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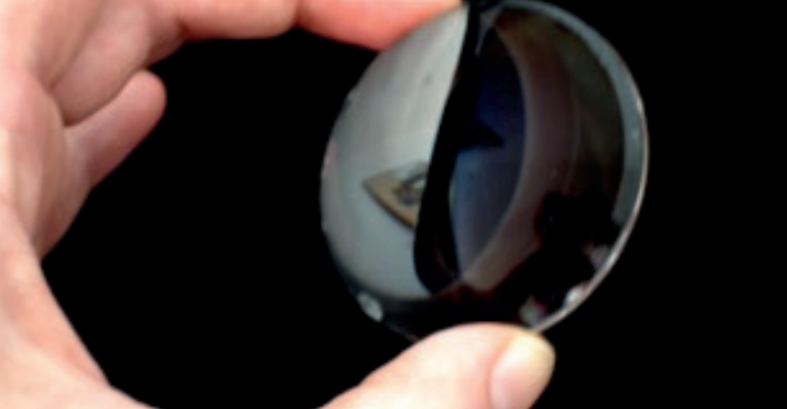
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 Hall 7.0, Booth B05

**DÜSSELDORF TRADE  
 FAIR CENTRE**





WE WILL BE PRESENTING MATERIALS, SURFACES,  
PROCESSES, TESTING, AND RECYCLING.



### About Fraunhofer

The Fraunhofer-Gesellschaft is a provider of research services: We work for clients in industry, commerce and public administration. Our business is built on innovation, and our objective is to transform scientific research into innovative products and applications. Today, the Fraunhofer-Gesellschaft employs a staff of around 22,000, operates 66 institutes and independent research units and manages a total budget of 1.9 billion euros.

Research is a crucial factor in business success, but it requires considerable investments. Every company has an interest in organizing its innovation activities as efficiently as possible. Engaged as partners for the duration of a specific project Fraunhofer-Institutes carry out requested work at professional standards and within a defined schedule.

We offer services on demand.

We develop, implement and optimize processes and products through to technical and commercial maturity.

We investigate your problem, work out possible solutions and develop a concept for implementation, exclusively for you.

### Materials

- fiber-reinforced composites
- wood polymer composites (WPC)
- carbon-based composites (UD-tapes, CFC)
- natural and bio-based synthetic polymers
- compounds, additives
- foams
- halogen-free flame retardants
- organic light emitting diodes (OLEDs)
- competency in cellulose and starch products
- melt-blown nonwovens
- cellulosic like fibers, films and nonwovens
- automotive parts
- packaging systems

### Surfaces

- functional coatings for polymers and polymer manufacturing
- functional films for food packaging and technical applications
- biological interactions with functional surfaces (antimicrobial, photo-catalytic)
- optical coatings on polymers
- functional nano coatings
- selective surface functions and coatings
- barrier and ultra barrier coatings
- corrosion protection coatings
- scratch-resistant coatings

- anti-reflection coatings
- elastic release film FlexPLAS for demoulding
- metallization of polymers
- anti-counterfeiting films
- anti-ice surfaces

### Processes

- micro-patterning processes for the production of flexible printed circuits (FPC)
- process optimization and development
- compounding and extrusion for films and profiles
- polymer synthesis on pilot scale
- flexible multifunctional polymerization
- micro technology and fluidic
- adhesion improvement for polymers
- thermoforming
- laser welding of polymers
- laser cutting, marking and surface structuring
- laser sealing
- granulate purification
- chemical functions for bioanalytical and electronic devices
- atmospheric and low pressure plasma treatment
- in-mold plasma coating
- (foam) injection molding

### Testing

- real-time image processing
- 100% quality control
- control of surface tension
- control of chemical composition
- control of biocompatibility
- mechanical characterization (stiffness, strength)
- testing in different media and at certain temperatures
- lifetime prediction
- biopolymer characterization
- morphological research
- derivation of structure-property relationships
- non-destructive testing (thermal imaging)
- detection of shrinkage with 3D-geometry measurement
- optical characterization (dispersion, haze,..)
- microbiological testing of surfaces
- estimation of bio-burden
- flexible scratch-resistant coatings
- thermal insulating coatings

### Recycling

- recycled new polymers from electronic and automotive waste
- new polymers from shredder residues, consumer or production wastes
- recycling of thermoplastic compounds
- analytics with respect to additives and contaminations
- recycled materials with properties of new materials
- applied for PO, PS, ABS, PET, PA etc.