FREECOVER NEWSLETTER ISSUE # 3 - JUNE 2026

WELCOME TO THE 3RD EDITION OF THE FREECOVER NEWSLETTER

This edition highlights FREECOVER's continued progress in advancing sustainable solutions for the recovery of critical raw materials through international collaboration, scientific exchange, secondments, workshops, and dissemination activities. The consortium further strengthened its contribution to circular economy innovation by promoting interdisciplinary research, stakeholder engagement, and knowledge transfer across Europe and beyond. Through technical seminars, science cafés, mobility actions, and public outreach activities, FREECOVER continues to support the development of sustainable and resilient value chains for Rare Earth Element recovery and battery circularity.

FREECOVER M13 MEETING AT UAB

FREECOVER partners gathered at the Universitat Autònoma de Barcelona (UAB) for the Month 13 (M13) Project Meeting, bringing together consortium members to review scientific progress, staff exchanges, dissemination activities, and future project priorities.

The meeting provided an important opportunity to strengthen collaboration among partners while discussing ongoing developments in sustainable recovery technologies, circular economy strategies, and mobility actions within the Marie Skłodowska-Curie Actions Staff Exchanges framework. Partners also reviewed upcoming scientific activities, dissemination planning, training initiatives, and collaborative research opportunities supporting FREECOVER's long-term objectives.

In parallel with the project meeting, partners participated in workshops and scientific exchange sessions that promoted interdisciplinary dialogue and strengthened knowledge transfer across the consortium.

THIS PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION'S HORIZON EUROPE RESEARCH AND INNOVATION PROGRAMME UNDER GA N° 101182579

FREECOVER SECONDMENTS IN ACTION

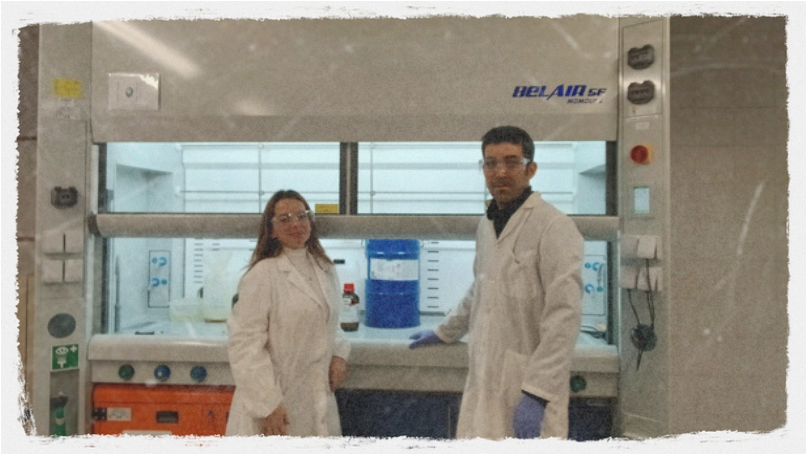
FREECOVER EU–CUBA SECONDMENT

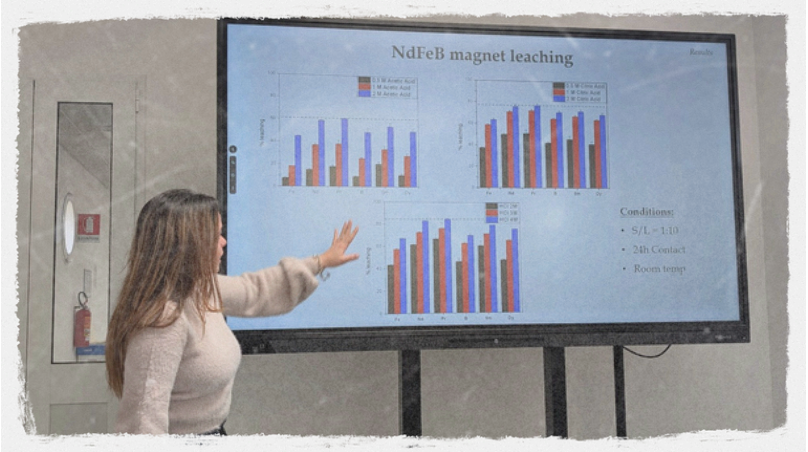
FREECOVER continues to promote international knowledge exchange through the Marie Skłodowska-Curie Staff Exchanges programme with a secondment hosted at the University of Udine (UNIUD), Italy. As part of this mobility activity, Yenisleidy Valdés from the University of Havana (UH), Cuba, contributed to Work Packages 2 and 3 focused on sustainable technologies for the recovery and separation of Rare Earth Elements (REEs) from permanent magnets.

