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Visiting Scientist from Kiev and Fraunhofer Team Conduct Research into Decommissioning Destroyed Nuclear Infrastructure

Ukrainian Robotics Specialist at Fraunhofer IWS in Dresden

(Dresden, 03/30/2023) The Fraunhofer-Zukunftsstiftung (Fraunhofer Future Foundation) is promoting scientific exchange between German and Ukrainian researchers to help repair war damage and prepare for rebuilding using climate and environmentally friendly technologies. To this end, the foundation is fully funding Ukrainian experts and their research activities with research stays of up to six months at Fraunhofer institutes in Germany. Oleksandr Proskurin, who has joined Fraunhofer IWS in Dresden, is the first visiting scientist from Ukraine to take part in the initiative.

The Ukrainian robotics specialist has been working with researchers at the Fraunhofer Institute for Material and Beam Technology IWS in Dresden as a visiting scientist since the beginning of 2023. Together, they are developing methods to decommission infrastructure destroyed and contaminated by nuclear radiation using laser technology. Proskurin is a robotics expert at the Institute for Safety Problems of Nuclear Power Plants (ISP NPP), part of the National Academy of Sciences of Ukraine (NASU). "During Oleksandr's six-month research stay in Dresden, we'll be using the example of the damaged nuclear power plant in Chernobyl to examine which innovative methods can be used to safely analyze and remove radioactive material from Chernobyl sarcophagus," says Dr. Andreas Wetzig, Technology Field Manager for Cutting and Joining at Fraunhofer IWS in Dresden, describing the project. The project findings will then be applied to the management of other infrastructure that has been destroyed and contaminated by radiation.

The Fraunhofer Future Foundation's initiative will help ensure that the latest findings from applied research are taken into account when repairing war damage, and in particular when rebuilding Ukraine. The focus of the research is therefore on sustainable construction, climate-friendly energy, the resource-efficient production of goods, and secure and resilient supply structures. "Rebuilding a country is a great opportunity to redesign infrastructure from scratch. We want to help Ukrainians rebuild their country in such a way that it meets the requirements of sustainable development, ensuring it is ecologically intact, socially balanced and economically sustainable," says

Head of Corporate Communications

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Prof. Hans-Jörg Bullinger, Chairman of the Fraunhofer Future Foundation, of the foundation's objective.

For its initiative, the Fraunhofer Future Foundation can draw on the expertise of the 76 Fraunhofer-Gesellschaft institutes and research units across Germany. In the future, further research projects are to be developed and implemented jointly with Ukrainian experts in cooperation with companies and the public sector in both countries.

About the Fraunhofer Future Foundation

The Fraunhofer Future Foundation supports and shapes the transformation to a sustainable economy and way of life.

Its support enables the development of products, services and business models that make an important contribution to resolving global challenges. The foundation was founded in 2008. In line with its statute, it exclusively funds projects at institutes of the Fraunhofer-Gesellschaft.

More information:

www.fraunhofer-zukunftsstiftung.de

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Ukrainian robotics specialist Oleksandr Proskurin (left) has been a visiting scientist in Patrick Herwig's (right) research group at Fraunhofer IWS in Dresden since the beginning of 2023. Together, they are developing methods to decommission infrastructure destroyed and contaminated by nuclear radiation using laser technology, here in the processing of non-radioactive test material.

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Materials and Lasers – Competence with a System: The **Fraunhofer Institute for Material and Beam Technology IWS** develops complex system solutions in materials and laser technology. We define ourselves as idea drivers developing customized solutions based on laser applications, functionalized surfaces as well as material and process innovations – from easy-to-integrate custom solutions to cost-efficient solutions for small and medium-sized enterprises to industry-ready one-stop solutions. Our research focuses on aerospace, energy and environmental technology, automotive, medical and mechanical engineering, toolmaking, electrical engineering and microelectronics, and photonics and optics sectors. In our five future and innovation fields of battery technology, hydrogen technology, surface functionalization, photonic production systems and additive manufacturing, we are already creating the basis today for the technological answers of tomorrow.



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The Fraunhofer Future Foundation fully finances research stays for Ukrainian experts at Fraunhofer institutes in Germany for up to six months. Oleksandr Proskurin is the first visiting scientist to take part in the initiative.

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