offers an excellent compensation and benefits package. For full consideration, please apply by **September 15, 2008**. Interested candidates should send a curriculum vitae, list of publications and patents, professional references, and salary history to [msdsearch@anl.gov](mailto:msdsearch@anl.gov).

Argonne National Laboratory is a multi-program laboratory managed by UChicago Argonne, LLC for the U.S. Department of Energy's Office of Science. We are an equal opportunity employer and value diversity in our workforce. Argonne's site is located about 25 miles southwest of Chicago on a beautiful 1500 acre campus. For additional information, please refer to Argonne's Home Page on the internet at <http://www.anl.gov/welcome.html>.

*Argonne is an equal opportunity employer, and we value diversity in our workplace.*



UNIVERSITY OF  
**SOUTH CAROLINA**

**ASSISTANT PROFESSOR POSITIONS**  
**Polymer Nanotechnology**  
**University of South Carolina**

The University of South Carolina invites applications for two tenure-track Assistant Professor positions in Polymer Nanotechnology in the Departments of Chemistry and Biochemistry & Chemical Engineering. Preference will be given to those candidates that have a strong background in the areas of polymer nanotechnology and nanocomposites; however, outstanding candidates from all areas of polymer chemistry and engineering are encouraged to apply. Exceptional candidates may be considered at a higher rank. Applicants should possess a PhD degree in chemistry, chemical engineering, polymer or materials science and engineering, or a related field, and are expected to teach courses in their respective departments as well as courses in a polymer chemistry and engineering curriculum.

The successful candidate is expected to develop an internationally recognized, externally funded research program as part of the USC thrust in polymer nanocomposite research in the new Horizon I research building. Interested applicants should send a letter of application, curriculum vitae, a concise description of research and teaching plans, and have three letters of reference sent to Professor Brian C. Benicewicz, Chair, FEI Cluster Search Committee, USC NanoCenter, University of South Carolina, 1212 Greene Street, Suite 120, Columbia, SC 29208. For full consideration, applications must be received by **December 1, 2008**.

The University of South Carolina is an Affirmative Action/Equal Opportunity Employer. Minorities and women are especially encouraged to apply. The University of South Carolina does not discriminate in educational or employment opportunities or decisions for qualified persons on the basis of race, color, religion, sex, national origin, age, disability, sexual orientation, or veteran status.