



2021-KRU-G-000-018051

**Traineeship on electrospray-assisted
sol-gel process for nuclear fuel
fabrication (E-gel4Nuc)**

<p>Position for:</p> <p>Trainee</p>	<p>As the science and knowledge service of the Commission, the mission of 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: https://ec.europa.eu/jrc/en</p> <p><u>Short description of activity:</u></p> <p>The activity will consist in the production of ceramic microbeads with tuneable size and porosity via electrospray-driven atomization, sol-gel stabilization and freeze-drying starting from water suspensions of metal oxide nanoparticles or metal ions solutions. The composition of the starting water suspensions and the effect of the critical process parameters will be systematically evaluated to explore the mechanisms of microbeads formation and stabilization. The trainee will assist the project team in the execution of laboratory work and will have the opportunity to be trained in the synthesis and chemical-physical characterisation of ceramic materials and nanocomposites.</p> <p><u>Qualifications:</u></p> <p><u>Essential:</u></p> <ul style="list-style-type: none">- University degree in a relevant field (e.g. chemistry, materials science, engineering) or in preparation of a thesis for a university degree- General understanding of the fundamental of nanomaterials synthesis and characterization methods is essentials- Good knowledge of spoken and written English (level B2) is essential; knowledge of other languages is an advantage
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	<p><u>Advantage:</u></p> <ul style="list-style-type: none"> - Prior experimental experience and knowledge of good laboratory practices is an advantage - Prior experience with electrospinning / electro spraying techniques is an advantage - Prior knowledge of ceramic materials synthesis and characterization is an advantage <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>
Unit /Directorate	Unit G.I.3 - Nuclear Fuel Safety Directorate G - Nuclear Safety and Security
Duration	5 months
Preferred starting date	1 November 2021
JRC Site	Karlsruhe
Country	Germany
JRC contact details	<p>For any technical problems with your application, please contact:</p> <p>HR-AMC8-RECRUITMENT-TOOLS-SUPPORT@ec.europa.eu</p>