



EUROPEAN RESEARCH EXECUTIVE AGENCY (REA)

REA.A – Marie Skłodowska-Curie Actions & Support to Experts
A.2 – MSCA Postdoctoral Fellowships

AMENDMENT No AMD-101065296-6

Project: 101065296 — Z-ION

The parties agree to amend the Agreement as follows ('**Amendment**')

1 . Change of the project duration

The project duration in the **Data Sheet** is changed to 26.

2. Change of the reporting periods

The reporting period(s) in the **Data Sheet** are changed to:

- RP 1: month 1 to month 26

All other provisions of the Agreement and its Annexes remain unchanged.

This Amendment **enters into force** on the day of the last signature.

This Amendment **takes effect** on the date(s) mentioned in the amendment clause(s) (or — if no date was chosen — on the same date the Amendment enters into force).

Please inform the other members of your consortium (if any) of this Amendment.

SIGNATURES

For the coordinator

For the granting authority

10. 10. 2024

16. 10. 2024

Done in English

Enclosures: Grant Agreement Data Sheet

DATA SHEET

1. General data

Project summary:

Project summary
Zinc-ion batteries (ZIBs) are among the most promising electrochemical energy storage (EES) technologies that could meet the future demand for green and safe storage of electric power, which is vital for a low carbon and fossil-fuel independent civilization. However, the low cost, Earth-abundance and superior safety/stability of zinc (Zn) in comparison to lithium-ion batteries, comes with formidable challenges, such as slow zinc ion migration and dendrite growth, limiting their charging/discharging time and life-span. Recent advances have expanded the design toolbox of metal organic frameworks (MOFs) and of tailored graphene derivatives – the core expertise of the applicant and of the host institution, respectively – which could drive the developments towards the next generation of ZIBs. The Z-ION project comes to meet the fundamental need for decarbonisation enabling safe, sustainable and low-cost batteries via the exploration of 3D and 2D conductive MOFs (CMOFs) and hybrids thereof with tailored graphene derivatives as hosts for Zn, which have so far remained largely unexplored in ZIBs. The conductivity and open framework of these materials, in comparison to the present insulating and low porosity cathodes, can boost Zn ion migration. Functionalization of both materials with chemical groups suitable for Zn coordination can streamline a homogeneous and dendrite-free deposition of metallic Zn at the anode through directed nucleation in their frameworks and at coordination sites. Importantly, tailored graphene derivatives with dense out-of-plane functionalities can facilitate the formation of covalent hybrids with CMOFs, ascribing hierarchical porosity and conductive bridges between the CMOF particles or sheets. The Z-ION project will thus offer indispensable knowledge for the advancement of low-cost, sustainable, and safe ZIBs, which also offer one of the highest volumetric energy densities, necessary for storing a lot of energy in small-sized batteries.

Keywords:

- Coordination chemistry
- Electrochemistry, batteries and fuel cells
- Graphene, 2D materials
- New materials: oxides, alloys, composite, organic-inorganic hybrid, nanoparticles
- Structural properties of materials
- metal organic frameworks, conductive, graphene, covalent hybrids, zinc-ion batteries, sustainable

Project number: 101065296

Project name: Teaming conductivity and chemical functionality in metal-organic frameworks for zinc-ion batteries

Project acronym: Z-ION

Call: HORIZON-MSCA-2021-PF-01

Topic: HORIZON-MSCA-2021-PF-01-01

Type of action: HORIZON TMA MSCA Postdoctoral Fellowships - European Fellowships

Granting authority: European Research Executive Agency

Grant managed through EU Funding & Tenders Portal: Yes (eGrants)

Project starting date: fixed date: 1 January 2023

Project end date: 28 February 2025

Project duration: 26 months

Consortium agreement: No

2. Participants

List of participants:

N°	Role	Short name	Legal name	Ctry	PIC	Total eligible contrib.	Max grant amount	Entry date	Exit date
1	COO	UP	UNIVERZITA PALACKEHO V OLOMOUCI	CZ	999649506	166 278.72	166 278.72		

N°	Role	Short name	Legal name	Ctry	PIC	Total eligible contrib.	Max grant amount	Entry date	Exit date
2	AP	PLEIONE	PLEIONE ANONYMI ETAIRIA KAINOTOMONENERGEIAKON EFARMOGON	EL	910897707	0.00	0.00		
Total						166 278.72	166 278.72		

Coordinator:

- UNIVERZITA PALACKEHO V OLOMOUCI (UP): from 9 August 2022 to present

3. Grant

Maximum grant amount, total estimated eligible costs and contributions and funding rate:

Total eligible contributions (unit, flat-rate and lump sum contributions and financing not linked to costs)	Maximum grant amount (Annex 2)	Maximum grant amount (award decision)
166 278.72	166 278.72	166 278.72

Grant form: Unit

Grant mode: Action grant

Budget categories/activity types:

- A. Contributions for recruited researchers
 - A.1 Living allowance
 - A.2 Mobility allowance
 - A.3 Family allowance
 - A.4 Long-term leave allowance
 - A.5 Special needs allowance
- B. Institutional contributions
 - B.1 Research, training and networking contribution
 - B.2 Management and indirect contribution