During the secondment, the research activities focused on optimisation of permanent magnet leaching processes, separation of rare earth metals, supported ionic liquid membranes, and natural zeolite-based adsorbents supporting environmentally friendly recycling approaches for critical raw materials. The exchange strengthened collaboration between the University of Havana and the University of Udine while promoting hands-on knowledge transfer and interdisciplinary scientific cooperation.

As part of the secondment activities, Yenisleidy also delivered a final seminar at UNIUD titled “Leaching Protocols for REEs Recovery from Permanent Magnets,” presenting advances in sustainable recovery approaches for NdFeB magnets under mild operating conditions. The presented results highlighted improved recovery efficiency, optimisation of acid concentration and contact time, and environmentally responsible hydrometallurgical processing methods aligned with FREECOVER’s circular economy objectives.

Through these secondment activities, FREECOVER continues to strengthen international collaboration, research mobility, and sustainable innovation pathways supporting Europe’s transition toward resilient and circular critical raw material value chains.





THIS PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION’S HORIZON EUROPE RESEARCH AND INNOVATION PROGRAMME UNDER GA N° 101182579

FREECOVER MASTERCLASS #2

As part of the ongoing secondment activities within the FREECOVER project, a highly engaging masterclass titled “From PhD to Research Manager” was successfully held on 20 March 2026 at the Universitat Autònoma de Barcelona (UAB)

The session was delivered by Dr. Leonardo Piccinetti with the participation of Donatella Santoro, representing SITES, a key partner in the FREECOVER project. The masterclass brought together researchers and early-stage scientists to discuss career development pathways within European research and innovation ecosystems.

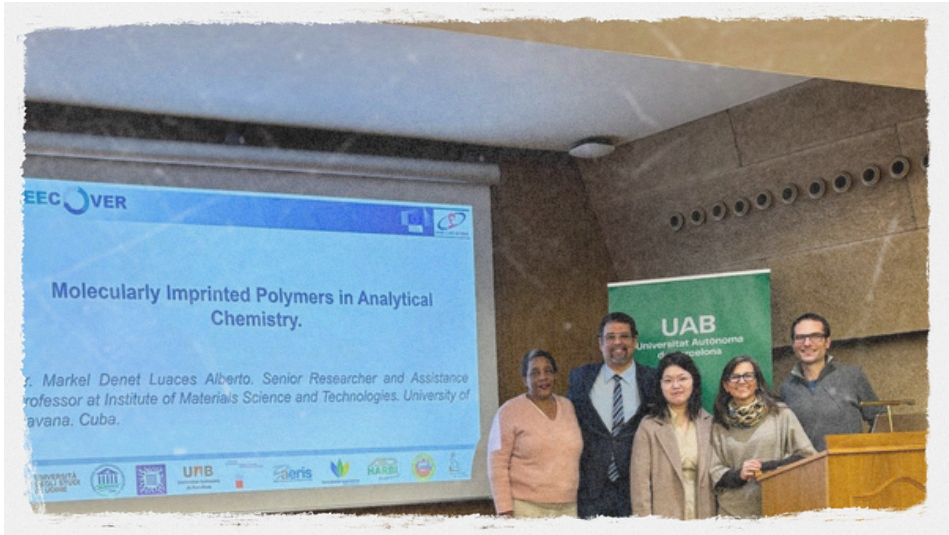
The session focused on supporting researchers in navigating the transition from academic research toward research management and international project coordination. Discussions explored European funding frameworks, proposal development, leadership skills, collaborative research environments, and the management of multidisciplinary innovation projects.

Participants actively engaged in interactive discussions addressing both opportunities and challenges faced by researchers pursuing careers beyond traditional academic pathways. The activity highlighted the importance of combining scientific excellence with professional development and transferable skills.

Through initiatives such as this masterclass, FREECOVER continues to strengthen capacity building, interdisciplinary collaboration, and researcher empowerment across partner institutions. The event further reflects the project’s commitment to fostering a stronger and more connected European research community through knowledge exchange, secondments, and international cooperation.

FREECOVER SEMINAR AT UAB

As part of the FREECOVER secondment and knowledge exchange activities, a scientific seminar titled “Molecularly Imprinted Polymers in Analytical Chemistry” was successfully held on 18 February 2026 at the Faculty of Sciences of the Universitat Autònoma de Barcelona (UAB).



