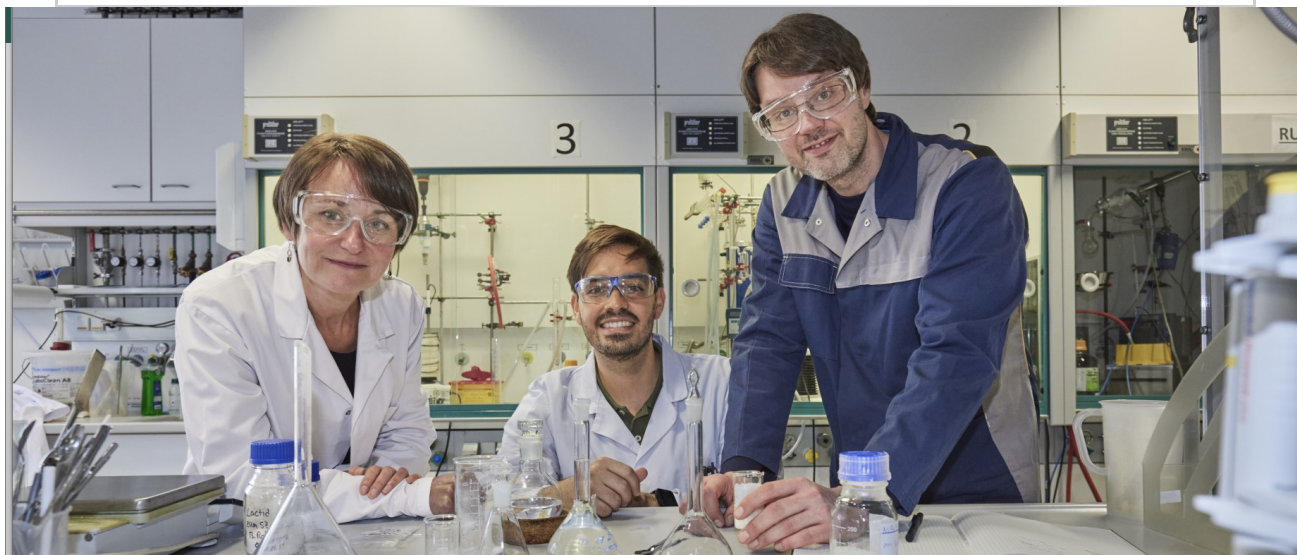


We make materials fit for the future!



Dear reader,

Dr. Antje Lieske, Dr. Benjamín Rodríguez and André Gomoll from Fraunhofer IAP received the prestigious Joseph von Fraunhofer Prize 2024 for the development of a flexible and recyclable film material based on the bioplastic polylactide - PLA for short.

The new PLA material is an outstanding example of application-oriented science. It solves many pressing issues in industry: The material does not contain migrating plasticizers, which are often harmful to health and can end up in the environment. It is at least 80 percent bio-based, thus reducing dependence on petro-based raw materials and significantly lowering the carbon footprint. The simple synthesis process enables continuous production from commercially available raw materials and can also be implemented locally by medium-sized companies. These advantages prompted the Polymer-Group company to commission a production plant for the innovative bioplastic. In the long term, the plant is expected to produce up to 10,000 tons of the flexible PLA material.

It is success stories like these that inspire us at Fraunhofer IAP to accomplish innovative solutions for a sustainable future - every day, year after year. Our latest research successes include [PFAS-free polymer membranes for semiconductor production](#) and [new types of powder for 3D printing](#). Furthermore we started a project to [improve bio-based rubber grades](#). The highlights of the research year 2023 at Fraunhofer IAP are presented in our newly published [annual report](#).

Enjoy reading!

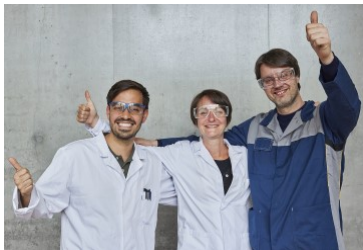
Your team at Fraunhofer IAP

- [News from research and development](#)
- [Fraunhofer IAP research team receives Joseph von Fraunhofer Prize](#)
- [PFAS-free polymer membranes for semiconductor processing](#)
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NEWS FROM RESEARCH AND DEVELOPMENT

Bioeconomy and Sustainability

Fraunhofer IAP research team receives Joseph von Fraunhofer Prize



Dr. Antje Lieske, Dr. Benjamín Rodríguez and André Gomoll have succeeded in developing a flexible and recyclable plastic film material based on the polylactide (PLA) bioplastic and enabling its commercialization. In 2023, the company SoBiCo GmbH put a production plant for the new PLA-based block copolymers into operation. The researchers have now been awarded the Joseph von Fraunhofer Prize 2024.

[MORE INFO](#)

Bioeconomy and Sustainability

PFAS-free polymer membranes for semiconductor processing



Researchers at Fraunhofer IAP have developed a sustainable alternative to PFAS-containing membranes for semiconductor production. The chemically stable, highly permeable polymer membrane makes it possible to filter the smallest particle contaminants. It can be customized so that the new process can be easily integrated into existing systems.

[MORE INFO](#)

PFAS-free: expertise at Fraunhofer IAP

We advise and support small, medium and large companies in making their business fit for the future: with environmentally

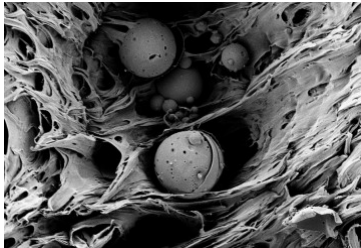
friendly materials that do not contain PFAS. We also develop technologies to cleanse the environment of PFAS.

