



Project sheet reference n°
2019-KRU-G-000-011312

Surface study of homoepitaxial growth of
UO₂ thin films

<p>Position for:</p> <p>Trainee</p>	<p><u>Short description of activity:</u></p> <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>A traineeship is suggested to perform homoepitaxial growth of UO₂ films on bulk single crystals and analyse surface properties by surface spectroscopy techniques.</p> <p>We will perform structural analyses using low energy electron diffraction (LEED) before and after deposition of UO₂ film by dc sputtering on bulk single crystal of UO₂. Goal is to determine the conditions for single crystalline growth.</p> <p>The electronic properties of the surface will also be systematically characterised by spectroscopy techniques (X-ray and Ultra-violet photoelectron spectroscopy) to ensure the oxidation state and the stoichiometry of UO₂. The LEED analyses will tell about the possibility to obtain homoepitaxial growth of UO₂ under our deposition conditions.</p> <p><u>Qualifications:</u></p> <p>Degree in physics or chemistry. X-ray diffraction, low energy electron diffraction, X-ray photoelectron spectroscopy would be an asset.</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 Advanced Nuclear Knowledge Unit Further information: https://ec.europa.eu/jrc/en/about/organisation https://ec.europa.eu/jrc/en/science-area/nuclear-safety-and-security
Indicative duration	5 months
Preferred starting date	01/06/2019
JRC Site	Karlsruhe
Country	Germany
<u>JRC contact details</u>	For any technical problems with your application, please contact: HR-AMC8-RECRUITMENT-TOOLS-SUPPORT@ec.europa.eu