The seminar was delivered by Dr. Markel Det Luaces Alberto within the department’s academic seminar series dedicated to PhD students and researchers. The session focused on advanced applications of Molecularly Imprinted Polymers (MIPs) in analytical chemistry, highlighting their role in selective detection, separation processes, and sustainable material development.

Participants explored innovative methodologies related to functional material design and analytical performance, with discussions emphasizing the growing relevance of MIPs in environmental and resource recovery applications. The seminar also provided an opportunity for scientific exchange between researchers and students working across chemistry, materials science, and circular economy-related disciplines.

THIS PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION’S HORIZON EUROPE RESEARCH AND INNOVATION PROGRAMME UNDER GA N° 101182579

FREECOVER EVENTS

FREECOVER INTERNATIONAL WORKSHOP

The FREECOVER consortium gathered on 22 January 2026 at the Universitat Autònoma de Barcelona (UAB) for an international technical workshop focused on sustainable technologies for the recovery and valorisation of critical raw materials and Rare Earth Elements (REEs).

Organised within the framework of the Horizon Europe Marie Skłodowska-Curie Staff Exchanges programme, the workshop brought together researchers and project partners from across Europe and Latin America to exchange scientific knowledge, present ongoing research activities, and strengthen international collaboration in circular economy innovation.

Throughout the workshop, participants explored advanced approaches for the recovery and separation of critical raw materials from industrial and electronic waste streams. The sessions highlighted innovative solutions combining green chemistry, hydrometallurgy, biotechnology, sustainable materials processing, and circular economy strategies aimed at reducing environmental impact and supporting resource efficiency.

The technical programme included presentations on luminescent rare earth materials, selective ionic liquids for green metal separation, natural zeolite-based extraction systems, recovery of rare earth elements from end-of-life permanent magnets, thermal desorption technologies for industrial residues, and biotechnology-driven recovery processes. Discussions also addressed sustainability assessment methodologies and innovation strategies supporting environmentally responsible recycling pathways.

The workshop provided an important platform for scientific exchange, interdisciplinary collaboration, and knowledge transfer among FREECOVER partners. Participants actively discussed ongoing secondment activities, future research directions, and opportunities to translate laboratory-scale innovations into scalable and sustainable industrial solutions.

By fostering cooperation between universities, research institutions, and innovation stakeholders, FREECOVER continues to strengthen its mission of advancing sustainable critical raw material recovery while supporting the development of resilient and circular value chains across Europe and beyond.

FREECOVER

THIS PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION'S HORIZON EUROPE RESEARCH AND INNOVATION PROGRAMME UNDER GA N° 101182579

FREECOVER SCIENCE CAFÉ

As part of its public engagement and outreach activities, the FREECOVER project hosted an interactive Science Café on 22 January 2026 at the Universitat Autònoma de Barcelona (UAB), bringing together researchers, students, and members of the public to discuss sustainable recycling solutions for Rare Earth Elements (REEs).

The event, titled "The Hidden Metals of the Green Transition – Can We Recycle Them Better?", was led by Prof. Andrea Melchior from the University of Udine and organised within the framework of the Marie Skłodowska-Curie Staff Exchanges programme. The activity created an open and informal environment encouraging dialogue between scientists and society on the environmental and technological challenges linked to critical raw materials.

During the session, participants explored the growing importance of Rare Earth Elements in modern technologies such as electric vehicles, renewable energy systems, smartphones, and electronic devices. Discussions highlighted Europe's dependency on imported critical raw materials and the urgent need for sustainable recycling and recovery technologies capable of supporting circular economy objectives and strategic autonomy.

Researchers presented several innovative approaches being developed within FREECOVER, including environmentally friendly hydrometallurgical processes, bio-based ionic liquids, natural zeolite adsorbents, advanced separation technologies, and sustainability-oriented recovery methods designed to reduce environmental impact while improving resource efficiency.

