

POLYMAT

ESG REPORT



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LETTER FROM THE MANAGEMENT

SCIENTIFIC DIRECTION

At POLYMAT, sustainability is not only a strategic objective, but the principle that inspires and guides our scientific activity. As a center of excellence dedicated to advanced research in polymer science, we firmly believe that scientific knowledge must be accompanied by a responsibility to the environment, society, and the future of our surroundings.

In recent years, we have intensified our efforts to develop sustainable polymer materials: recyclable, reusable, and derived from renewable sources. These lines of research, aligned with global challenges, not only respond to complex scientific challenges but also seek real and applicable solutions to advance toward a circular economy that is more resource-efficient and respectful of the planet.

At POLYMAT, we are researching how to synthesize polymers in a more sustainable way, using non-toxic solvents such as water and dispersed medium technologies. We are also looking at energy applications where polymers play a key role in battery safety, improving the efficiency of solar cells, and recycling them. We develop polymer membranes for water or air purification, or carbon dioxide sequestration processes for decarbonization. We are also developing new biodegradable polymers that can be used to eliminate the environmental problem of microplastic pollution or used as biomaterials. Our work also includes the development of innovative plastic recycling technologies. Finally, another of our lines of research addresses the use of polymers in food to improve both food preservation and the efficiency of agricultural and livestock production.

This report captures POLYMAT's progress and commitments in the field of sustainability. It reflects the responsibility with which we approach our mission: to generate knowledge that contributes to scientific progress and the well-being of the planet.

We believe in transformative science. A science that builds bridges between research and industry, between technology and the environment, between today and tomorrow. We will continue advancing along this path, convinced that the materials of the future must, above all, be sustainable.



David Mecerreyes

Scientific Director at POLYMAT

MANAGEMENT

At POLYMAT Management, we firmly believe that scientific excellence is only possible in an ethical, fair, and deeply humane environment. That's why we foster an organizational culture based on integrity, equality, and diversity. Our Regulatory Compliance and Good Governance System ensures that every step we take is aligned with our values, through a risk prevention model, an Ethics Channel, and a Code of Conduct that reinforce transparency and shared responsibility.

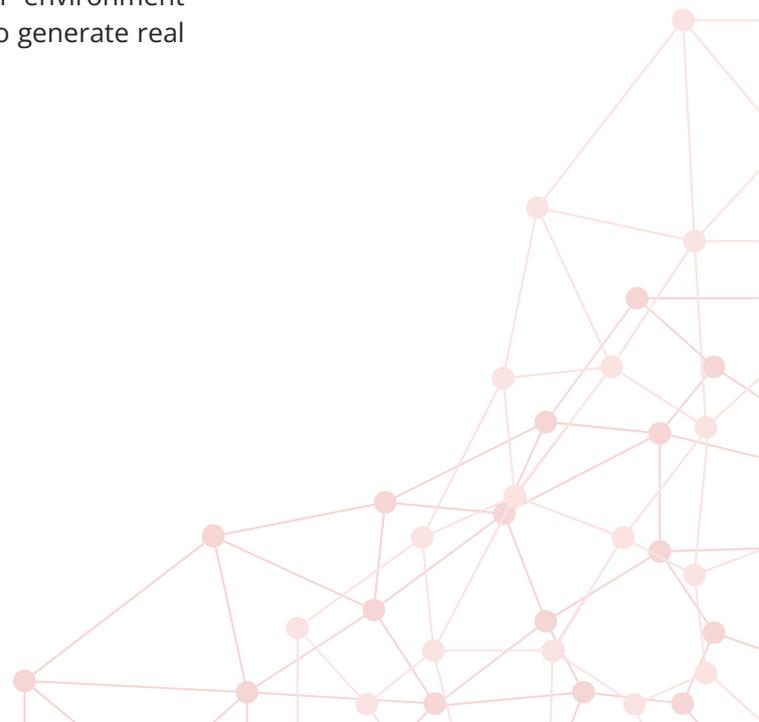
Multiculturalism is one of our greatest assets: researchers of more than 36 nationalities coexist in a creative, collaborative, and global ecosystem. We actively promote true equality between women and men—with 52% of our staff being women—through a participatory Equality Plan and programs such as EMAKIKER, which foster female leadership in cutting-edge scientific fields. Our commitment to people is recognized by the European Commission's HR Excellence in Research seal, which endorses our commitment to developing talent through training programs, mentoring, and ongoing support at all stages of a research career.

