

Korea-EU Horizon Europe Researchers Networking Forum on Energy & Advanced Mobility

Benjamin Heyne

Head of Department

Fraunhofer IAP

Polymers and Electronics



1. Short Introduction of Fraunhofer Institute for Applied Polymer Research IAP



Locations in Potsdam, Cottbus, Hamburg, Schkopau, Schwarzheide, Senftenberg and Wildau

~270 employees

26.8 million euros operating budget and
17.2 million euros external revenues (status: 2023)



1. Short Introduction of Fraunhofer Institute for Applied Polymer Research IAP

Bioeconomy and sustainability

Tapping sustainable raw materials for a circular economy



Health and quality of life

New active ingredients, products and processes for medicine, medical technology and cosmetics



Energy transition and mobility

Innovative materials for the energy transition and evolution of new mobility concepts



Industry and technology

Customized solutions from laboratory to industrial scale





2. Expertise

- Specialized in sustainable polymers, bioplastics, composites, polymer electronics, biomedical materials.
- Advanced labs and pilot plants for synthesis, processing, material testing, and scale-up.
- Seven divisions: biopolymers, functional polymers, composites, synthesis/polymer tech, nanotech, life science/bioprocesses, pilot plants.
- Collaborates with universities and industry; 7 research sites across Germany.
- Focus on bioeconomy, circular economy, energy transition, health, industry.
- Services: R&D, process development, pilot-scale production, material characterization.

Your potential contribution to a consortium:

- Synthesis, modification, characterization and processing of functional monomers and polymers
- Membrane / Separator / Solid Polymer Electrolyte Development according to process specifications
- Bio-based carbon fiber/ powder for modification / optimization of GDLs
- Catalyst coated membranes: From colloidal synthesis to processed CCM / MEA / Catalysts for electrodes
- Testing of materials on system level

Keywords:

- Functional materials (design/ synthesis/ characterization)
- Battery systems
- Solid polymer electrolytes / Separator / Membranes
- Noble-metal reduced catalysts for electrocatalysis
- Organic / flexible / perovskite solar cells



3. Let's Develop a Joint Project Idea Together

Examples of targeted calls:

- HORIZON-CL5-2026-09-D2-01: Producing battery-grade materials for electrodes through sustainable processing and refining of raw materials or developing bio-based materials
- HORIZON-CL5-2026-10-D2-03: Integrated Production and Product Development for Next-Generation Lithium-based Batteries for Mobility (BATT4EU and Made in Europe Partnerships)
- HORIZON-CL5-2027-04-Two-Stage-D2-07: Novel approaches towards next-generation battery concepts, leveraging the enabling role of innovative advanced materials (BATT4EU and IAM4EU Partnerships)
- HORIZON-CL5-2026-03-D3-01: Targeting key value chain components for increasing the competitiveness of renewable energy technologies in Europe
- HORIZON-CL5-2026-04-Two-Stage-D3-02: Next generation of renewable energy technologies

Main objectives:

- Bio-based materials as solid polymer electrolytes
- Bio-based materials for Carbon based GDLs / Electrodes
- Mineral recovery and recycling from batteries
- Waste water treatment e.g. redox-flow batteries



4. Profile You are Seeking and Why

- Seeking consortia needing design, modification, or optimization of new or existing materials
- Focus on collaboration across entire value chains: material development, processing, demonstrators, and prototyping
- Aim to form integrated consortia covering all stages from lab to application
- Facilitate knowledge exchange and resource sharing among partners
- Support innovation and scalable solutions through joint efforts
- Promote sustainable and impactful material technologies through cooperation



5. Contact Details

Dr. Benjamin Heyne
Division Functional Polymers
Head of Department Polymers and Electronic
Tel. +49 331 568-1715 | Fax: +49 331 568-3910
benjamin.heyne@iap.fraunhofer.de

Fraunhofer IAP
Potsdam Science Park
Geiselbergstraße 69
14476 Potsdam | Germany
www.iap.fraunhofer.de

