

EPS-04573

THE UNIVERSITY OF MANCHESTER
PARTICULARS OF APPOINTMENT
FACULTY OF ENGINEERING AND PHYSICAL SCIENCES
SCHOOL OF MATERIALS
READER/SENIOR LECTURER/LECTURER IN CERAMIC MATERIALS

- 1 The University invites applications for the above permanent post.
- 2 Salary will be Reader: £47,787 to £62,306 per annum, Senior Lecturer: £47,787 to £57,031 per annum, Lecturer: £33,562 to £46,400 per annum according to relevant experience.
- 3 Informal Enquiries can be made to Brian Derby,
Email: brian.derby@manchester.ac.uk or Tel: 0161 306 3569
- 4 Applications should be made online. If you are unable to apply on line please request an application form by emailing quoting the reference number or by calling 0161 275 4499.
- 5 The University of Manchester values a diverse workforce and welcomes applications from all sections of the community.

Job title: Reader/Senior Lecturer/Lecturer in Ceramic Materials

Salary: Reader: £47,787 to £62,306 per annum.
Senior Lecturer: £47,787 to £57,031 per annum.
Lecturer: £33,562 to £46,400 per annum.

Start/duration: 1st October 2014 or as soon as possible thereafter

Probation period: 48 months

Based at: The University of Manchester

Responsible to: Professor Paul O'Brien
Professor of Inorganic Materials
Head of the School of Materials

and on a day-to-day basis (as Line Manager)
Professor Brian Derby
Professor of Materials Science

The Position

You will be expected to engage in a full academic role, embracing teaching, research and administrative work. Training and guidance across all these aspects of an academic role will be provided during the probation and beyond, in accord with university requirements and where specific needs are identified.

Teaching will be within the School of Materials and allocated in accordance with School practice under direction from the Head of School and Line Manager, focusing on structural materials related topics in the School's science and engineering based undergraduate and postgraduate degree programmes. The person appointed will be expected to design and deliver high quality teaching and learning material, to set, mark and assess coursework and examinations, to supervise undergraduate and taught postgraduate student projects and tutorials, and to provide timely and effective support and feedback to students. Administrative duties within the School of Materials may be School-wide or more focused on specific responsibilities and will be assigned by the Head of School in discussion with the Line Manager. There also will be opportunities to become involved with wider roles at Faculty and/or at central University level, if the postholder has interest in pursuing such roles, but this is not a requirement of the post.

The School of Materials has a strong research ethos and the expectation is that the person appointed will develop strong structural materials based research activity that aligns with anticipated future directions for support by major research funding agencies and industry. The research does not necessarily have to align directly with existing research in the School, indeed the School would welcome growth in new directions, but it will clearly benefit the postholder if the research aligns with current research activity within The University of Manchester overall. Additionally, given broad range of research activity within the School and the University of Manchester overall, the postholder will be encouraged to develop collaborative work to take advantage of synergies with colleagues

The position will be subject to a four-year probationary period in accordance with the standard practices at The University of Manchester, which will include completion of the New Academics Programme that provides new academic staff with insights and knowledge designed to increase their awareness and proficiency in all aspects of their role, relating to research, teaching, administration, external affairs and professional development.

Overall Purpose of the Job

- You will be expected to engage in research, teaching and administration, but in particular will be expected to develop research activity in ceramic science and engineering which aligns with anticipated future directions for support by the major research funding agencies.
- To fulfil the research expectations will require the postholder to secure significant research funding, to supervise and guide postgraduate and postdoctoral researchers, to deliver timely presentations and publications of the research with protection of intellectual property where appropriate, and to engage in and/or initiate collaborations where this is relevant.
- Teaching will be within the School of Materials and allocated in accordance with School practice under direction from the Head of School and Line Manager. This will normally focus on topics relating to materials science with a focus on ceramics and related materials at both undergraduate and postgraduate levels.
- Administrative duties within the School of Materials will be assigned by the Head of School in discussion with the Line Manager.

Responsibilities of the Post:

Research

- To conduct ceramic materials related research in a field that strengthens and complements research within the School of Materials and/or the University.
- To generate significant external research income.
- To recruit and supervise postgraduate and postdoctoral researchers
- To publish research in high quality academic journals and through presentations at conferences and seminars.

Teaching

- To engage in undergraduate and postgraduate teaching.
- To design and deliver high quality teaching and learning material and provide timely and effective support and feedback to students.
- To set, mark and assess coursework and examinations.
- Supervise undergraduate and taught postgraduate student projects and tutorials.
- Contribute to teaching related administration and to curriculum design.

Other

- To undertake administrative duties within the School/University.

PERSON SPECIFICATION (READER)

Essential

- PhD in materials science, materials engineering or a related discipline.
- An established international reputation in the field of ceramic materials.
- Excellent interpersonal and communication skills.
- Ability to work collaboratively and as part of a team.
- Ability to take on a leadership role in furthering ceramic materials as a discipline.
- Evidence of high quality ceramics related research in a field that strengthens and complements structural materials research within the School of Materials and/or the University, with:

- a successful and significant record of publication in academic journals;
- an established track record of achieving significant research funding from a range of sources;
- experience of presenting at national and international conferences as a contributor and as an invited speaker;
- significant recognition within the international ceramic research community;
- a commitment to developing and maintaining a programme of research and publishing;
- the ability, to run a significant research group and evidence of managing large research projects.
- An educational background suitable for teaching materials science and engineering related topics at undergraduate and postgraduate degree programme levels