Furthermore, we strive to ensure that our research generates a tangible social impact, addressing global challenges and improving the quality of life through science. This commitment translates into direct contributions to the United Nations Sustainable Development Goals (SDGs): from energy decarbonization (SDGs 7 & 13), access to clean water (SDG 6), health and well-being (SDG 3), to gender equality (SDG 5), quality education (SDG 4), and responsible innovation (SDGs 9 & 12). Our science is geared toward transforming knowledge into solutions that benefit society and the planet.

At POLYMAT, we believe that science truly advances when it is in harmony with people. That's why we cultivate an environment where knowledge, diversity, and integrity intertwine to generate real impact, both inside and beyond the laboratory.



Idolia Azaldegi
POLYMAT Manager



ENTITY INFORMATION

The Basque Center for Macromolecular Design and Engineering, POLYMAT Fundazioa, is a research center of international excellence focused on the synthesis and development of polymers to address the major challenges of 21st-century society: energy, sustainability, and health.

To a certain extent, polymers have shaped society as we know it and are an excellent ally in addressing the social and industrial challenges of the present century.

At POLYMAT, we conduct research that covers all levels of Technology Readiness Levels (TRLs), from the origin of the idea to its transfer to the market, and from basic research to the launch of startups. We work to ensure that our research has an impact and is transferred to both companies and society.

MISSION

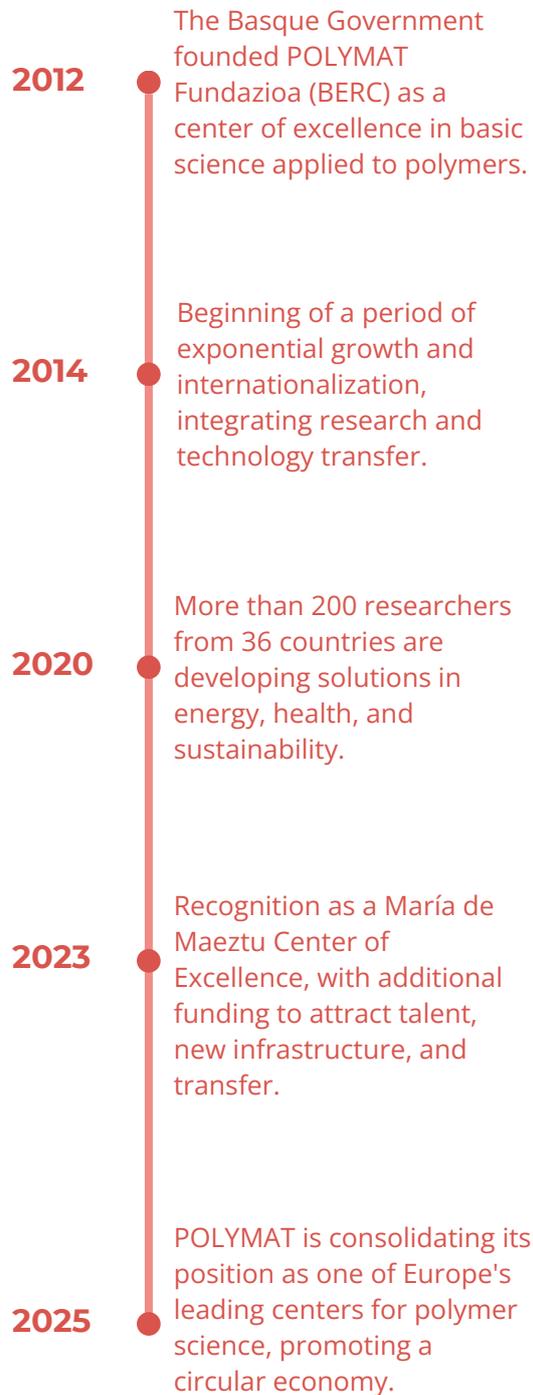
Develop vibrant fundamental research based on polymer synthesis, assembly, and processing to address 21st-century technological challenges in fields such as energy, healthcare, and sustainability.

