Fraunhofer
FEP

Fraunhofer Institute for Organic Electronics, Electron Beam and Plasma Technology FEP

Profile

The Fraunhofer Institute for Organic Electronics, Electron Beam and Plasma Technology FEP is located in Dresden and focuses on developing innovative solutions, technologies and processes for surface modification and organic electronics.

Evolution of surface and light

Profile

Fraunhofer Institute for Organic Electronics, Electron Beam and Plasma Technology FEP works on innovative solutions in the fields of vacuum coating, surface treatment as well as organic semiconductors. The core competences electron beam technology, plasma-assisted large-area and precision coating, roll-to-roll technologies, development of technological key components as well as technologies for the organic electronics and IC/system design 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 OLED microdisplays, organic and inorganic sensors, optical filters and flexible OLED lighting.

Our aim is to seize the innovation potential of the electron beam, plasma technology and organic electronics for new production processes and devices and to make it available for our customers.

Contact

Director

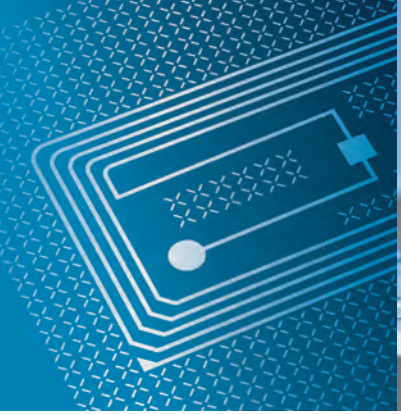
Prof. Dr. Elizabeth von Hauff
Prof. Dr. Volker Kirchhoff

Corporate Communications
Annett Arnold, M.Sc.
Phone +49 351 2586-452
annett.arnold@fep.fraunhofer.de

Marketing
Ines Schedwill
Phone +49 351 8823-238
ines.schedwill@fep.fraunhofer.de

Site Winterbergstraße
Winterbergstr. 28 | 01277 Dresden
Phone +49 351 2586-0
info@fep.fraunhofer.de

Site Maria-Reiche-Straße
Maria-Reiche-Str. 2 | 01109 Dresden
Phone +49 351 8823-238
info@fep.fraunhofer.de



Optics, Sensor Technology and Electronics

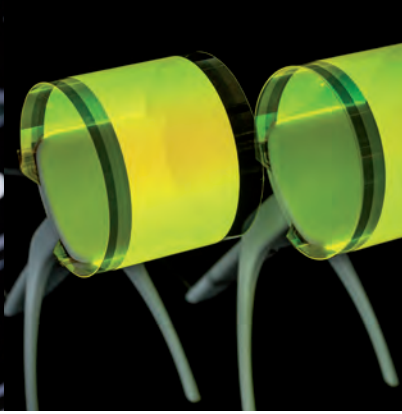
- Ultra-barrier films
- Energy harvesting layers
- Optical sensors for surface inspection in biology, biomedicine and chemistry
- Organic photodiodes
- Insulation layer
- Optical precision and high performance coatings

www.fep.fraunhofer.de/optics-sensor-technology-and-electronics

Medical and biotechnological Applications

- Biofunctional surfaces
- Surface treatment of medical products
- Coating for medical devices
- Electron beam sterilization and germ reduction
- Testing of biocompatibility and degree of sterilization
- OLED-on-Silicon technology for fluorescence sensors

www.fep.fraunhofer.de/medical-applications



Displays and Wearables

- Bidirectional OLED-on-Silicon microdisplays
- Microdisplays in various resolution and layouts
- Autostereoscopic 3D-displays
- CMOS design, optic design, system integration, IC design
- OLED microstructuring e.g. with orthogonal photolithography
- Functional layers for displays

www.fep.fraunhofer.de/displays-and-wearables

Light

- Pilot and development lines for production of organic devices and OLED
- Preparation of concept studies
- Development and processing of flexible substrates with organic electronics
- Evaluation and characterization of devices
- Inspection and production of samples for organic devices

www.fep.fraunhofer.de/light

Smart Building and Architecture

- Energy-efficient coatings
- Decorative layers
- Integrated organic solar cells
- Integrated sensors
- Customized OLED-lighting

www.fep.fraunhofer.de/smart-building-and-architecture

Solar energy

- Front barrier layers / ultra-barrier films
- Front contact layers (TCO)
- Absorber layers (Si, CdTe, CIGS)
- Rear contact layers (Mo, Al, Cu; electron beam structuring)
- Layers for rear support (insulation, barrier functions)
- Advisory service for the cleaning of solar panels
- Development of encapsulation and contacts for organic solar cells

www.fep.fraunhofer.de/solar-energy

Mechanical Engineering

- Vacuum coating of components
  (e. g. automotive, aircraft, ships)
- Vacuum coating of tools
  (e. g. forming and cutting tools)
- Electron beam modification of components
- Plasma cleaning of components
- Advisory service for the cleaning of components

