Ref: EPS-05576

THE UNIVERSITY OF MANCHESTER
PARTICULARS OF APPOINTMENT
THE FACULTY OF ENGINEERING AND PHYSICAL SCIENCES
SCHOOL OF CHEMISTRY

RESEARCH ASSOCIATE:
RADIATION CHEMISTRY OF WATER-OXIDE SYSTEMS

1 The University invites applications for the above post which available for a period of 2 years.

2 Salary will be £30,434 to £37,394 per annum according to relevant experience.

3 Informal enquiries may be made to Professor Simon M Pimblott
Email: simon.pimblott@manchester.ac.uk  Tel: + 44 (0)1946 508 888

4 Applications should be made on line. If you are unable to apply on line please request an application form by emailing hrservices@manchester.ac.uk quoting the reference number or by calling 0161 275 4499 (HR Services).

5 The University of Manchester values a diverse workforce and welcomes applications from all sections of the community.
**Job title:** Research Associate: Radiation Chemistry of Water-Oxide Systems

**Salary:** Grade 6

**Start/duration:** 2 years

**Probation period:** 9 months

**Based at:** Dalton Cumbrian Facility (DCF)

**Responsible to:** Simon M. Pimblott, Professor of Radiation Chemistry, School of Chemistry & Director, Dalton Cumbrian Facility

**BACKGROUND**

The DCF is a new research base for the University of Manchester’s Dalton Nuclear Institute and is located at the Westlakes Science & Technology Park, near Whitehaven, in West Cumbria. It is designed to be an international user facility for radiation sciences, attracting academic researchers from the UK and overseas and is an integral part of the recently announced UK National Nuclear User Facility, along with the Central Laboratory of the National Nuclear Laboratory and the Culham Centre for Fusion Energy. The experimental equipment at DCF includes extensive irradiation facilities (including a NEC 5MV tandem ion accelerator and a self-contained Foss Therapy Co-60 irradiator) supported by high-end analytical and inspection laboratories. A second accelerator, a NEC 2.5MV single-ended proton / helium ion accelerator will be installed in 2015.

The National Nuclear Laboratory Central Laboratory is the UK’s flagship nuclear research and development facility for work with radioactive materials. It is located on Sellafield site and supports research programmes in the fields of reactor operations, fuel reprocessing, and decommissioning and cleanup.

**Overall Purpose of the Job**

You will design, develop and perform experimental studies of alpha induced radiation chemistry of water/ ceramic oxide systems working at the University of Manchester’s Dalton Cumbrian Facility, and of water-PuO$_2$ systems working at the Central Laboratory of the National Nuclear Laboratory. You will report to Simon M. Pimblott, Professor of Radiation Chemistry and Director of the Dalton Cumbrian Facility and Carolyn I. Pearce, Dalton Fellow in Nuclear Engineering.

**Key Responsibilities, Accountabilities or Duties**

This position requires a commitment to working at a facility located in West Cumbria about 120 miles from the university’s main campus in Manchester.

The key roles and responsibilities will be as follows:

- to develop and perform experiments within the active laboratories of the NNL-CL and the research laboratories of the DCF,
- to conduct individual and collaborative research projects,
to provide day-to-day management of radiation science team research projects, including supervision and training of students,
to prepare reports and forward planning documents,
to participate in interactions with other universities, other similar research centres, and the nuclear industry,
to assist in the preparation of proposals and applications to external bodies to securing funding and contracts for research projects, and
to publish high quality research reports and publications.

PERSON SPECIFICATION

Essential:
You will possess
- a PhD in experimental physical sciences, preferably radiation chemistry or radiochemistry,
a record of scientific achievement demonstrated by publication in high quality peer review journals, and
a proven track record in the application of experimental analytic science methods appropriate in radiation sciences, particularly gas and ion chromatography and the various forms of spectrometry.

You will be able to demonstrate
- experience in experimental radiation sciences, preferably radiation chemistry or radiochemistry,
- experience in the use and handling of ionizing radiation sources, and preferably experience in handling radionuclides,
a background of day to day laboratory work within the higher education system,
experience of working in a joint industrial and academic projects, and
- proven project management skills.

You will have the ability
- to liaise confidently and effectively with a range of individuals,
to work independently and as part of a team,
to present in both written and oral publications,
to meet deadlines,
to contribute to broader management and administrative processes, and
to assess and organise resources

You must able to be security vetted to work on a nuclear licensed site

Desirable:
It is desirable that you have,
a knowledge of, and experience in, the operation of active glove boxes or fume hoods, and
Postdoctoral or higher level scientific experience.