VISION

We strive to be recognized:

- For the Scientific Community, for our excellence in polymer research.
- By the University of the Basque Country (EHU) and the Public Administration, to effectively strengthen the Basque Science System.
- For Society, to help improve people's quality of life.

HISTORY



Values



Excellence



Efficiency



Cooperation



Innovation



Equality

KEY FACTS

National and international
reference center for
polymer science

Staff of **+200 researchers**
of **36 different**
nationalities

Organized **25 international**
conferences

Publication of **+1500**
scientific publications

+100 doctoral theses
defended

Specialized Master's Degree in
Polymers organized by the EHU and
the University of Bordeaux

Participated in **+60**
European projects
including three ERCs

+40 patentes granted

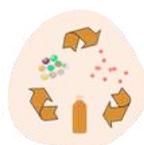
4 Start-ups created

RESEARCH AREAS



Polymers and Energy

Development of advanced polymer materials that improve the performance of energy technologies such as batteries, solar cells, and hydrogen fuel cells.



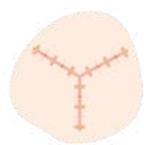
Polymers and Sustainability

Development of sustainable biobased polymers, organocatalysts, polymer recycling, and membranes for food, water, and air purification.



Polymer Physics and Additive Manufacturing

Research the physics of multiphase and semi-crystalline polymers. Advance new manufacturing technologies such as 3D printing, applied rheology, and additive manufacturing.



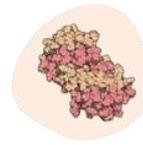
Molecular and supramolecular materials

Design molecular and supramolecular materials with self-assembled structures, creating polymers with specific properties for applications in electronics and optics.



