**Job Description: Research Officer**

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| **Faculty:** | ***Faculty of Science and Engineering*** |
| **Department/Subject:** | ***Materials Science and Engineering*** |
| **Salary:** | *Grade 8: £38,205 to £44,263 per annum* |
| **Hours of work:** | ***Full time, 35 hours per week*** |
| **Number of positions:** | ***1*** |
| **Contract:** | **Fixed term position, ending 28 February 2025** |
| **Location:** | **This position will be based at the Bay Campus** |

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| **Main Purpose of Post** | 1. Be the lead post-doctoral researcher for recycling of ceramic based coatings. 2. Be the lead post-doctoral researcher for development of metal oxide sol gel processes within the team. 3. Produce sol gel ceramic coatings and characterise to develop materials recovery processes to separate from the substrate. 4. Work with industrial partner NIR manufacturer to further develop machine capabilities. 5. Be equipment owner of the high temperature NIR, responsible for training, maintenance and upgrades to equipment. 6. Develop recycling processes based on NIR thermal processing 7. Lead collaborations with Birmingham on Near Infrared Sintering and using NIR processing as a method for recycling coatings. 8. Collaborate with circular economy researchers to develop strategies for incorporating novel recycling processes into a circular economy. |
|  | 1. Pro-actively contribute to and conduct research, including gather, prepare and analyse data and present results, exhibiting a degree of independence in terms of specifying the focus and direction of that research. 2. Prepare reports, draft patents and papers describing the results of the research, both confidential and for publication. The appointee is expected to be actively engaged in the writing and publishing of research papers, particularly those intended for publication in refereed (e.g. international) journals or comparable as a normal part of their role. 3. Be self-motivated, apply and use their initiative, aiming to determine suitable ways to tackle challenges and seeking guidance when needed. 4. Use creativity to analyse and interpret research data and draw conclusions on the outcomes. 5. Interact positively and professionally with other collaborators and partners within the Faculty, elsewhere in the University and beyond both in industry/commerce and academia. 6. Contribute pro-actively to the development of external funding applications to support their own work, that of others and the Faculty and the Institution in general. The appointee will be expected as a normal part of their work to be actively engaged in writing, or contributing to writing such applications. 7. Contribute to Faculty organisational matters in order to help it run smoothly and to help raise its external research profile. 8. Keep informed of developments in the field in both technical and specific terms and the wider subject area and the implication for commercial applications and the knowledge economy or academia. 9. When requested act as a representative or member of committees, using the opportunity to extend their own professional experience. 10. Demonstrate and evidence own professional development, identifying development needs with reference to Vitae Researcher Development Framework particularly with regard to probation, performance reviews, and participation in training events. 11. Maintain and enhance links with the professional institutions and other related bodies. 12. Observe best-practice protocols in maintenance and retention of research records as indicated by HEI and Research Councils records management guidance.  This includes ensuring project log-book records are deposited with the University/Principal Investigator on completion of the work |
| **General Duties** | 1. To promote equality and diversity in working practices and maintain positive working relationships. 2. To conduct the job role and all activities in accordance with safety, health and sustainability policies and management systems, in order to reduce risks and impacts arising from the work activity. 3. To ensure that risk management is an integral part of any decision making process, by ensuring compliance with the University’s Risk Management Policy. 4. Any other duties as agreed by the Faculty / Directorate / Service Area. |
| **Person Specification** | **Essential criteria:**   1. A PhD in ceramics and surface coatings or equivalent 2. Evidence of active engagement, personal role, and contribution to writing and publishing research papers, particularly for refereed journals. 3. Evidence of the capacity for active engagement in designing research and writing, or contributing to writing, applications for external research funding. 4. Ability to demonstrate significant independence of focus and direction in research – determining ’what, why, when and with whom' to progress work. 5. Experience in Sol gel chemistry and analysis 6. Direct experience working with Industry on ceramic materials development. 7. Extensive practical experience in characterisation techniques as: XRD, XRF, SEM/EDX, UV/Vis/NIR and Raman Spectroscopy, DSC/TGA, FT-IR. 8. Practical experience of high temperature (>1000°C) Near Infrared Sintering training and maintenance. 9. Demonstration of practical laboratory skills 10. A demonstrable ability to conduct research in line with the objectives of the project 11. Evidence of planning skills to contribute to the research project. 12. A commitment to continuous professional development   **Desirable Criteria**   1. Evidence of external engagement and impact of research outside of academic circles – for example participation in outreach activities for schools / community lectures, science fairs. 2. Experience of supervising undergraduate or postgraduate student projects |
| **Welsh Language Level** | Level 1 – ‘a little’ - pronounce Welsh words. Able to answer the phone in Welsh (good morning / afternoon). Able to use very basic every-day words and phrases (thank you, please etc.). Level 1 can be reached by completing a one-hour training course.  For more information about the Welsh Language Levels please refer to the Welsh Language Skills Assessment web page, which is available [here](https://www.swansea.ac.uk/welsh-language-standards/compliance/recruitment/). |
| **Additional Information** | Informal enquiries: Professor Matthew Davies (m.l.davies@swansea.ac.uk) |

  