

Expression of Interest for hosting Marie Skłodowska – Curie Postdoctoral Fellow at the University of Lodz

1. DEPARTMENT INTERESTED IN HOSTING POSTDOCTORAL FELLOWS

Faculty: Faculty of Chemistry
Department: Department of Analytical and Inorganic Chemistry,
Electrochemistry@Soft Interfaces Team (E@SI)
Contact person – potential Supervisor: (Lukasz Poltorak,
lukasz.poltorak@chemia.uni.lodz.pl, associated professor, 00 48 42 635 57 74)

2. SCIENTIFIC AREA:

- Chemistry
- Economic Sciences
- Information Science and Engineering
- Environmental and Geosciences
- Life Sciences
- Mathematics
- Physics
- Social Sciences and Humanities

3. SHORT SUMMARY OF THE HOSTING DEPARTMENT (*max. 1 page*)

Activities and expertise:

Electrochemistry, soft matter, liquid-liquid interfaces, biomimetic interfaces, membranes, sensors, ion transport, 3D printing, fabrication for electrochemistry, nanomaterials, electrochemical deposition.

Involvement in EU-funded research and training programmes/actions/projects:

Horizon EUROPE; HORIZON-WIDERA-2022-TALENTS-02-01 — Fostering balanced brain circulation – ERA Fellowships, GRANT AGREEMENT Project 101090335 — e-gainstRapeDrugs

Key research facilities:

Facility being located in the Electrochemistry@Soft Interfaces team

- # Well equipped electrochemical laboratories;
- # Know how and equipment needed for the electrified liquid-liquid interfaces based studies;

Microscopy lab: optical profilometry, scanning electron microscopy, optical microscopy, polarization microscopy;
3D printing lab: fused deposition modeling based technology (single and multiple nozzles, closed chambers, printers for conductive filaments); digital light processing printers, extrusion printers, filamakers, shredder, bioprinter;
Atomic absorption spectrometry;
Know-how related to miniaturization for electrochemistry;
FTIR with ATR;
Infrastructure for interfaces characterization.

Intersectoral secondments optionsⁱ



YES

NO

4. PROPOSED PROJECT TOPIC

Rough outline of project idea or key words (optional - max. 10 phrases)

Polymeric membranes development for ionic sieving.
Sensing at the electrified liquid-liquid interface.
Materials development for 3D printing.
Interfaces modification for the sensors development.
Three phase junctions modification.
Electrochemically assisted modification reactions.
Soft particles formulations and their electroanalytical studies.
Liquid-liquid interfaces modification with self-assembling objects.
Wireless electrochemical deposition.

5. VALID FOR THE FOLLOWING HORIZON-MSCA--PF CALL:

2023

2024

2025

2026

2027

MSCA Postdoctoral Fellowships are selected by EC on the basis of annual calls for proposals. Forthcoming and open calls for proposals can be found on the Funding & tender opportunities Portal of the European Commission

ⁱ Within non-academic organizations (enterprises, hospitals, government institutions, cultural institutions, non-governmental organisations such as foundations, associations or other legal entities) – may be planned during the project provided they are in line with the Guide for applicants regulations of the corresponding call.