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Advanced Processes for Functional Coatings at SVC

The Fraunhofer FEP speaks at the SVC TechCon on May 3–8th, 2014 in Chicago and provides insights into various research findings in the area of advanced processes for functional coatings.

The team of scientists from the Fraunhofer FEP presents vacuum processes for encapsulation, generation of optical coatings and treatment of flexible glass.

Dr. John Fahlteich, senior scientist from the department Flexible Products, will outline the requirements, technologies and perspectives for thin-film encapsulation of flexible electronics. During his talk he will highlight concepts for direct encapsulation as well as for roll-to-roll-manufacturing of barrier films and put up for discussion current challenges, latest trends and emerging encapsulation solutions. Moreover, John will also run a short course giving a comprehensive overview about the state-of-the-art in the field of transparent thin film permeation barriers.

Dr. Daniel Gloess, department leader Dynamic Coatings in the Precision Coatings Division, will focus on coatings for optical applications. In his first talk he will elaborate a reactive magnetron sputtering process for fabrication of dense, smooth and environmentally stable films for precision optics. In this process films of materials like SiO₂, Al₂O₃ or Nb₂O₅ are deposited with very little absorption and scattering losses. Due to the high deposition rate of the reactive magnetron sputtering process a high productivity can be achieved. Daniel will depict the machine design, technology, control possibilities as well as in-situ monitoring behind this process concluding his speech with examples of applications.

In his second talk, he will focus on the synthesis and deposition of nanoparticles by gas phase condensation. This process, combined with a PECVD, allows to generate nanocomposite films with plasmonic properties.

Dr. Christian May, head of Division Flexible Organic Electronics, will present the latest results regarding flexible OLED for lighting applications. He will speak about the roll-to-roll line concept for research and development of OLED lighting for automotive and other transport applications.

Finally, Dr. Manuela Junghaehnel, senior scientist from the Department of Flat Substrates, will speak about large area sputtering of dielectric and infrared blocking layer stacks on flexible glass. She will especially focus on critical parameters of thin-film

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sputtering deposition considering handling and performance of flexible glass in existing thin-film coating equipment at the Fraunhofer FEP.

The above-mentioned processes will be also demonstrated on a car exhibit at our booth #1334 where the team of experts expects you.

For detailed information about the presentations please consult our website:
www.fep.fraunhofer.de/en/svc-2014.html

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About Fraunhofer FEP

Fraunhofer FEP (www.fep.fraunhofer.de) is one of 67 institutes of the Fraunhofer-Gesellschaft, Europe's largest applied research organization. For more than 20 years we have been active in vacuum coating technology, electron beam surface modification processes, and electron beam source development. In these core areas we work on enhancing technologies, processes and key components. With our coatings we refine products in the area of electronics, sensor, optics, mechanical engineering, packaging, energy, environment, biomedical engineering, architecture, preservation and agriculture.



Automotive technologies by Fraunhofer FEP

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