



2022-PTT-C1-FGIV-021428

**FG IV – Project Officer – Scientific Research on
Battery Safety****POSITION FOR:**

Member of the contract staff FG IV – art. 3b of the Conditions of Employment of Other Servants
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1962R0031:20110101:EN:PDF>)

The current vacancy is in the Directorate for Energy, Transport and Climate, in the Energy Storage Unit of the European Commission's Joint Research Centre (JRC) in Petten (the Netherlands).

The Directorate for Energy, Transport and Climate provides support to EU policies in the field of sustainable, safe, secure and efficient energy production, distribution and use. Fostering sustainable and efficient mobility in Europe and providing scientific and technical analyses in support to integrated air quality, climate and related policies are also in the area of activities.

The Energy Storage Unit of this Directorate performs scientific research in the fields of battery and hydrogen technologies in support of related European Commission policies. These technologies are enablers of the transition towards less carbon-intensive and hydrogen-inclusive EU energy and transport systems and need to be highly performing, sustainable and safe to effectively drive the decarbonisation of energy and transport systems forward.

The Unit activities include pre-normative experimental research and desktop analytical activities. It is directly involved in numerous EU energy, industrial, mobility and research and innovation policies.

Further information: <https://ec.europa.eu/jrc/en/research-facility/battery-energy-storage-testing-safe-electric-transport> and <https://ec.europa.eu/jrc/>

WE PROPOSE:

Our Energy Storage Unit is looking for a highly motivated and experienced colleague for research on battery safety. We study the safety of advanced battery used in vehicles and in stationary energy storage applications. Our direct goal is supporting the development and improvement of methods and standards able to evaluate battery safety under real-life operation. Our overarching goal is contributing to a safer use of high-power batteries.

The research focus will be the study of the thermal runaway and thermal propagation occurring under accidental condition in Li-ion batteries. The objective is to develop a testing procedure able to reproduce these phenomena and assess the related batteries behaviour. This testing procedure will be part of a technical regulation to be adopted globally for the approval of these batteries.

The work will require a definition of thermal runaway criteria, the evaluation of mitigation and prevention strategies for thermal runaway and propagation, and the investigation of hazards and risks associated with emissions from Li-ion batteries under these accidental conditions. The activities will require an analysis of the current global state-of-the-art in the field, the design and execution of experiments and the processing of data. Analytical techniques relevant in this context are FTIR, GC, DTA, ICP-OES and X-ray diffraction (XRD), available in our laboratory, as well as other methods of chemical and gas analysis.

The successful candidate will work together with a team of engineers and scientists from the Energy Storage Unit. Specific duties include:

- To define, prepare and execute experiments to evaluate fitness-for-purpose of existing test procedures for battery safety and to propose improvements where needed.
- To disseminate scientific results by publishing articles in peer-reviewed journals, attending key scientific conferences, communicating with external project collaborators and presenting our activities and experimental results and findings.
- To contribute to our activities supporting European Commission policies in field of battery safety, in

collaboration with the Directorate-General responsible for Environment (DG ENV) and the Directorate-General for Internal Market and Industry (DG GROW).

JRC offers a full time work position and a set of social benefits for its employees and their families, including health insurance, European School education for children and a work place in the middle of a Nature 2000 dune area.

WE LOOK FOR:

We are looking for a candidate with the following experience/skills:

Required Skills/Experience

- University studies of at least three years in physics, chemistry, engineering or a similar field.
- Five years of professional experience or a PhD in a relevant field.
- Hands-on experience with experimental research related to batteries or battery materials, preferably Li ion batteries.
- Openness to work in a multicultural environment.
- Oral and written English at least at level B2.
- Ability to work in a team.
- Very good communication skills.

Desirable Skills/Experience

- Experience in chemical/physical analysis techniques
- Knowledge of battery standards.
- Programming experience (preferably Matlab and/or Python)
- Statistical data evaluation.

INDICATIVE CONTRACT'S DURATION:

36 months initial contract with possible renewals up to maximum 6 years.

PLACE OF WORK:

Petten (NL)

ELIGIBILITY CRITERIA:

Candidates for this contract agent post shall:

– (i) have passed a valid EPSO CAST selection procedure;

or

– (ii) be registered in the EPSO Permanent CAST https://epso.europa.eu/documents/2240_en

or

- (iii) be registered in the specialised call for researchers <https://ec.europa.eu/jrc/en/working-with-us/jobs/vacancies/function-group-iv-researchers>.

With a valid application number to one of the above, you may then apply for this specific vacancy at JRC through: <http://recruitment.jrc.ec.europa.eu/?type=AX>.

RECRUITMENT POLICY:

The Joint Research Centre

- Cultivates a workplace based on respect for other people and the environment.
- Embraces non-discriminatory practices and equality of opportunity. In case of equal merit, preference will be given to the gender in minority.