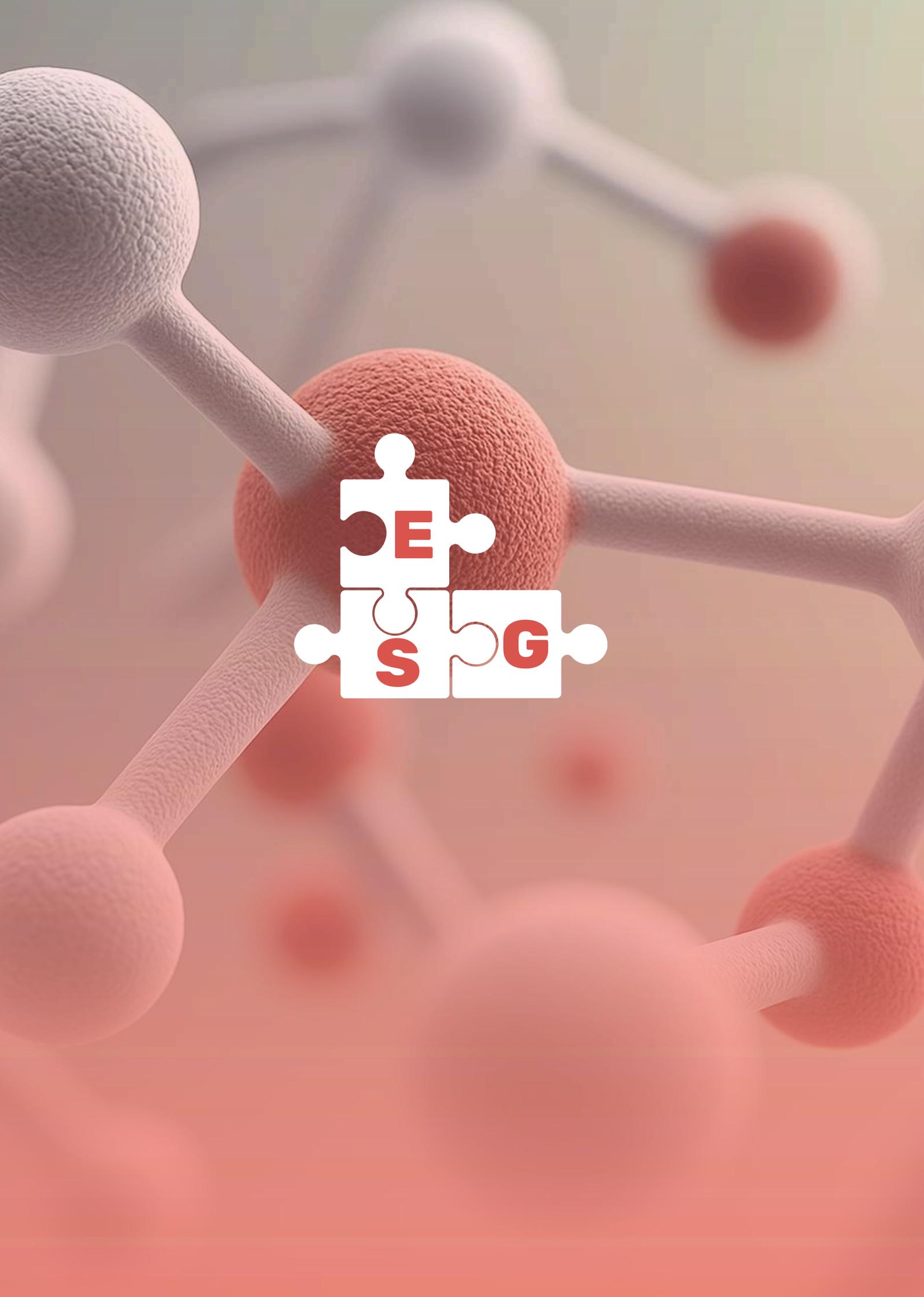
Polymers for Health

Develop polymers for medical applications, including controlled drug release systems, smart materials for tissue regeneration, and polymers for bioelectronics.



Polymerization and Simulation Engineering

New processes in polymerization engineering and simulations for designing and optimizing polymer synthesis processes. Dispersed/emulsion polymerization. Application of machine learning methods for polymer development.



E
S **G**

ESG CONTRIBUTION

WHAT ARE ESG CRITERIA?

The acronym ESG is used to assess a company's performance and impact **in three key areas:**



ENVIRONMENTAL

It refers to how the company manages its natural resources, its impact on climate change, and its relationship with the planet.



SOCIAL

It includes aspects related to human rights, working conditions, diversity, equality, inclusion, and the connection with society and local communities.



GOVERNANCE

It relates to the structure and good governance of the company, corporate ethics, the fight against corruption, transparency, decision-making, and collective action.





THE KEY ROLE OF POLYMERS FOR SUSTAINABLE DEVELOPMENT

Synthetic polymers are the most versatile material in existence and play a **key role in creating a more sustainable and competitive industry**, as they are essential for manufacturing high-value products in areas such as energy, electronics, healthcare, and transportation. They are found in all kinds of products: automobiles, airplanes, artificial hearts, contact lenses, televisions, trains, and other applications such as adhesives, construction materials, telephones, computers, refrigerators, diapers, frying pans, sportswear, and more.

OUR CONTRIBUTION THROUGH RESEARCH TO THE ENVIRONMENTAL IMPROVEMENT OF INDUSTRY AND SOCIETY

Polymers & Energy



We create more efficient, lightweight, and sustainable solutions for the transition to decarbonization and renewable energy.

Molecular & Supramolecular Materials



We design functional materials with precise structures that enable the development of new, smarter, more efficient technologies with a smaller ecological footprint.

Polymers & Sustainability



We develop recyclable, biodegradable, and biobased polymers, promoting a circular economy and reducing environmental impact and global warming.

Polymers for Health



We create advanced medical solutions such as regenerative biomaterials, controlled drug release, and novel bioelectronic devices, improving people's health and reducing clinical waste.

Polymer Physics & Advanced Manufacturing



We optimize material manufacturing processes, reducing resource and energy consumption and improving efficiency in key industrial sectors.

Polymerization Engineering & Simulation



We design more efficient, predictive, and sustainable processes, supporting responsible innovation and reducing environmental impact.



