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MSU celebrates 15 years of collaboration, research, and innovation with Fraunhofer USA

*Story courtesy of Fraunhofer-Gesellschaft:* For 70 years, the researchers at the Fraunhofer-Gesellschaft in Germany have been asking the right questions and finding answers – in the form of solutions that improve society and directly benefit the economy. This year marks an anniversary in the U.S., too: the establishment of Fraunhofer USA as a legally independent Fraunhofer affiliate 25 years ago. This non-profit organization was founded in 1994 to conduct applied research and development for customers from industry and from the federal and state governments in the U.S. With a history of more than 15 years now, the collaboration with Michigan State University (MSU) is a prime example of the continued success of this transatlantic research alliance.

Fraunhofer USA was established 25 years ago as a legally independent international Fraunhofer affiliate and has been collaborating with Michigan State University for the past 15 years in a productive and mutually beneficial partnership.

The Fraunhofer USA research centers and the Fraunhofer Institutes in Germany work together to provide the global market with a wide array of leading-edge technologies and to close the innovation gap between the laboratory and the real-world market. In doing so, the Fraunhofer USA research centers pursue strategic alliances with one or more of the numerous Fraunhofer Institutes in Germany and with major research universities in the U.S. The business activities in the U.S. are aimed not only at applying the technology transfer methods that have been tried and tested in Germany to the U.S. market, but also, and more importantly, at broadening the scientific expertise there through extensive cooperation with research centers of top international standing and through staff training and qualification in an international environment. With seven centers, Fraunhofer USA is the largest international subsidiary in the Fraunhofer network.
Transatlantic research alliance
The success of the close collaboration between MSU and the Fraunhofer USA Center for Coatings and Diamond Technologies CCD is typical of the transatlantic research alliance. This collaboration between the Fraunhofer-Gesellschaft, Fraunhofer USA, MSU and the Fraunhofer Institute for Material and Beam Technology IWS in Dresden dates back more than 15 years and has resulted, for instance, in the development of process and system technologies for manufacturing high-quality diamond materials for applications in power and high-frequency electronics.

Various other Fraunhofer USA CCD projects further illustrate the broad range of topics, the success and the social impact of the research conducted by Fraunhofer USA. For instance, for the treatment of wastewater from industry and landfills, Fraunhofer USA CCD researchers developed a solution that breaks down polyfluoroalkyl compounds, which are persistent organic pollutants. The portfolio of these U.S.-based researchers also includes a project for manufacturing retrofittable window frames that reduce a building’s energy budget, as well as a scalable ion beam source designed to improve thin-film deposition processes and material properties.

Fraunhofer USA President Thomas Schuelke said: “The operational basis for the long-standing and successful collaboration between MSU and Fraunhofer USA is the simple recipe for a good partnership: shared investments, shared risks and shared successes. But the successful implementation of this concept rests with the people who bring the collaboration to life and add value for all of the partners.”

Schuelke, who is also a professor of electrical and computer engineering at MSU, said that’s what the colleagues at MSU and Fraunhofer do, whether they work in administration or in the lab.

“We are proud to have a strong research university such as MSU as a partner and to join forces with them to face the challenges and opportunities the future holds,” he added.

Fraunhofer USA CCD conducts research projects focusing particularly on coating technologies, carbon materials and 3D printing technologies, with a total project volume of $2.8 million per year. With industrial revenues accounting for 43 per cent of this figure, Fraunhofer USA CCD is also a prime example of the success of the Fraunhofer model abroad.

Honorary doctorate for Reimund Neugebauer
Reimund Neugebauer, president of the Fraunhofer-Gesellschaft, said research and innovation know no borders.

“Of course, excellence and originality are clear aims of our international activities, too, for cross-border alliances can succeed only when complementary areas of expertise add value for both partners and create new scientific value,” he said.
“The collaboration with MSU, which like the Fraunhofer-Gesellschaft, has a clear focus on applied research and key technologies of the future. It can be considered an example of the success of our internationalization strategy, and going forward, it will also take further innovative developments from the lab to the market.”

Leo Kempel, dean of the MSU College of Engineering, said the partnership with Fraunhofer has expanded the university’s connections with industry in myriad ways.

“We are grateful to Fraunhofer for helping us figure a more holistic view of what industry needs from us.”

During his visit to the U.S., Neugebauer was awarded an honorary doctorate in engineering from MSU during Commencement services on May 3. The honorary degree acknowledged his contributions to application-oriented research and to the transatlantic research alliance. He joins the ranks of many others who have been awarded an honorary MSU degree for outstanding work in research or the management of public organizations, including automotive pioneer Henry Ford, Apple co-founder Stephen Wozniak, and former U.S. presidents Harry Truman and Bill
Related Website: [Communications contact: Patricia Mroczek](https://www.egr.msu.edu/news/2019/05/07/fraunhofer-usa)