

We make materials fit for the future!



Dear reader,

Sustainable solutions are at the heart of our work at Fraunhofer IAP. With fresh ideas and innovative technologies, we are addressing global challenges such as climate change, resource scarcity, and the demands of a future-oriented circular economy.

In this newsletter, we take a look at the progress in the development of bio-based adhesives. Our researchers are committed to increasing the use of materials from nature in industrial applications, for example in the production of folding boxes.

In addition, you will gain exciting insights into materials such as fungal mycelium and bioplastics. They open up new perspectives for the production of packaging that does not rely on fossil raw materials. Product packaging can be easily labeled and verified with the newly developed SmartID technology. You will learn how it works in an interview with project coordinator Dr. Tobias Jochum.

We are taking another step towards greater sustainability in our research with a photovoltaic system on the institute building at the Wildau site. This measure is funded by the Ministry of Science, Research, and Culture of the State of Brandenburg.

Let yourself be inspired by the ideas and approaches in this newsletter. Together, we can contribute to a more sustainable future. We look forward to continuing this journey with you. We wish you a good, healthy, and successful year 2025.

Your team at Fraunhofer IAP

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NEWS FROM RESEARCH AND DEVELOPMENT

Bioeconomy and Sustainability

Gluing with starch: bio-based adhesives for industrial applications



Folding boxes are considered sustainable packaging solutions for numerous everyday products. However, environmentally friendly adhesives are still lacking for fully sustainable production. Researchers at Fraunhofer IAP, along with partners from industry and science, are changing this. They are developing adhesives made from renewable raw materials.

[MORE INFO](#)

PACKAGING: NEW MATERIALS AND TECHNOLOGIES

Fraunhofer magazine

We tackle sustainability



How can things be packaged more sustainably in the future? Materials made from fungal mycelium and bioplastics like polybutylene succinate (PBS) or polylactic acid (PLA) are a possible answer to this question. The Fraunhofer magazine reports

Interview with Dr. Tobias Jochum

Original packaged with SmartID



SmartID integrates the unique structure of material surfaces into QR codes as a security feature. This technology enables manufacturers to counterfeit proof their packaging, labels and products. Dr. Tobias Jochum coordinates the development of

on developments for innovative packaging solutions at Fraunhofer IAP.

[MORE INFO](#)

SmartID at Fraunhofer IAP. In the interview, he explains how the technology works and what makes it so unique.

[MORE INFO](#)

YOUR TEAM AT FRAUNHOFER IAP

New management of the CAN research division at Fraunhofer IAP

Professor Mehtap Özaslan has been leading the team at the Fraunhofer Center for Applied Nanotechnology in Hamburg since October 1, 2024. With her expertise, she strengthens the developments of the Fraunhofer IAP in the areas of fuel cells, water electrolysis, electrocatalysis, and membrane electrode units.



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[TO RESEARCH DIVISION](#)

ON OUR OWN ACCOUNT

Solar power for sustainable research



Another step towards sustainability and energy resilience for the Fraunhofer IAP: A photovoltaic system has been installed on the institute building in Wildau. It can generate about 15 percent of the annual energy needs at the site. The project is funded by the Brandenburg State Ministry of Science, Research and Culture.

[MORE INFO](#)

Professor André Laschewsky retires



Professor Laschewsky worked for more than 20 years at Fraunhofer IAP in the field of water-based polymer systems. Current findings were discussed by researchers at the workshop "Self-organizing Polymers" on September 27, 2024. We thank Professor Laschewsky for the long-standing collaboration and wish him all the best for the future!

[MORE INFO](#)

EVENTS

Recap

[Techblick @Fraunhofer IAP](#)



Participants of the TechBlick conference received exclusive insights into the research of Fraunhofer IAP in October 2024. Key topics of the tour included: quantum dot materials and devices for displays and lighting, materials and processes for sensors and actuators, highly conductive and chemically resistant carbon fibers based on cellulose.

[GO TO THE RECAP ON LINKEDIN](#)

SAVE THE DATES 2025

Here you meet the team of the Fraunhofer IAP

Munich, Germany | February 25, 2025 - February 27, 2025

LOPEC

Paris, France | March 4, 2025 - March 6, 2025

JEC World

Hannover, Germany | March 31, 2025 - April 4, 2025

Hannover Messe

Dortmund, Germany | May 7, 2025 - May 8, 2025

EMPACK Dortmund

Hamburg, Germany | June 3, 2025 - June 4, 2025

EMPACK Hamburg

Düsseldorf, Germany | October 8, 2025 - October 15, 2025

K 2025

Potsdam, Germany | October 13, 2025 - October 14, 2025

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 Science 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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