IMPACT ENTREPRENEURSHIP

We have generated 20 patents, 15 of which were in collaboration with foreign universities and companies.

4 of the patents have resulted in the creation of **4 Start-ups:**



Polykey (2020): Provides on-demand R&D services and innovative products for the plastics and recycling industry. It develops products in three areas established as objectives for a transition to a sustainable future: production of bio-based polymers; development of chemical recycling strategies; and design of innovative polymers for more efficient and safer batteries.



Polimerbio (2019): A biotechnology company dedicated to the research, development, and manufacturing of biodegradable medical devices based on biomaterials. This is the case with the patent for a bioabsorbable urological tube, which avoids a second intervention, for treating urethral strictures.



Surphase (2018): revolutionizes desalination process monitoring by offering noninvasive, real-time detection and analysis of membrane fouling and cleaning. Its unique AI-assisted sensor and software system delivers detection that surpasses the sensitivity limits of existing methods, achieving nanometer-level accuracy.



Hevea 3D (2025): dedicated to the 3D printing of high-performance polymeric materials.

1 NEW START-UP IN DEVELOPMENT

EUTECMED focuses on advanced wound care for chronic wounds and infections through the use of eutectic mixtures.



EQUALITY

EQUALITY PLAN

By the end of 2024, the gender ratio at BERC POLYMAT will be 109 women and 101 men. **This means that 52% of the center's staff are women.** POLYMAT currently has a Gender Equality Plan, which is scheduled to be renewed in 2025. To develop this plan, an Equality Committee was created, consisting of eight members, encompassing both men and women in the research and administrative and management categories of the organization.

EMAKIKER PROGRAM

The EMAKIKER program includes calls for female researchers who wish to explore creative and high-risk areas in polymer science. Selected researchers receive financial support from BERC POLYMAT **to create and lead their own disruptive project.**



WOMEN EMPOWERMENT

We collaborate with the Women for Africa Foundation to support the professional development of African female researchers by offering them research residencies at its facilities.



Since 2019, we have participated in the Emakumeak Zientzian initiative, which aims to highlight the role of women in science and promote scientific careers among girls.



We participate in the INSPIRA STEAM program, which promotes scientific vocations in elementary school girls through group mentoring.



Since 2023, we have been part of the Science, Technology, and Innovation Working Group of the National Pact for Equality and Lives Free from Violence against Women, coordinated by EMAKUNDE.





DIVERSITY, INCLUSION AND MULTICULTURALISM

We have established ourselves as an internationally renowned center, attracting global talent: more than 46% of our researchers come from 36 countries. In recent years, we have hosted more than 100 visitors from foreign universities and research centers.



TRAINING AND DEVELOPMENT

We promote the training of research talent through the International Double Master's Degree in Polymer Science, in collaboration with the University of Bordeaux and with the support of large multinational or international companies.

Between 20 and 25 new PhDs complete their research training each year at POLYMAT and the University of the Basque Country (EHU); and they find work in Basque and international companies and research centers.

At POLYMAT, we organize international training courses annually, such as the Emulsion Polymerization Processes Course and the Structure and Properties of Polymers Course (more than 500 participants between 2020 and 2024). Our research staff has given more than 100 distinguished lectures and received multiple international awards,

consolidating ourselves as a global benchmark in training, research and knowledge transfer.

In recent years, we have organized eight international conferences, bringing together hundreds of researchers from around the world in Gipuzkoa. Among these, the GEP-SLAP conference, which brought together more than 400 polymer experts in San Sebastián, is noteworthy. High-level scientific events include Aerogel Inspired Materials, Organic Battery Days, Bioinorganic Chemistry to Catalysis, Membrane Engineering and the Four Natural Elements, and POLYMAT Spotlight.

Also noteworthy is our intensive outreach work, with participation in initiatives such as Donostia WeekINN, Elhuyar Zientzia Azoka, Zientzia Astea, Inspira Bizitza, and Pint of Science, among others.



GOVERNANCE

GOVERNMENT BOARD

The entities of the POLYMAT Government Board are:



Promoter of scientific research and talent attraction.



