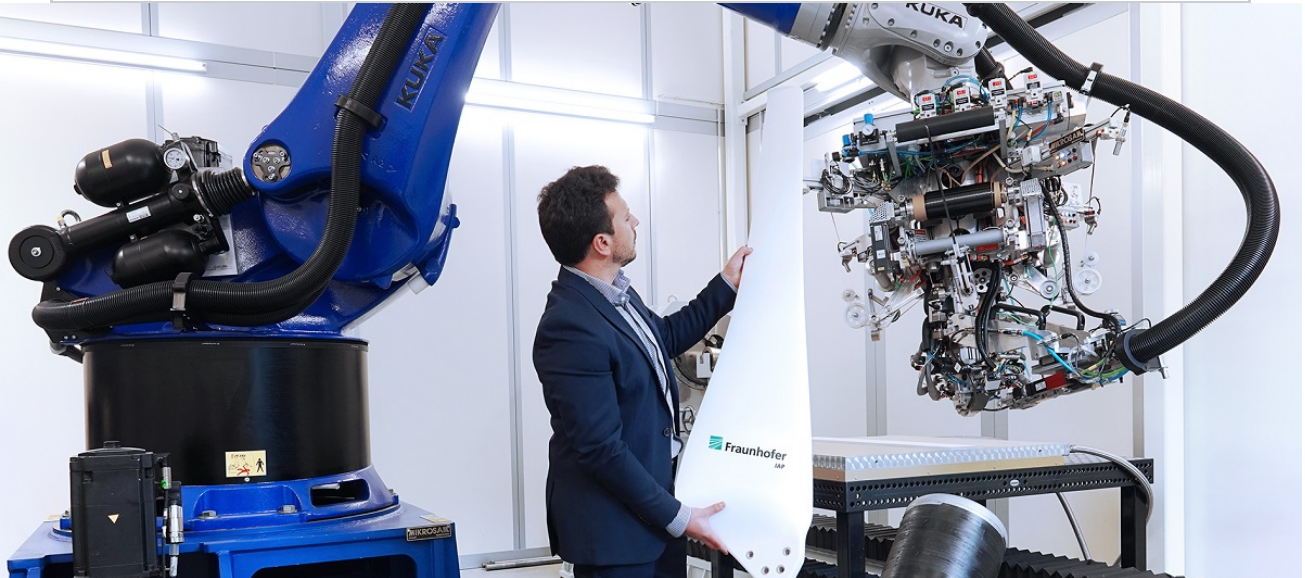


## We make materials fit for the future!



Dear Ladies and Gentlemen,

Based on a ruling by the Federal Constitutional Court, the debate about Germany's climate targets has come into focus and is sending a strong signal to politics and society. It is a groundbreaking appeal to industry to establish sustainable products and production processes. The key to this are creative solutions from research and development. Lightweight construction in particular offers a wide range of possibilities for a more energy-efficient and thus more sustainable economy.

In the PYCO research division of the Fraunhofer IAP, we develop novel construction methods, material designs, structures and associated manufacturing technologies for lightweight components together with our partners. These are used, for example, in wind turbines and containers for hydrogen storage. The local production and storage of hydrogen from wind power thus makes it possible to make private households and municipalities independent of fossil fuels and significantly reduce carbon dioxide emissions.

In the recently commissioned new building for the PYCO research division in Wildau, we are now combining our expertise in materials development, design and manufacturing technologies for lightweight construction under one roof. This allows us to offer our industrial partners practical solutions for lightweight construction from a single source.

Yours sincerely,

Prof. Alexander Böker

## NEWS FROM RESEARCH AND DEVELOPMENT

Bioeconomy and Sustainability

### Development of recyclable, fiber-reinforced material made from 100 percent bio-based polylactic acid

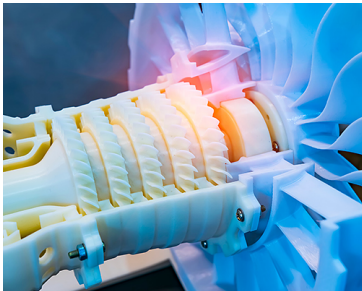


As part of the Renewable Resources funding program of the German Federal Ministry of Food and Agriculture (BMEL), we are developing a composite material made entirely of bio-based polylactic acid (PLA) that is significantly easier to recycle than conventional fiber composites.

[MORE INFORMATION](#)

Industry and Technology

### Plastic components with longer service life



Components with reduced friction represent an important contribution to conserving resources and achieving climate protection targets. In the case of plastics, lower friction can also reduce microplastics in the environment. With the development of self-lubricating plastics, we and the SKZ Plastics Center are supporting these goals.

[MORE INFORMATION](#)

Energy Transition and Mobility

### Hydrogen power plant for the garden



In the future, private customers will use small wind turbines to produce hydrogen for their own use. Together with the Brandenburg University of Technology Cottbus-Senftenberg (BTU) and an industrial partner, we are now developing the key technologies for this: small efficient rotors and safe tanks.

[MORE INFORMATION](#)

Bioeconomy and Sustainability

### Enzymes successfully embedded in plastics

In general, plastics are processed at way over a hundred degrees Celsius. Enzymes, by contrast, cannot usually withstand these high temperatures. We have managed to reconcile these contradictions: We successfully embedded enzymes in plastics without the enzymes losing their activity



in the process. The opportunities this creates are enormous.

[MORE INFORMATION](#)

## DATES

online conference / June 16, 2021, 2 p.m. - 4 p.m.

### **Fraunhofer CCPE compact: Chemical Recycling – Most wanted for a Circular Economy?**



At the second Fraunhofer CCPE compact on June 16, 2021, this time everything revolves around the topic of chemical recycling. CCPE scientists will answer the question of how highly contaminated and problematic plastic waste can be recycled.

[MORE INFO](#)

online conference / June 20, 2021 - June 24, 2021

### **9th World Hydrogen Technologies Convention "Digital Edition"**



Efficient catalysts are at the core for wide-spread use of fuel cells and water electrolysis. The presented continuous process allows for manufacturing large amounts of high quality platinum-based catalyst nanoparticles for these applications.

[MORE INFO](#)

## ON OUR OWN ACCOUNT

### **New building in Wildau: advantages for research, the economy and the region**

Our research division PYCO has combined its lightweight construction competencies, which were previously spread across several locations, under one roof in Wildau. In addition



to laboratories for material development, the premises also have space for manufacturing technologies for larger components. We offer industrial customers complete solutions for lightweight construction from a single source.

[TO RESEARCH DIVISION PYCO](#)

## 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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