Cost eligibility options:

- In-kind contributions eligible costs

Budget flexibility: Yes (flexibility with conditions)

4. Reporting, payments and recoveries

4.1 Continuous reporting (art 21)

Deliverables: see Funding & Tenders Portal Continuous Reporting tool

4.2 Periodic reporting and payments

Reporting and payment schedule (art 21, 22):

Reporting					Payments	
Reporting periods			Type	Deadline	Type	Deadline (time to pay)
RP No	Month from	Month to				
					Initial prefinancing	30 days from entry into force/10 days before starting date – whichever is the latest
					Final payment	90 days from receiving periodic report
1	1	26	Periodic report	60 days after end of reporting period		

Prefinancing payments and guarantees:

Prefinancing payment	
Type	Amount
Prefinancing 1 (initial)	116 395.10

Reporting and payment modalities (art 21, 22):

Mutual Insurance Mechanism (MIM): Yes

MIM contribution: 5% of the maximum grant amount (8 313.94), retained from the initial prefinancing

Restrictions on distribution of initial prefinancing: The prefinancing may be distributed only if the minimum number of beneficiaries set out in the call conditions (if any) have acceded to the Agreement and only to beneficiaries that have acceded.

Interim payment ceiling (if any): 90% of the maximum grant amount

No-profit rule: n/a

Late payment interest: ECB + 3.5%

Bank account for payments:

████████████████████

Conversion into euros: n/a

Reporting language: Language of the Agreement

4.3 Certificates (art 24): n/a

4.4 Recoveries (art 22)

First-line liability for recoveries:

Beneficiary termination: Beneficiary concerned

Final payment: Each beneficiary for their own debt

After final payment: Beneficiary concerned

Joint and several liability for enforced recoveries (in case of non-payment):

Individual financial responsibility: Each beneficiary is liable only for its own debts (and those of its affiliated entities, if any)

Joint and several liability of affiliated entities — n/a

5. Consequences of non-compliance, applicable law & dispute settlement forum

Suspension and termination:

Additional suspension grounds (art 31)

Additional termination grounds (art 32)

Applicable law (art 43):

Standard applicable law regime: EU law + law of Belgium

Dispute settlement forum (art 43):

Standard dispute settlement forum:

EU beneficiaries: EU General Court + EU Court of Justice (on appeal)

Non-EU beneficiaries: Courts of Brussels, Belgium (unless an international agreement provides for the enforceability of EU court judgements)

6. Other

Specific rules (Annex 5): Yes

Standard time-limits after project end:

Confidentiality (for X years after final payment): 5

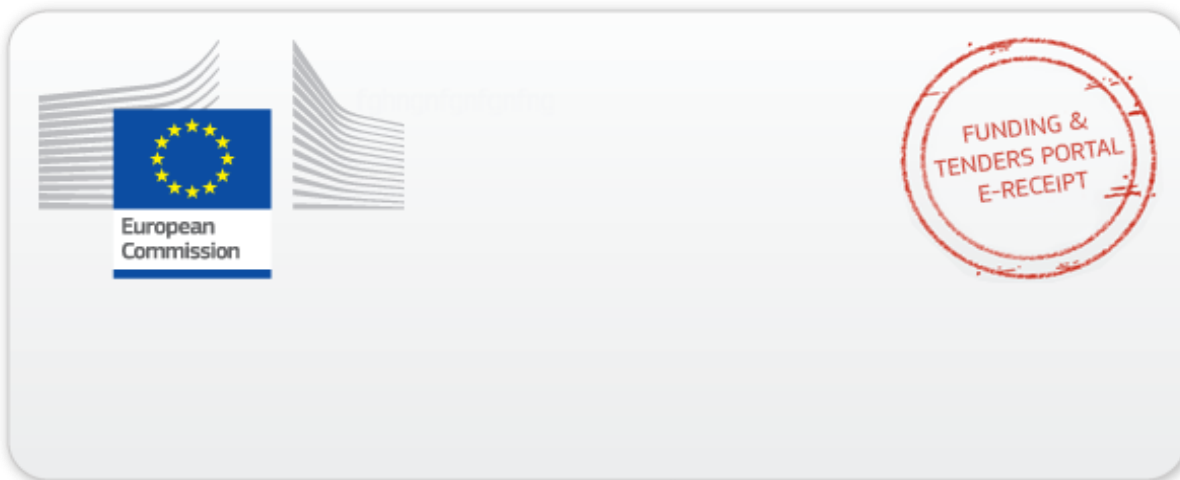
Record-keeping (for X years after final payment): 5 (or 3 for grants of not more than EUR 60 000)

Reviews (up to X years after final payment): 2

Audits (up to X years after final payment): 2

Extension of findings from other grants to this grant (no later than X years after final payment): 2

Impact evaluation (up to X years after final payment): 5 (or 3 for grants of not more than EUR 60 000)



2. 10. 2024

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