Leading academic institution and promoter of scientific development.



Public entity providing funding and institutional support.

COMPLIANCE SYSTEM

At POLYMAT, we have implemented a **Regulatory Compliance and Good Governance System** that reinforces its commitment to integrity, ethics, and responsibility in all its activities. This system includes:

An **Organization and Management Model** to prevent criminal risks and strengthen good governance.

An **Ethics Channel** for anyone to report irregularities or conduct contrary to the center's values, ensuring confidentiality and protection against retaliation.

A **Code of Ethics** that governs professional conduct, promoting principles of respect, honesty, and responsibility.

The model is updated annually, reviewing the functioning of the risk control system and ensuring its proper functioning.



HR EXCELLENCE IN RESEARCH

The HR Excellence in Research distinction is awarded to research institutions that demonstrate significant progress in **integrating the principles of the European Charter for Research Personnel** into their policies and practices, promoting a fairer, more ethical, and quality work environment.

On July 4, 2017, we received the "**Excellence in Human Resources in Research**" seal and recognition. This award reflects our commitment to the continuous improvement of our human resources policies, in line with the European Charter for Researchers, the Code of Conduct for the Recruitment of Researchers, and our commitment to transparency and fairness in recruitment and evaluation procedures. This accreditation was renewed by the organization following a visit by evaluators from the European Commission in 2023, receiving praise for the initiatives and actions implemented.



HR EXCELLENCE IN RESEARCH



PARTNERSHIP ECOSYSTEM

At POLYMAT, we have built a solid ecosystem of partnerships with companies, universities, technology centers, and public organizations, both locally and internationally. **These synergies allow us to address shared challenges, accelerate knowledge transfer, and generate a real impact on society.**

We firmly believe in the power of collaboration as a driver of innovation

AGENT MAPPING

We collaborate with leading companies in the polymer sector, both nationally and internationally. This collaborative network has been consolidated through projects funded by public institutions such as the Basque Government, the Government of Spain, and the European Union. We collaborate with and provide services to more than 25 Basque companies.

As a center of the Basque Science and Technology Network (RVCTI) and the BERC network, we complement other centers belonging to the network, such as University Departments, BERCs, and Health Research Institutes.



Companies



Research Centers and Universities



Technology Centers

We collaborate with technology centers that help us with technological development, industrial validation, and materials scaling.



Other Collaborations

We collaborate with other national and international stakeholders to create synergies and advance research, knowledge transfer, and the application of our technologies.

POLYMAT

COMMITMENT TO THE SDGS

WHAT ARE THE SUSTAINABLE DEVELOPMENT GOALS?

The SDGs (Sustainable Development Goals) are a global initiative promoted by the United Nations (UN) to build a more just, responsible, and sustainable future.

They include 17 goals that address challenges such as climate change, equality, decent employment, and environmental protection. Our activities directly contribute to numerous Sustainable Development Goals.



COMMITMENT TO THE SUSTAINABLE DEVELOPMENT GOALS

Science and polymers are key to meeting the challenge of sustainable development. Our research, innovation, and transfer make an active and significant contribution to achieving the Sustainable Development Goals promoted by the UN.

Main SDGs





SDG 9

Industry, innovation and infrastructure

Through collaborative research projects with companies, through our 20 patents and the creation of impactful startups such as Polimerbio, Surphase, and Polykey, we transfer knowledge to the market, generating real-world solutions: from bioabsorbable medical devices to technologies to improve plastic recycling and energy efficiency. We are also incubating new startups in sustainable 3D printing and biomedicine, recently awarded in innovation competitions.



SDG 7

Affordable and Clean Energy

We develop functional polymers for batteries, solar cells, and emerging energy technologies, essential for accelerating the transition to renewable sources and reducing dependence on fossil fuels. Research into new materials enables progress toward more secure, sustainable, and efficient energy systems.



SDG 6

Clean Water and Sanitation

Through our research and solutions developed by startups like Surphase, we contribute to improving the efficiency of water purification and desalination processes, both in industry and in vulnerable communities. This technology directly impacts public health, universal access to water, and industrial sustainability.



