Fraunhofer IAP

WE MAKE MATERIALS FIT FOR THE FUTURE!

Fraunhofer Institute for
Applied Polymer Research IAP

Potsdam Science Park

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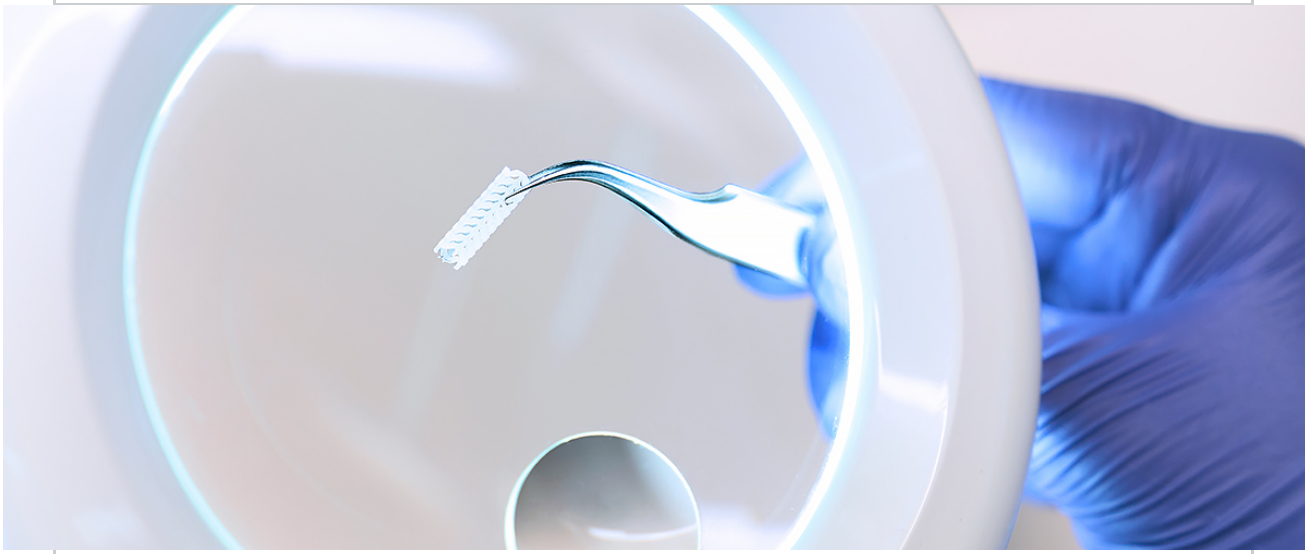
Fraunhofer IAP - News

We make materials fit for the future!



Due to its unique composition and coating, this innovative stent is expected to further lower the risk of thrombosis and help restore the vessel's natural flexibility. © Fraunhofer IAP

Dear reader,

Around 500,000 stents are implanted in Germany every year to treat narrowed blood vessels and prevent heart attacks or strokes. However, conventional models can damage the protective cell layer. A team at Fraunhofer IAP has developed a novel stent that significantly reduces the risk of thrombosis and promotes vascular regeneration. This is achieved by specially coated polymer materials. The team was honored with the senetics Innovation Award 2025 for this innovation.

We will be presenting new developments in the field of bio-based and biodegradable plastics at K 2025 in Düsseldorf. At the Fraunhofer joint booth, we will be showcasing materials that combine sustainability with high performance for industry and society. Will you be there?

Until now, wood-based materials such as particle boards were usually burned after use. But now there is a process that turns this apparent end point into a new beginning. Together with partners, we have developed a solution that enables the complete recycling of particle boards – a real contribution to the circular economy.

Sustainability and the circular economy are also the focus of the PSP Conference at Potsdam Science Park. Browse our event calendar and take the opportunity to talk to Fraunhofer IAP researchers in person and discuss solutions to the current challenges facing your company.

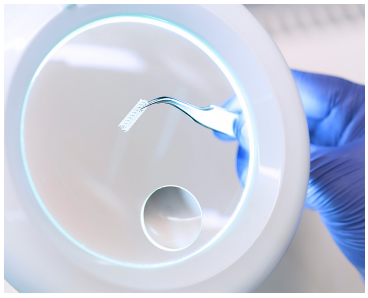
Your team at Fraunhofer IAP

CONTENT

NEWS FROM RESEARCH AND DEVELOPMENT

Health and Quality of Life

New stent with the potential to lower thrombosis risk



Innovative implant for vascular medicine: Researchers at Fraunhofer IAP have developed a stent that is designed to reduce the risk of thrombosis thanks to its special composition and coating. The material of the stent is gradually broken down by the body, helping to restore the blood vessel's original flexibility. The researchers were honored with the senetics Innovation Award 2025 for their innovation.

MORE INFO

Bioeconomy and Sustainability

Particle boards made from 100 percent waste wood

We have developed a chemical process that allows wood chip materials to be recycled 100 percent – without adding new wood chips or adhesives. Together with partners from industry and science, we are demonstrating how circular economy can be successfully applied to old furniture and wooden components. The project was funded by the German Agency for Renewable Resources (FNR).

