Press Release

Anniversary event draws 600 visitors

Fraunhofer ISC Würzburg celebrates 100 years of silicate research

On April 1, 2026, Fraunhofer ISC Würzburg celebrated its 100th anniversary as a research institute. Since 1926, the institute has shaped silicate research and has also developed into a broadly based materials research institution. Around 600 citizens attended the anniversary afternoon to gain insights into research, everyday lab life, and innovative strength.

Wide Variety of Materials Research: 15 Themed Stands and Labs

What do scratch-resistant eyeglass lenses, glass-ceramic dental prostheses, eco-friendly mulch papers, small satellites, and jet engines have in common? Materials solutions from the Fraunhofer Institute for Silicate Research ISC! Visitors to the Fraunhofer ISC were able to discover this and more. For the anniversary afternoon, the institute's staff at the Würzburg headquarters set up 15 information booths on selected topics in the foyer and adjacent laboratories. For three hours, over 30 researchers provided information to visitors of all ages about the broad spectrum of their work: NewSpace and new satellite technology, functional coatings as an environmentally friendly alternative to PFAS (PFAS—per- and polyfluorinated alkyl substances—are among the so-called "forever chemicals"; restrictions or a ban are currently being discussed), instrument engineering for efficient production, glass development—specifically dental glass, automation and AI-based materials development, wound healing concepts, analytics, high-temperature lightweight construction with special ceramics, particle technology for medical and technical applications, solid-state battery development, battery cell manufacturing, battery diagnostics, smart and textile sensor technology, cultural heritage protection, and chemical materials development in the virtual materials space.

Focus Areas for Climate Protection, Health, and the Energy Transition

The anniversary afternoon offered a wealth of information, insights into laboratories, and hands-on activities, including offerings for children, which were well-received and widely utilized. The event vividly demonstrated how materials research is incorporated into everyday products and the societal relevance of science. This central role of materials research for society, the economy, and the environment was clearly illustrated at the thematic booths. Research for the benefit of humanity, for example, also offers biomedical approaches that help identify new active ingredients for pharmaceuticals and cosmetics, thereby helping to avoid animal testing. The positive response from visitors was overwhelming—and the greatest reward for the staff who helped organize the day.

The Institute's Role in Würzburg

As a regional driver of innovation, the institute cooperates closely with local companies and the university. This transdisciplinary and application-oriented collaboration strengthens Würzburg as a hub for innovation. Local companies also benefit from this: support in product development, market expansion, and the spin-off of relevant projects. Examples range from the battery recycling startup CellCircle to collaborative research for the cosmetics manufacturer Kneipp, and NewSpace initiatives with Brose.

Outlook and Mission

Prof. Miriam Unterlass has led the institute since fall 2024. "100 years of the Institute for Silicate Research—that's a proud milestone! And for us, it's a commitment to improve the world with sustainable, non-critical, and circular material solutions," says Prof. Unterlass, outlining the mission for the future. "Sustainable material synthesis, environmentally friendly material alternatives, and the circular economy, as well as automation and digitalization to achieve these solutions, are now even more central to Fraunhofer ISC's materials research," the institute director continues. Collaboration with research and industry, along with the further development of the regional research landscape, will continue to strengthen Würzburg as a hub for science and innovation in the long term.

The 100th anniversary commemorates a long tradition that continues to evolve: from silicate research to holistic materials research that enables sustainable and life-saving solutions. The Fraunhofer ISC Würzburg remains a beacon and point of reference for materials research, innovation, and social responsibility—with an eye toward a resource-efficient, circular future.

Fig. 1: 100 years active in materials research – KWI since 1926, MPI since 1948, and Fraunhofer Institute for Silicate Research ISC since 1971 © Fraunhofer ISC

100 Years of the Institute for Silicate Research – Milestones in a concise chronology

1926–1948: Founding of the Kaiser Wilhelm Institute in Berlin-Dahlem; Prof. Eitel as a influential but controversial figure; close integration of glass, ceramics, and cement research; Nazi-era research funding directed toward military contracts; relocation to the Rhön region.

1948–1971: New beginning in Würzburg as the Max Planck Institute; Prof. Dietzel shapes the institute's development, with a focus on glass, ceramics, and enamels; 1952 inauguration of the new building; 1971 transition to Fraunhofer ISC.

1971–2006: New material developments, growth of technical centers and branch offices; under Prof. Scholze, the foundation is laid for the development of ORMOCER®-based material families; under Prof. Schmidt, further ORMOCER®-based applications are developed in dentistry, the environment, cultural heritage preservation, and corrosion protection; Under Prof. Müller, the research field of ceramic reinforcement fibers is established; environmental awareness and cultural heritage protection gain importance; founding of the "Technology of Functional Materials" degree program at the University of Würzburg and expansion of research into the fields of "Health" and "Electronics."

2006–2024: Reorientation under Prof. Sextl; the degree program is brought to life; center structure, further growth, and expansion of value chains through project groups for material cycles and resource strategies (IWKS) as well as high-temperature lightweight construction (HTL) and life sciences; closer ties to industry, prototype development, and pilot plants, including Europe's first pilot plant for the production of ceramic reinforcement fibers on an industrial scale; globalization of markets and strengthening of the Fraunhofer profile as a driver of innovation.

2024 to present: New priorities under Prof. Unterlass: "Sustainable Chemistry" takes center stage, internationalization is being driven forward, and "Materials Acceleration"—i.e., the acceleration of materials development through digitalization, artificial intelligence, and robotics—is propelling materials research further into the 21st century.

Materials science is crucial for sustainable product innovation. The **Fraunhofer Institute for Silicate Research ISC**, based in Würzburg, focuses on chemical materials research and offers solutions related to sustainable materials, manufacturing, and processing. It is part of the **Fraunhofer-Gesellschaft**, one of the leading organizations for applied research, with a focus on future-oriented key technologies and the transfer of research results to industry to strengthen our economic position and benefit our society. Founded in 1949, the organization currently operates 75 institutes and research facilities in Germany. Its nearly 32,000 employees, most of whom have backgrounds in the natural sciences or engineering, generate an annual budget of €3.6 billion. Of this, €3.1 billion is allocated to contract research.

Contact

Marie-Luise Righi
Fraunhofer Institute for Silicate Research ISC
PR and Communications
Head
Phone +49 931 4100-150
righi@isc.fraunhofer.de

www.isc.fraunhofer.de