[MORE INFO](#)



Industry and Technology

New types of powder for 3D printing



Tailor-made materials are a key success factor for additive manufacturing. The choice of materials for powder-based 3D printing is still limited. Scientists at Fraunhofer IAP and Kunststoff-Zentrum SKZ are developing and testing polymer additives to significantly expand the variety of powder materials.

[MORE INFO](#)

Industry and Technology

Bio-based synthetic rubber



Making mobility more sustainable: Novel, bio-based rubber types will enable car tires with previously unattainable properties in the future. Until now, the raw materials for the production of synthetic rubber have largely been obtained from fossil sources. Under the leadership of Fraunhofer IAP, four Fraunhofer Institutes are now developing alternative, bio-based raw material sources.

[MORE INFO](#)

ANNUAL REPORT 2023

Innovations for a sustainable future



The 2023 annual report is online! We present our most exciting projects and latest findings. The highlights of our 2023 report include sustainable lightweight solutions, counterfeit-proof QR codes for unique packaging labels and how our pilot plants are helping to transfer sustainable products and processes from the laboratory to industrial scale.

[READ MORE](#)

International partnership

Fraunhofer expands cooperation with South Korea



Fraunhofer IAP, with its expertise in the field of functional polymer systems, is a key partner in an international cooperation program in South Korea for technological innovations in battery cell and semiconductor technology. The cooperation with the Fraunhofer-Gesellschaft and eight of its institutes was signed in April.

[MORE INFO](#)

Increase innovation cycles

Benefit with us from extended research funding

The new Growth Opportunities Act provides considerably more tax allowances for companies for research and development: Among other things, the eligible costs for contract research rose for contract research from 60 to 70 percent. The maximum assessment basis is now 10 million euros instead of the previous 4 million euros. The standard research allowance of 25 percent for SMEs has also been increased by a further 10 percent per year. Whether SME, start-up or large company: All companies subject to tax in Germany that carry out research and development receive tax relief on personnel, material or equipment costs as part of research expenditure. With this new scope, companies can strengthen their research and development activities in-house or with third parties and thus increase their product innovation cycles.

Let's talk and clarify your innovation needs.

[CONTACT US](#)

Events

Meet the Fraunhofer IAP team

Jeju, Korea | August 20 - 23, 2024

IMID 2024

Find out the latest news from the world of information displays at IMID 2024. On August 22 and 23 with presentations from Fraunhofer IAP. Our topics: Quantum rods as emitters for polarized light sources, QD-LED for the development of electroluminescent displays, cadmium-free QDs for the

color conversion of blue light.

DISPLAY TECHNOLOGIES

QUANTUM MATERIALS AT FRAUNHOFER IAP

Rüdesheim, Germany | September 3 - 5, 2024

Beilstein Nanotechnology Symposium 2024

The next generation of nanomedicines is the focus of the Beilstein Nanotechnology Symposium 2024. Dr. Neus Feliu Torres will speak about the development of nanomedicines, the evaluation of their interaction with biological systems and about the biocompatible nanoparticles of Fraunhofer IAP, which are used as contrast agents for imaging in diagnostics.

MORE INFO

Potsdam, Germany | September 27, 2024

Workshop | Self-organizing Polymers

The topic of the workshop is the self-organization of polymers in the presence of water, whether in solutions, at interfaces or as colloidal dispersions. We are also saying goodbye to Professor André Laschewsky. The renowned polymer researcher has been working at Fraunhofer IAP in the field of water-based polymer systems for more than 20 years as a jointly appointed professor with the University of Potsdam.

TO THE PROGRAM AND REGISTRATION

Potsdam, Germany | October 14 - 15, 2024

PSP Conference 2024 – HEALTH

This year's PSP Conference at the Potsdam Science Park is all about health. You can look forward to an exciting two-day program with the latest research results, product innovations and fresh impulses from the Berlin-Brandenburg capital region. Experience best practices, cutting-edge discussions, exciting start-up pitches and outstanding projects at the interface of personalized medicine, artificial intelligence in medicine and (digital) diagnostics.

GO TO REGISTRATION

We make materials fit for the future!

Creative solutions are the key to overcoming the challenges of the present and the future - whether they be climate change, pandemics, the energy transition, structural change or new mobility concepts.

Fraunhofer IAP tackles these challenges through innovative materials, processes and technologies, targeting the entire value chain - from the idea to the customized prototype.



Our subject areas:

- BIOECONOMY and SUSTAINABILITY
- ENERGY TRANSITION and MOBILITY
- HEALTH and QUALITY of LIFE
- INDUSTRY and TECHNOLOGY

[TO THE HOMEPAGE](#)

Potsdam Sciene Park

Fraunhofer IAP is part of the largest science location in the state of Brandenburg: the Potsdam Science Park. Just 30 minutes from the center of Berlin, more than 12,500 people research, work and study in the fields of biotechnology, medical technology, optics, geosciences, astrophysics and gravitational physics. On an area of more than 50 hectares, the innovation- and founder-friendly park continues to offer office and laboratory space for startups and ready-to-build plots for small and medium-sized companies. We live science!

[TO THE HOMEPAGE OF THE POTSDAM SCIENCE PARK](#)

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Fraunhofer is Europe's largest application-oriented research organization. Our research efforts are geared entirely to people's needs: health, security, communication, energy and the environment. As a result, the work undertaken by our researchers and developers has a significant impact on people's lives. We are creative. We shape technology. We design products. We improve methods and techniques. We open up new vistas. In

short, we forge the future.

Fraunhofer Institute for Applied Polymer
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