



## **Empa - the place where innovation starts**

Empa is the research institute for materials science and technology of the ETH Domain and conducts cutting-edge research for the benefit of industry and the well-being of society.

The Laboratory for Thin Films and Photovoltaics is known for its innovative research in the field of inorganic and organic-inorganic hybrid thin film photovoltaic and battery technologies. The Laboratory holds the world record for energy conversion efficiency of CIGS solar cells on flexible substrates, and is one of the leading players for CIGS/perovskite tandem devices. The lab is a contributor to the Coating Competence Center of Empa. To strengthen our team we are opening a

## **Post-doc position in the field of thin-film devices for energy applications**

We are looking for a postdoc motivated to contribute to the development of thin-film photovoltaic devices based on the CIGS technology and other energy-related applications. In close collaboration with other team members, the researcher is responsible for the fabrication and characterization of high performance devices with different concepts, develop interconnects, and explore possibilities for alternative electrical contacts in view of integration as bottom or top cell in tandem devices.

Upon mutual interest the responsibilities will be extended to the exploration of new materials, processing methods and device applications.

### **Your responsibilities include:**

- Plan and conduct experiments to develop the scientific understanding and improve the performance of solar cells and modules
- Devices fabrication using various deposition techniques, notably high-vacuum coevaporation, chemical bath deposition, magnetron sputtering, atomic layer deposition and thermal/e-beam evaporation
- Characterization of material, layers and devices by (time-resolved) photoluminescence and material analysis methods, interpretation of results
- Take a lead in the exploratory research that can result in high-quality scientific publications as well as work in close collaboration with industrial and academic partners from Europe

### **Your profile:**

- PhD degree in Material science, Physics, Chemistry, Electrical engineering or similar, with strong hands-on experience with in semiconductor materials, advanced semiconductor characterization and/or interface passivation approaches
- The work requires high level of experimental skills to operate sophisticated machines, analytical mindset for interpreting measured data and perform designer's experiments for innovation.
- Ability to work in a collaborative team environment towards a common goal
- You are a team player and your strengths include taking personal responsibility, high motivation for innovation, excellence and flexibility to work and deliver results

We offer an international, highly stimulating research environment with excellent infrastructure and broad interdisciplinary surroundings with plenty of possibilities for personal and professional development. You will work on important and promising solutions to the global energy problem in an international environment.

The initial contract is for one year and can be extended up to three years.

The starting date is Spring 2023 or upon mutual agreement.

**For further information** about the position please contact Dr Romain Carron [romain.carron@empa.ch](mailto:romain.carron@empa.ch) and visit our websites <http://www.empa.ch/web/s207> and [Empa-Video](#).

**We look forward** to receiving your application including a letter of motivation, CV, diplomas with transcripts and contact details of two referees. Please send the requested documents via email directly to Dr Romain Carron.

Empa, Romain Carron, Laboratory for Thin Films and Photovoltaics, Ueberlandstrasse 129, 8600 Dübendorf, Switzerland.

The job description was updated from the initial one regarding starting date and modalities of application.