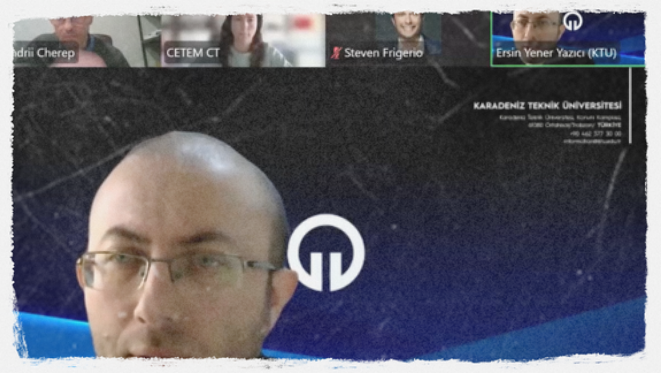
The Science Café encouraged active participation and direct interaction between attendees and researchers, allowing broader audiences to better understand the societal relevance of critical raw material recovery and circular economy innovation. Conversations addressed the environmental implications of mining, recycling challenges for electronic waste, and the role of European research projects in developing sustainable technological solutions.

By combining scientific communication with public dialogue, FREECOVER continues to strengthen awareness, knowledge exchange, and community engagement while supporting the broader objectives of the MSCA Staff Exchanges programme in promoting research excellence, international collaboration, and science outreach.

THIS PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION'S HORIZON EUROPE RESEARCH AND INNOVATION PROGRAMME UNDER GA N° 101182579

FREECOVER DISSEMINATION

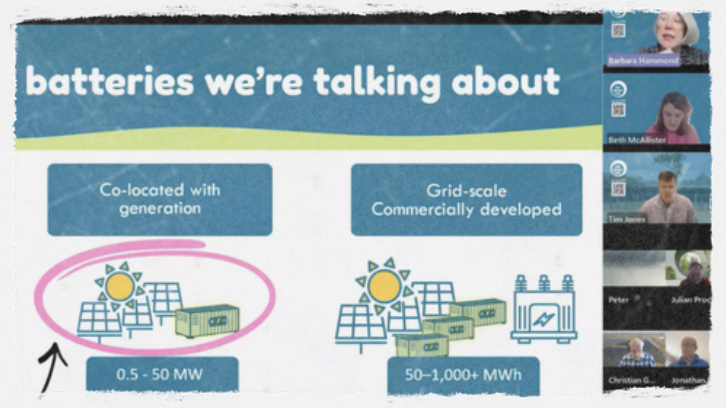
SUPPORTS KNOWLEDGE EXCHANGE ON INDUSTRIAL SYMBIOSIS



FREECOVER highlighted key discussions from the LIAISE COST Action Webinar on Industrial Symbiosis in the Mineral Sector, held on 17 April 2026, bringing together experts working on sustainable resource recovery and circular economy solutions.
The activity was followed and reported by Shariefah Darries from SITES as part of FREECOVER's dissemination and knowledge-sharing efforts.
The webinar explored innovative approaches including energy storage from mining waste, galvanic leaching using e-waste and pyritic tailings, and high-purity quartz recovery from mining residues, demonstrating the growing role of industrial symbiosis in sustainable critical raw material recovery.

EXPLORES BATTERY STORAGE AND RENEWABLE ENERGY SOLUTIONS

As part of its dissemination and knowledge-sharing activities, FREECOVER participated in the webinar "Battery Storage and Renewables" held on 26 March 2026, organised by Community Energy England and Low Carbon Hub.
The activity was attended and reported by Shariefah Darries from SITES, contributing to FREECOVER's ongoing engagement with sustainable energy and circular economy initiatives.
The webinar explored the role of battery storage systems in supporting renewable energy integration, grid resilience, and community energy models, while highlighting the growing importance of sustainable recycling and recovery of critical raw materials used in battery technologies.



NEXT STEPS

During the next project phase toward PM/M18, FREECOVER partners will continue advancing secondment activities, collaborative research, and technical exchange across the consortium. Upcoming work will focus on sustainable hydrometallurgical processes, innovative separation technologies, circular economy approaches, and environmentally responsible recovery of Rare Earth Elements (REEs) from secondary resources.
Additional workshops, seminars, dissemination activities, and stakeholder engagement initiatives will further strengthen scientific cooperation and knowledge transfer between academic and industrial partners participating in the project.

LOOKING AHEAD

FREECOVER remains committed to supporting sustainable innovation, international collaboration, and interdisciplinary research aligned with the objectives of the Marie Skłodowska-Curie Staff Exchanges programme. Through continued mobility actions and collaborative activities, the consortium aims to contribute to resilient and circular critical raw material value chains supporting Europe's green and digital transition.

THIS PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION'S HORIZON EUROPE RESEARCH AND INNOVATION PROGRAMME UNDER GA N° 101182579