SDG 12

Responsible Production and Consumption

We promote a circular economy through research into sustainable polymers, developing recyclable, biodegradable, and biobased materials. We also innovate in polymerization engineering and simulation, designing more efficient and sustainable processes for the plastics industry and other strategic sectors such as food.



SDG 13

Climate Action

We contribute to decarbonization with carbon dioxide capture membranes and through research in Polymers and Energy, designing lighter, more efficient materials that are compatible with renewable energy. We also optimize industrial processes through polymer physics and additive manufacturing, reducing resource, energy, and emissions use.

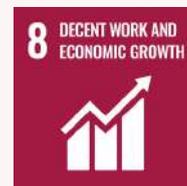


SDG 3

Health and Wellness

Through our Polymers for Health line, we develop polymers for advanced medical applications: from regenerative biomaterials and controlled drug-release materials to bioelectronic devices, improving quality of life and reducing the impact of healthcare waste.

Secondary and transversal



SDG 4 Quality Education

- We collaborate with the “Mujeres por África” Foundation to support the professional development of African female researchers by offering them research residencies at its facilities.
- Since 2019, we have participated in the Emakumeak Zientzian initiative, which aims to highlight the role of women in science and promote scientific careers among girls.
- We participate in the INSPIRA STEAM program, which promotes scientific vocations in elementary school girls through group mentoring.
- Since 2023, we have been part of the Science, Technology, and Innovation Working Group of the National Pact for Equality and Lives Free from Violence against Women, coordinated by EMAKUNDE.



SDG 5 Gender Equality

- We promote true equality between women and men through an updated Gender Equality Plan, which is shared across the entire organization.
- Since 2018, we have been promoting a scholarship called EMAKIKER, aimed exclusively at senior female polymer scientists.
- We have an agreement with the Women for Africa Foundation to promote research stays for African scientists at our center.
- We collaborate with initiatives such as Emakumeak Zientzian and INSPIRA STEAM, highlighting the role of women in research and promoting scientific and technical vocations among girls and adolescents.



SDG 17 Partnerships to Achieve the Goals

- We have multiple alliances and collaboration agreements with national and international research centers and universities to carry out collaborative research projects.
- We actively collaborate with local, national, and international companies to solve their main challenges and help them innovate, become more competitive, and become more sustainable through research.



SDG 8 Decent Work and Economic Growth

- We promote an ethical, equitable, and high-quality working environment for research staff, based on the principles of the European Charter for Researchers and the Code of Conduct for Researcher Recruitment.
- We foster a multicultural and inclusive work environment with a presence of more than 36 nationalities.
- We promote the development of our scientists' research and professional careers.
- Our commitment to excellence in people management was recognized in 2017 with the prestigious "HR Excellence in Research" seal awarded by the European Commission. We renewed this accreditation in 2023, following a positive evaluation that recognized our best practices in recruitment, evaluation, and professional development.

Other Contributions



SDG 10

Reduction of Inequalities

We are a multicultural center with a diverse environment, hosting researchers from more than 36 countries. Between 2020 and 2024, we will welcome more than 100 visitors from international centers, strengthening the global exchange of knowledge and opportunities.



SDG 11

Sustainable cities and communities

We contribute to the design of sustainable cities by developing functional materials for lightweight construction and efficient energy storage technologies.



SDG 16

Peace, justice and strong institutions

We have implemented a Regulatory Compliance and Good Governance System that reinforces our values of integrity, responsibility, and respect. We have a Criminal Risk Prevention Model, an accessible and secure Ethics Channel, and a Code of Ethics that guides our professional conduct. This structure strengthens transparency, promotes fair environments, and allows us to prevent conduct contrary to our principles.



SDG 14

Underwater Life

Through devices for monitoring desalination processes and water treatment solutions, we contribute to reducing the impact of microplastics in marine environments through new biodegradable polymers and plastic recycling technologies.

LOOKING TO THE FUTURE

Looking to the future, at POLYMAT we want to...

1

Leading research excellence in sustainable polymeric materials

Continue promoting research into recyclable, biodegradable, and biobased polymers capable of responding to the challenges of climate change, pollution, and resource scarcity, thus strengthening our role in the transition to a circular economy.