MORE INFO

Fraunhofer IAP at K 2025: focus on bioplastics

The plastics industry is at a turning point: fossil raw materials and energy-intensive processes are coming under increasing pressure. Bio-based plastics and new materials offer sustainable alternatives and conserve resources. At K 2025 in Düsseldorf, we will be showcasing bio-based plastics and other innovative materials at the Fraunhofer joint booth that combine sustainability with high performance for industry and society:

• PBS – new types of polybutylene succinate made from regional plant residues, suitable for packaging, textiles, and more
• PLA – flexible, recyclable film material based on the bioplastic polylactide
• Carbon fibers from cellulose – renewable raw material with high-end performance

Visit us from October 8 to 15, 2025, in Hall 7 / Booth SC05.

MORE INFO ON LINKEDIN

Bioplastic PBS

Dr. Jens Balko

“There is an enormous and growing demand for high-quality recycled materials in the EU. Bioplastics such as PBS are one alternative for closing this recycle gap.”

MORE INFO

Bioplastic PLA

Dr. Antje Lieske

“Sustainability should not be a compromise. With the next generation of bio-based materials, we are proving that maximum performance and circularity can work hand in hand.”

MORE INFO

Biobased Carbon Fibers

Dr. Jens Erdmann

“From nature to practice: Our bio-based carbon fibers open up new possibilities for high-performance applications – with clear advantages over market standards.”

MORE INFO

Industry and Technology

Better, faster, bio-based: functional new plastic alternatives

In the SUBI²MA flagship project, several Fraunhofer institutes are working to accelerate the development of new materials that are not only ecofriendly but also functionally superior. Their goals: further development of new bio-based materials, developing new biohybrid materials and digital fast-track development. At Fraunhofer IAP, the focus is on the integration of functional biomolecules.

MORE INFO

ON OUR OWN ACCOUNT

Lab Services at the Potsdam Science Park

Are you looking for co-operation partners, laboratory equipment for test measurements or do you just need a specific device for a short period? Take advantage of the Lab Services offered by the Potsdam Science Park. The Fraunhofer IAP is a partner of this network.

MORE INFO

EVENTS

Meet the Fraunhofer IAP team here

Düsseldorf, Germany | October 08, 2025 - October 15, 2025

K 2025

Visit us at K 2025! We will be presenting new types of polybutylene succinate (PBS) plastic made from plant-based residues. They are suitable for a variety of processing methods, from injection molding and deep drawing to extrusion and spinning. Meet our team in Hall 7 / Booth SC05 and discover our exhibits for packaging, consumer goods, and textiles.

MORE INFO

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

PSP Conference 2025 – SUSTAINABILITY

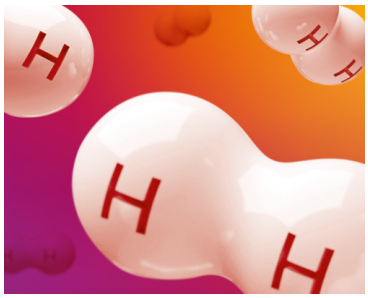
On October 13 and 14, 2025, the PSP Conference will bring together founders, researchers, and decision-makers with a

focus on sustainability at the Fraunhofer Conference Center. In addition to providing inspiration for a sustainable future through cutting-edge research and innovation, there will be an opportunity to get to know Fraunhofer IAP better during a deep dive.

MORE INFO

Potsdam, Germany | October 16, 2025

Brandenburg Hydrogen Day 2025



We make materials fit for your hydrogen processes! With the development of new polymers, membranes, catalysts, coatings, carbon fibers, and CFRP components. At the Brandenburg Hydrogen Day, you can learn more about our solutions for hydrogen technologies – from the laboratory to the semi-industrial scale.

MORE INFO [IN GERMAN]

Berlin, Germany | October 22, 2025 - October 23, 2025

TechBlick

Forward-looking electronics – additive, sustainable, flexible, hybrid, portable, structural, and in 3D. At TechBlick 2025, we will be presenting our developments: color-stable quantum materials, printing inks for displays, innovative display components, OLED displays, and perovskite solar applications.

MORE INFO

Potsdam, Germany | November 13, 2025

A sustainable future in the plastics industry

How can the transition to a circular plastic economy be achieved? Employees from established companies and innovative start-ups will discuss this on November 13, 2025. The Center of Excellence for Functional Integration of the Fraunhofer Institutes IAP and IZI-BB is organizing the event. Take advantage of this opportunity to exchange ideas and become part of the transformation!

MORE INFO [IN GERMAN]

Frankfurt am Main, Germany | November 18, 2025 - November 21, 2025

Formnext 2025

Fraunhofer IAP presents developments in the areas of artificial tissue from 3D printers, innovative biomimetic materials, and thermoresponsive fasteners, closure caps, and morphing structures. Visit us at the Fraunhofer joint booth, Additive Manufacturing Competence Field.

MORE INFO

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.