Post-doctoral position on photo(electro)catalytic reduction of CO_2

Duration: 2025-2027 (24 months, starting January 2025)

Location: CEA Grenoble (France).

The position is opened in the SolHyCat team (https://www.solhycat.com/) of the Laboratory of Chemistry and Biology of Metals, under the supervision of Dr. Murielle Chavarot-Kerlidou. The research project seeks to design innovative photocathodes for the production of solar fuels and chemicals from CO_2 and sunlight. Various strategies will be developed to covalently anchor bio-inspired molecular catalysts in three-dimensional porous polymers, as well as to immobilize them onto suitable electrode materials. Photoelectrocatalytic CO_2 reduction activities will then be assessed and benchmarked to highlight the beneficial role the 3D structuration can play on the performances (TOF, selectivity) and stability of these hybrid photocathode assemblies.

The work will be carried out within the framework of the Power-CO_2 project of the National research program and equipment for *Decarbonizing industry* (PEPR SPLEEN), in collaboration with the ING team (Dr. Jérôme Canivet) at IRCELYON.

Qualifications: The applicants should hold a PhD in molecular chemistry, with a strong background in coordination chemistry; they will further benefit from experience in electrochemistry and/or (photo)catalysis. The successful candidate should demonstrate good communication skills (oral and written) in English and be highly motivated to broaden her/his knowledge and work in a multidisciplinary collaborative environment.

Interested candidates are asked to send their CV and a motivation letter (with contact details of at least two potential referees) to Dr. Murielle Chavarot-Kerlidou (murielle.chavarot-kerlidou@cea.fr).

The position is opened from January 1st 2025. The candidates should take into account that the hiring procedure takes about two months. The salary will depend on experience (health insurance and benefits paid by the employer).