



EUROPEAN COMMISSION

DIRECTORATE GENERAL
JOINT RESEARCH CENTRE
Directorate for Nuclear Safety and Security
The Director

Project sheet reference n°
2018-KRU-G-000-9886

Synthesis of the nanosized (U,Ce)O₂ solid solutions

Position for:	<u>Short description of activity:</u>
Trainee	<p>As the science and knowledge service of the Commission, the mission of DG Joint Research Centre is to support EU policies with independent evidence throughout the whole policy cycle.</p> <p>The JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at: http://www.jrc.ec.europa.eu</p> <p>We propose a traineeship, in collaboration with Helmholtz-Zentrum Dresden Rossendorf, in the area of synthesis and characterisation of nanomaterials by using the hot compressed water method.</p> <p>The trainee will be involved in chemical synthesis of the (U,Ce)O₂ solid solutions, and in the investigation of its thermal behaviour under different conditions, in order to assess the phase diagram and the potential electronic transfer in between the two cations. She/he will learn the traditional methods of nanomaterials synthesis and several characterisation techniques (SEM, XRD, TGA).</p> <p><u>Qualifications:</u></p> <p><u>Essential</u></p> <p>Enrolled in the final year of a Master's degree in chemistry, materials science/engineering, or similar, or recently graduated.</p> <p><u>Advantage</u></p> <p>Previous experience in a materials science or chemistry lab, knowledge of inorganic chemistry, and powder XRD acquisition and interpretation.</p> <p><u>For general eligibility requirements, please read the rules governing the traineeship scheme of the JRC:</u></p> <p>https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/jrc-trainees</p>

Institute/ Directorate Unit	JRC.G, Nuclear Safety and Security (Karlsruhe) JRC.G.I.5 Further information: https://ec.europa.eu/jrc/en/about/organisation https://ec.europa.eu/jrc/en/science-area/nuclear-safety-and-security
Indicative duration	4 -5 months at JRC
Preferred starting date	August or September 2018
JRC Site Country	Karlsruhe Germany
<u>JRC contact details</u>	For any technical problems with your application, please contact: hr-amc8-recruitment-tools@ec.europa.eu