



Fraunhofer FEP Dresden, Germany

Fraunhofer Institute for Electron Beam and Plasma Technology FEP works on innovative solutions in the fields of vacuum coating and surface treatment. The core competencies electron beam technologies, roll-to-roll technology as well as plasma-activated large-area and precision coating provide a basis for these activities.

Thus, Fraunhofer FEP offers a wide range of possibilities for research, development and pilot production, especially for the processing, sterilization, structuring and refining of surfaces as well as sensors and filters. Our aim is to seize the innovation potential of these technologies for new production processes and devices and to make it available for our customers.



Plasma Technologies and Coating of Flexible Products



We develop technologies, processes and key components for the vacuum coating of flexible products such as polymer films and thin metal foils, textiles, membranes and paper.

Furthermore, we develop plasma-activated coating processes for industrial-scale manufacturing as well as economical and high-quality large-area coating based on PVD and PECVD processes. The goal of our work is to provide the surfaces of these materials with custom-designed functionality. Our services encompass all of the necessary steps in a development project – from the conceptualization phase to transfer of the technology.



Electron Beam Technologies



We use electrons as a versatile tool. We utilize thermal, chemical, and biological effects of accelerated electrons in the energy range of 10 - 300 keV and even more for industrial-oriented technological and engineering development, as well as developing tailored electron-beam sources.

Furthermore, we focus on large-area coating of metal sheets and strips at high deposition rates. The coating of 3D objects and the development of technologies for medical and biotechnological application is also on our agenda.

In addition to the environmental sustainability the advantage of our processes is the almost inexhaustible range of layer materials which goes far beyond the materials that can be used for conventional surface modification.

We are active in the field of:

- » Smart textiles
- » Deposition and processing techniques
- » Machine development
- » Measurement techniques
- » Packaging
- » Hybrid systems
- » Electronics
- » Substrates
- » Vacuum techniques



We offer

The Fraunhofer-Gesellschaft is the world's leading organization for applied research. Fraunhofer FEP works on innovative solutions in vacuum coating and surface treatment.

Career opportunities at Fraunhofer are as diverse as our research fields: Whether you are a trainee, student assistant, intern, doctoral student, scientist, or administrator - become part of the team! Excellent training opportunities, ample freedom to realize creative ideas, and a practical approach to work have made us one of the most popular employers in Germany.

If you are or have been studying physics, chemistry, natural sciences, technology, or engineering, then you have come to the right place. There is also a need for other subjects

– provided you have a passion for application-oriented research and the ability to work independently. We offer you the opportunity to qualify for responsible work in industry or science. We look forward to receiving your application!

We support

- » Study Internships
- » Diploma/Bachelor/Master Theses
- » PhD positions

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