2

Multiplying the social impact of research

To deepen the transfer of knowledge toward applied solutions in health, energy, water, and food, with a people-centered approach aligned with the Sustainable Development Goals (SDGs).

3

Investing in transformative training and inclusive talent

Strengthen training, mentoring, and professional development programs linked to the HR Excellence seal, consolidating a multicultural, equitable learning ecosystem open to global talent.

4

Consolidate a transparent and ethical governance model

Continually update and improve the Good Governance System, promoting an institutional culture based on integrity, shared responsibility, and the active participation of the entire POLYMAT community.

5

Promote knowledge transfer and innovation

Promote shared innovation and generate greater economic impact both locally and internationally.



FACILITIES AND EQUIPMENT

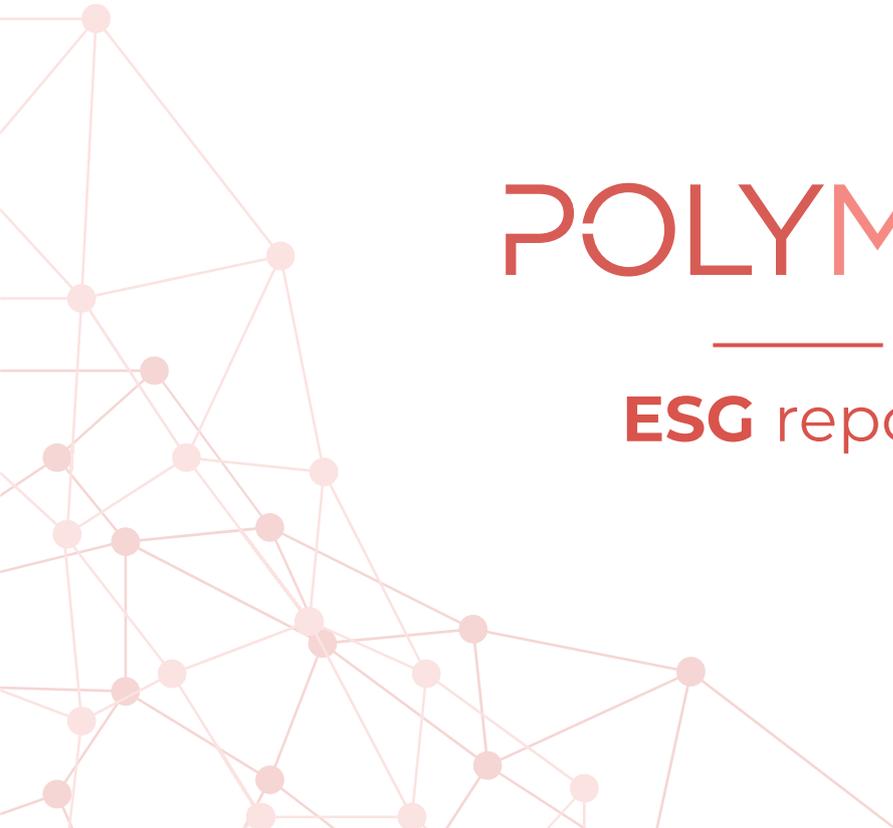
POLYMAT has been operating primarily on the Gipuzkoa Campus of the University of the Basque Country. The addition of new laboratories and facilities to the new building promoted by Ikerbasque at the end of 2025 marks a turning point in our history as a center of research excellence. This new space, specifically designed for cutting-edge science, will feature highly specialized laboratories, open areas for interdisciplinary collaboration, and state-of-the-art equipment.

Beyond its functional value, the new building represents an environment that embodies our vision of the future: sustainable, inclusive,

open to the world and impact-oriented. It will strengthen our scientific capabilities, attract new international talent, and consolidate synergies within the POLYMAT ecosystem and with other strategic players in the Basque and European R&D system.

This new headquarters will be a physical reflection of what we are and what we aspire to continue to be: a dynamic research center, connected to the major challenges of the 21st century and with a clear commitment to transforming knowledge into solutions for society.





POLYMAT

ESG report