Desirable

- Experience of a range of teaching methods
- Experience of planning and developing teaching materials
- Successful experience of supervising postgraduate students
- Experience of working in or with industry

PERSON SPECIFICATION (SENIOR LECTURER)

Essential

- PhD in materials science, materials engineering or a related discipline.
- A developing international reputation in the field of ceramic materials.
- Excellent interpersonal and communication skills.
- Ability to work collaboratively and as part of a team.
- Evidence of high quality ceramics related research in a field that strengthens and complements structural materials research within the School of Materials and/or the University, with:
 - a successful and significant record of publication in academic journals;
 - an established track record of achieving research funding from a range of sources;
 - experience of presenting at national and international conferences;
 - significant recognition within the international ceramic research community;
 - a commitment to developing and maintaining a programme of research and publishing;
 - the ability, to run a significant research group and evidence of managing large research projects.
- An educational background suitable for teaching materials science and engineering related topics at undergraduate and postgraduate degree programme levels

Desirable

- Experience of a range of teaching methods
- Experience of planning and developing teaching materials
- Successful experience of supervising postgraduate students
- Experience of working in or with industry

PERSON SPECIFICATION (LECTURER)

PhD in materials science, materials engineering or a related discipline.

- Excellent interpersonal and communication skills.
- Ability to work collaboratively and as part of a team.
- Evidence of high quality structural materials related research in a field that strengthens and complements structural materials research within the School of Materials and/or the University, with:
 - a successful record of recent publications;
 - experience of presenting at national and international conferences;
 - recognition within the relevant research community;
 - a commitment to developing and maintaining a programme of research and publishing;
 - the ability, or potential, to obtain significant research funding and evidence of managing research projects.
- An educational background suitable for teaching materials science and engineering related topics at undergraduate and postgraduate degree programme levels.

BACKGROUND

The School of Materials

The School of Materials is the largest single materials grouping in any European University having around 1200 students and 82 academic staff, as well as a further 65 administrative and technical staff. The academic staff have expertise that spans an unusually wide range of materials disciplines, from polymers, metals, ceramics, biomaterials and composites, to corrosion protection, paper, textiles and fashion business and design. The teaching and research reflects this breadth of activity. The School offers a wide range of undergraduate and postgraduate degree programmes, of which those most relevant to the position advertised are undergraduate Bachelors and Masters degrees in Materials Science & Engineering, and a postgraduate taught Masters degree in Advanced Engineering Materials. The School of Materials is a key part of Doctoral Training Centres in: Advanced Metallic Materials, Graphene Nownano, Materials under Extreme Environments and Nuclear Engineering. The full range of degree programmes offered by the School of Materials can be seen at www.materials.manchester.ac.uk.

Research in the School is characterised by high profile, strong links with industry in all discipline areas, most notably with major internationally-competitive collaborative research funded by the nuclear industries, Rolls-Royce, BP and AkzoNobel, but also through many other projects with a large number of companies from around the world. The School's annual external research income is typically over £10m and there are over 260 postgraduate and postdoctoral researchers drawn from all parts of the world, creating a vibrant research environment. Collaborative and multidisciplinary projects have been established across the School, the University and with industry. Academics in the School have extensive networks and interactions with researchers throughout the world, encouraging not only an exchange of research ideas and staff, but also the creation of a dynamic pro-active research community.

The School is well equipped for research with laboratories spanning material synthesis to ceramic processing and novel fabrication methods. These are backed up by a full range of analytical equipment, which includes chromatographic methods (GC, HPLC, GPC), spectroscopy (UV-Vis, IR and Raman), with MS, ESR and NMR available in the School of Chemistry), particle sizing (PCS, PSDA, DC), thermal analysis (several modulated DSCs, DMTAs, microDSC, simultaneous DTA/TGA - capable to 1600°C), dilatometers, rheometry (high and low viscosity). The School is extremely well-equipped, particularly in facilities for microscopy and microstructural characterisation. We currently have 12 SEMs and 5 TEMs, including recent investments in a Titan G2 80-200 S/TEM (ChemiSTEM™), high resolution FEG-SEMs and 2 dual beam FIBs with capability for 3D characterisation. We are in the process of tendering for an additional TEM and SEM along with a number of specialist environmental and mechanical testing stages to extend this facility. The Henry Moseley X-ray Imaging Facility contains state-of-the-art X-ray imaging and tomography equipment and complements the dedicated beamline at the Diamond Synchrotron that is managed by the School. There are also a complete range of X-ray diffraction instruments, including several dedicated to residual strain and stress determination. There are extensive mechanical testing facilities including four nanoindenters, two of which are optimised for high temperature testing.

The Faculty of Engineering and Physical Sciences has invested in facilities for materials processing and manufacture including the Nuclear Manufacturing Research Centre and the North West Composites Centre. Nuclear materials research interests are supported by a comprehensive facility for materials radiation damage and simulation at the Dalton West Cumbria Research Facility, managed by the University. The School has a leading role in developing novel manufacturing routes for ceramics and has recently received £1M for a new digital fabrication suite including state of the art industrial inkjet printers. The School of Materials has strong links with University of Manchester cross-faculty research centres including: the Photon Science Institute, National Centre for Graphene Research, Dalton Nuclear Institute, University of Manchester Aerospace Research Institute and the Manchester Institute for Biotechnology.

Further Background Information

Further background information can be gained from The University and School websites: <http://www.manchester.ac.uk/> and <http://www.materials.manchester.ac.uk/>