Das Fraunhofer-Institut für Silicatforschung ISC arbeitet an innovativen Materialien und Technologien für nachhaltige Produkte.
The Fraunhofer Institute for Silicate Research ISC works on innovative materials and technologies for sustainable products.
Kontakt | Website | Online-Ansicht

Fraunhofer ISC News

News from the ISC // Issue 3/2025

Fraunhofer ISC / General

Fraunhofer supports automotive supplier Brose SE in entering the aerospace sector

Automotive supplier Brose SE is planning to enter the aerospace and satellite business. To this end, the family-owned company has entered into strategic partnerships with the Fraunhofer Institute for High-Speed Dynamics EMI, the Fraunhofer Institute for Silicate Research ISC, and the BERLIN SPACE Consortium.

Goals of the cooperation:
• Development of small satellites and key components for space technology.
• Manufacture of highly efficient electric propulsion systems in industrial series production at the Würzburg site
• Support in setting up supply chains, production processes, and applications for “NewSpace”

The cooperation contributes to closing the industrial capability gap in Europe in the field of NewSpace and securing access to forward-looking technologies in international competition.

Contact: Dr. Stephan Busch (Fraunhofer EMI)
Contact: Dr. Victor Trapp (Fraunhofer ISC)

DETAILED PRESS RELEASE

Fraunhofer ISC / CeSMA

Silicones – Functional protection with flexibility

Silicones are **hybrid materials** with **temperature resistance, chemical stability, and high elasticity.** At Fraunhofer ISC, we develop specially adapted silicone formulations at the Center for Smart Materials and Adaptive Systems (CeSMA)—for example, for encapsulating electronic components or elastic sensors (DES) that function even in stretchable structures or on textiles. High filling degrees without loss of elasticity and application-specific additives ensure reliable protection and a long service life.

Contact: Detlev Uhl (Material Development CeSMA)

MORE INFORMATION ON THE CESMA WEBSITE

Fraunhofer ISC / materials chemistry

Safe and sustainable material solutions for packaging and textiles

On November 20, 2025, the EU project “ZeroF” presented groundbreaking research results on PFAS-free coatings in Barcelona.

The focus was on solutions that do not contain PFAS (so-called forever chemicals) while maintaining

the same functionality. Fraunhofer ISC presented its ORMOCER® technology: organic-inorganic hybrid polymers that have been specially developed for packaging and textiles – transparent, robust, temperature-resistant, and adaptable.

Contact: Dr. Diana Lau (Scientific Director, Chemical Coating Technology)

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Podcast tip:

"Eternity Chemicals" with Dr. Ferdinand Somorowsky

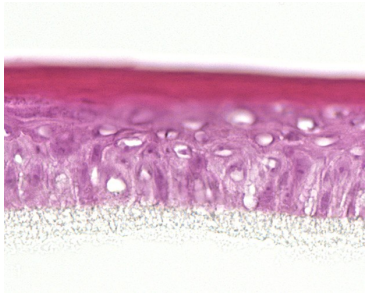
In the brand eins podcast from November 7, 2025, Dr. Ferdinand Somorowsky explains in detail why a possible PFAS ban could be not only a risk for industry, but also an opportunity for genuine innovation.

Contact: Dr. Ferdinand Somorowsky (Head of Chemical Coating Technology)

PROJECT-ZEROF | PODCAST BRAND EINS | CHEMICAL COATING ISC

Fraunhofer ISC / TLZ-RT

Research that protects – without animal testing



The **Fraunhofer Translation Center for Regenerative Therapies TLZ-RT** is adopting the **epiCS® technology** from **Henkel AG & Co. KGaA**, thereby ensuring the continued availability of internationally standardized epidermis models. These tissue models, validated by the Organization for Economic Co-operation and Development (OECD), offer a reliable alternative for evaluating the skin reactions to chemical substances and contribute to the safety of cosmetics and pharmaceuticals.

This means: scalable testing methods, regulatory reliability, and new perspectives for research and product development - directly available and produced in Germany. epiCS® opens up new avenues for ethically acceptable and scientifically sound safety testing. Industry partners benefit from efficiency, ethics, and expertise from a single source.