www.fep.fraunhofer.de/mechanical-engineering

Packaging

- Vacuum roll-to-roll coating of polymer films and metal foils
- Barrier coatings
- Electron beam sterilization of packaged products
- Electron beam curing of inks
- Electron beam modification of polymer surfaces

www.fep.fraunhofer.de/packaging

Environment and Energy

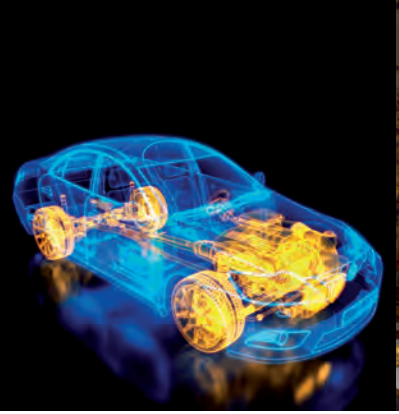
- Coating and layer modification for energy storage devices
- Coatings for green technologies
- Processes for the recovery and refinement of valuable materials
- Processes for the treatment of waste water and waste gas

www.fep.fraunhofer.de/environment-and-energy

Agriculture

- Electron treatment of seeds
- Electron beam disinfection of animal feed and food products
- Modification of materials made from renewable resources
- Technology in agricultural machines for detecting foreign objects

www.fep.fraunhofer.de/agriculture



Transport

- Anticorrosive coatings, antifreeze and scratch-resistant coatings
- Antireflective coatings
- Curing of polymers
- Coatings for innovative sensor systems
- Flexible organic lighting systems
- Integrated sensors and displays, additional information for driver's via OLED smart glasses

www.fep.fraunhofer.de/transport

Preservation

- Energy-efficient coatings
- Corrosion sensors
- Plasma cleaning of textiles and silver jewelry
- Stabilization of brittle papers
- Disinfection of paper, polymers, wood and leather

www.fep.fraunhofer.de/preservation

DIRECTIONS
WINTERBERGSTRASSE

Anfahrt

By Car

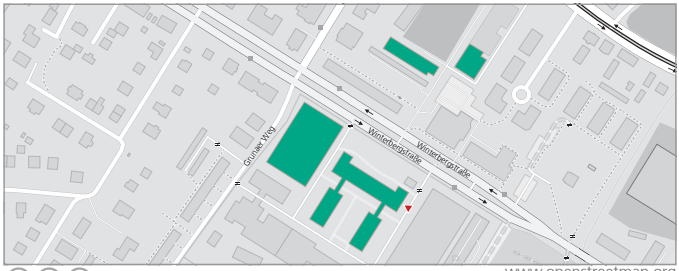
- Autobahn A17, exit »Dresden-Südvorstadt«
- Bundesstrasse B170, direction Dresden
- At »Pirnaischer Platz« turn right, direction »Gruna/VW Manufaktur«
- At the end of »Grosser Garten« turn right onto »Karcherallee«
- At the next traffic light turn left into »Winterbergstrasse«

by Bus and tram

- Dresden »Hauptbahnhof Nord« take tram line 3/7 (»Wilder Mann«, »Weixdorf«) and exit at »Pirnaischer Platz«
- Change to tram line 1/2 (»Prohlis«, »Kleinzschachwitz«) and exit at »Zwinglistrasse«
- Change to bus 64 (»Reick«) and exit at »Fraunhofer-Institutszentrum«

By plane

- From Dresden Airport 30 minutes by taxi to the Fraunhofer-Institutszentrum (Winterbergstrasse 28)



Anfahrt

By Car

- Autobahn A4, exit »Dresden-Flughafen«
- Drive along the »Hermann-Reichelt-Strasse« direction »Hoyerswerda«; this leads into the »Grenzstrasse«
- After the »Dörnichtweg«, take the first junction right into the »Maria-Reiche-Strasse«

by Bus and tram

- From Dresden »Hauptbahnhof Nord« take tram line 7 (»Weixdorf«) and exit at »Arkonastrasse«
- Walk left through the residential area to the »Grenzstrasse«
- Follow the »Grenzstrasse« and turn left into »Maria-Reiche-Strasse« (10 min by foot)

By plane

- From Dresden Airport take bus 80 and exit at »Grenzstrasse Mitte«
- You will reach »Maria-Reiche-Strasse« after ca. 150 meters

www.fep.fraunhofer.de

twitter.com/fraunhoferfep
facebook.com/fraunhoferfep
youtube.com/fraunhoferfep
linkedin.com/company/fraunhofer-fep
xing.com/companies/fraunhoferfep
instagram.com/fraunhoferfep

TÜVRheinland ZERTIFIZIERT
Management System
ISO 9001:2015
ISO 50001:2018
www.tuv.com
ID 9105050079

We focus on quality and the ISO 9001.