

**JOB DESCRIPTION**

**Vacancy Ref: 0854-23**

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| **Job Title:** **Research Associate in Materials Engineering (Capture γ-ray Assessment in Nuclear Energy)** | **Present Grade:** 6 |
| **Department/College:** Engineering |
| **Directly responsible to:** Professor Andrew Kennedy |
| **Supervisory responsibility for:** Some supervision of postgraduate students |
| **Other contacts**  |
| **Internal:**Profs. Malcolm Joyce, Stephen Croft and Andrew Kennedy |
| **External:**  Steve Bradnam and Lee Packer (UKAEA);Robert Mills and David Hambley (National Nuclear Laboratory). |
| **Major Duties:** 1. Improving and advancing our scientific understanding, combining simulations and experimentation, to determine whether porous materials can be used as analogues for dispersed water in FCM.
2. Applying existing and developing new concepts in macro porous materials to infer materials properties of relevance to spent nuclear fuel management, building on existing prior art.
3. Evaluating and optimising the ability of novel macro porous materials to deliver the structural and functional requirements to perform as an effective analogue for water in FCM – as dictated by the project objectives – through a process of design, manufacture, characterization and testing.
4. Participation and leadership in C-GANE project meetings, including the preparation and presentation of talks, posters and reports, and material for a website associated with the project, to disseminate the results of these studies.
5. Participation and presentation of papers at national and international conferences and workshops to detailing the results of the project to a wider audience and to learn about current advances in the field.
6. Preparation of high-quality journal papers for publication of the project findings.
7. Participation in (and ultimately taking the lead in) writing new research proposals that build on the expertise in radiation and monitoring research developed in this project.
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