

JOB OFFER

Position in the project:	POSTDOC at Next-Generation Energy Systems
Scientific discipline:	Physics, Chemistry, Materials science or related fields
Job type (employment contract/stipend):	Full-time employment contract
Number of job offers:	1
Remuneration/stipend amount/month (“X0 000 PLN of full remuneration cost, i.e. expected net salary at X 000 PLN”):	Gross monthly salary up to 12,000 PLN depending on experience and expertise
Position starts on:	From April 2023 (depending on applicant’s availability)
Maximum period of contract/stipend agreement:	December 2023 (possible to elongate)
Institution:	ENSEMBLE ³ Sp. z o. o.
Project leader:	Prof. Dorota Anna Pawlak
Project title:	ENSEMBLE ³ Centre of Excellence for nanophotonics, advanced materials and novel crystal growth-based technologies The Centre is funded through the International Research Agenda of the Foundation for Polish Science, under axis IV of the Smart Growth Operational Programme, Measure 4.3, and the Teaming for Excellence H2020 programme
Project description:	ENSEMBLE ³ is a new Centre of Excellence for nanophotonics, advanced materials, and novel crystal growth-based technologies located in Warsaw, Poland, created jointly by institutions from Poland, Germany, Italy, and Spain. The centre will work on the development of novel material technologies and advanced materials with unique electromagnetic properties, with potential applications in fields such as photonics, optoelectronics, telecommunication, solar energy conversion, medicine, and aerospace.
Group description:	One postdoc researcher positions are open in the “Next-Generation Energy Systems” group, led by Dr. Atsushi Nagai . The group will aim to realize the next generation of useful energy systems such as fuel cells, batteries, and gas storages at the nanoscale in innovative multidimensional porous materials, mainly Covalent Organic Frameworks (COFs) and Conjugated Micro-Porous materials (CMPs), which will be developed for the first time at our centre. It will contribute to demonstrating novel design concepts opening the path to porous materials and devices with unprecedented performance. Moreover, the preparation of CMPs based on rich-electronic conjugated backbones could imply the development of stable solid state materials with optoelectronic and photochemical applications. CMPs based on exclusively aromatic builder units, are especially remarkable and still more robust and stable than conventional COFs, maintaining intrinsic electron-rich structure, and capability to be functionalized and high porosity. The research will be undertaken by state-of-the-art organic/polymer synthetic approach and the characterization will use a lot of equipment such as nano- and micro- FTIR, powder XRD, nitrogen adsorption, solid-state NMR and UV/PL, Tg-DTA, DSC, SEM, TEM, conductivity measurements (electron, proton and ionic). Advanced simulations such as DFT and material studio will be harnessed to understand the real nanoscale porous layered structures of the measured crystalline materials.

Key responsibilities include:	<ul style="list-style-type: none"> • Develop novel COFs and CMPs for the application of energy storage • Characterize the innovative porous materials, analyze and simulate them in relation to the materials structure, composition, and other properties (e.g., electronic and conductivity) at the nanoscale • Propose new ideas • Disseminate results to the scientific community and the public
Profile of candidates/requirements:	<ul style="list-style-type: none"> • PhD degree in chemistry, physics, optics, material science, or similar, received no later than five years prior to the date of application • Outstanding research achievements reflected by the publication track record • Experience in organic synthesis, X-ray spectroscopy, and nitrogen adsorption measurement • Ability to use DFT simulation, material studio and to understand the nanoscale physical origin of optical properties • Experience in fields such as organic/polymer synthesis, photonics, gas adsorption • Strong motivation for science and scientific research • Creativity, critical thinking, organizational skills, proactive approach to perform tasks and reach objectives • Strong ability to work independently as well as in a team, social competence, personal responsibility • Strong communication skills in English
Required documents:	<ul style="list-style-type: none"> • CV (including a list of projects/publications); • Cover letter; • Proof of PhD; • Name and addresses of two references.
We offer:	<ul style="list-style-type: none"> • Full-time employment; • Opportunity to work in an innovative scientific environment; • International cooperation with experienced researchers; • Competitive salary; • Administrative support for visa and related documentation; • Access to well-staffed core facilities.
Please submit the documents to:	https://system.erecruiter.pl/FormTemplates/RecruitmentForm.aspx?WebID=5f271ab90cfa41679282c5849fa2eae4
Application deadline:	13 March 2023 Competitive candidates will be interviewed before the appointments are made.
For more details about the position please visit (website/webpage address):	For further information, visit: www.ensemble3.eu www.facebook.com/fmlaboratory For questions, please contact: recruitment@ensemble3.eu , atsushi.nagai@ensemble3.eu
Euraxess job/stipend offer (in case of PhD and postdoc positions):	https://euraxess.ec.europa.eu/jobs/71869

Please include in your CV:

I hereby give consent for my personal data included in my application to be processed for the purposes of the recruitment process under the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