Contact: Prof. Dr. Florian Groeber-Becker (Head of TLZ-RT)
Contact: Dr. Dieter Groneberg (Group Leader, Skin Department)

PRESS AND CONTACT

Fraunhofer ISC / FZEB

Testing and analysis of battery cells and modules

Precise battery analysis for maximum performance. Our testing procedures provide detailed data on capacity, service life, and safety parameters - for informed decisions and optimized systems.

Our services:
• Various analyses to support product and research development
• Support with cell parameterization for battery modeling (BMS)
• Evaluation of parameters that are crucial for cell performance
• Accompanying electrical tests in pre-series production

Are you interested in our offer and would like to discuss your project or require further information?

Contact: Dr. Jochen Settelein (Head of Battery Testing/Analytics)

WEBSITE FZEB

Fraunhofer ISC / FZEB / February 3–5, 2026, CCW Würzburg

Invitation to the second Conference on Battery Direct Recycling (2026)

Following the success of the Conference on Battery Direct Recycling 2024, the Fraunhofer Center for Electromobility Bavaria (FZEB) at Fraunhofer ISC is hosting a second conference. It will take place from February 3–5, 2026, once again at the Concress Centrum Würzburg CCW, bringing together national and international experts from science, industry, and politics. The recycling of battery materials is central to sustainability and geopolitical independence. With the new EU Battery Regulation, this topic is becoming even more important.

The topics: Design for recycling, innovative technologies, digitalization, life cycle assessment, and political and economic framework conditions.

Excerpt Lecturers:
Patrik Johansson, BATTERY 2030+, *Uppsala University, Schweden*
Sascha Nowak, *MEET Battery Research Center, Deutschland*
Rob Sommerville, *University of Birmingham, UK*
Eliana Quartarone, *University of Pavia, Italien*
Justo Garcia, *Orano, Frankreich*
Moritz Poremba, *BMW AG, Deutschland*
Eva Allen, *Argonne National Laboratory, USA*

Registration is now open:

Contact: Dr. Andreas Flegler (Head of FZEB)
Contact: Dr. Guinevere Giffin (Scientific Director FZEB)

REGISTRATION, AGENDA, SPONSOR PACKAGES

Monthly newsletter on LinkedIn

How can materials be both sustainable and high-performance? That was the central question in our October edition of “One Month – One Material” on LinkedIn. We looked at hybrid materials that intelligently combine properties such as transparency and hardness, flexibility and thermal stability, or biodegradability and protection.

Excerpt from the topics:

ORMOCER® – Hybrid polymers for sustainable applications
PFAS-free – same function, no risk to humans or the environment

bioORMOCER®-Coatings
The further development of ORMOCER® systems based on renewable raw materials and with adjustable biodegradability

Silicone
At the Fraunhofer ISC **Center Smart Materials and Adaptive Systems CeSMA** we develop customized silicone formulations, for example as casting compounds for electronic components.

Follow us on LinkedIn to stay up to date on the latest developments in materials research at Fraunhofer ISC!

MORE TOPICS | SUBSCRIBE TO LINKEDIN NEWSLETTER

Up-to-date

Wir informieren via **Podcast, Youtube-Video** und **Social-Media**-Kanälen wie **LinkedIn,** wenn es um neue Forschungsergebnisse, Projekte oder neue Errungenschaften geht. Schauen Sie einfach mal auf unsere Medienseite.
We provide information via **podcasts, YouTube videos** and **social media channels** such as **LinkedIn** when it comes to new research results, projects or new achievements. Just take a look at our media page.

YOUTUBE | LINKEDIN | PODCAST | XING | PUBLICATIONS

Kontakt/Contact

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Leitung Marketing / Head of marketing

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97082 Würzburg

→ E-Mail senden

Das Fraunhofer-Institut für Silicatforschung ISC ist eines der wichtigsten Zentren für materialbasierte Forschung und Entwicklung in Deutschland. Unter dem Motto „Materials meet…“ arbeiten rund 400 Mitarbeiterinnen und Mitarbeiter an innovativen Materialien und Technologien für nachhaltige Produkte und leisten essentielle Beiträge zur Lösung der großen weltweiten Zukunfts-Themen und -Herausforderungen. Forschungsschwerpunkte liegen in den Bereichen Energie, Biomedizin, Klima und Umwelt, Digitalisierung und Adaptive Systeme.