

Optical Coatings

The Optical Coatings session serves as a focal point for global technical interchange in the field of optical interference coatings. Topics featured will include coating design, development of practical manufacturing techniques, characterization methods, and a wide range of applications.

Invited speakers are selected to survey advancements in the Optical Coatings community. We are very pleased to start the 2011 Optical Coatings session with an invited talk from **Professor Detlev Ristau from the University of Göttingen, Laserzentrum Hannover, Germany**, who will discuss optical coatings for high power lasers. There will be a special emphasis in the area of “Optical Coatings for Space Applications.” **Dr. Karen M. McNamara from NASA** will present an invited talk on contamination and degradation in performance of optics in the space environment.

As part of the Symposium on Manufacturing and Technology for Thin Film Photovoltaics, **Dr. Dean Levi from NREL**, an expert in characterization of photovoltaic systems, will present an overview of the photovoltaics industry. In addition, we wish to solicit papers, which focus on the thin film design and manufacture of the PV systems including PV efficiency and optimal optical performance.

As in previous years, the Optical Coatings sessions will cover all recent trends in the optical coatings community. To build a well-rounded Optical Coatings session, abstracts are solicited for the following areas:

- *Novel optical interference design software and design techniques*
- *Energetic processes (ion and plasma sources, densification and stress control)*
- *Multifunctional coatings, especially in the ophthalmic field (scratch resistance, wettability)*
- *Deposition, characterization, and applications of sculpted and textured films, including nano-dots/nano-particles/micro- and nano-structured growth*
- *New deposition processes for optical coatings; including HIPIMS, ALD, new IBS processes and combination processing tools (e.g. sputtering + evaporation)*
- *New low cost processes for optical coatings*
- *Application of real-time process monitoring and control toward optical coating processes*
- *Novel coating materials*
- *Coatings on polymers and special substrate materials*
- *Metrology of optical films (new instrumentation, in-line approaches and software developments to make characterization feasible)*
- *Optical film characterization for long-lifetimes and self-cleaning issues*
- *Applications in non-traditional wavelengths, from EUV to IR especially in the area of X-Ray wavelengths*
- *Complex 3-D optical devices*
- *Optical coatings for energy control and solar power*
- *Optical coatings for laser applications, including femto-second laser*
- *Optical coatings for display, aerospace and integrated photonic device applications*
- *Production issues common to the industry - including lessons learned or serendipitous discoveries that came from problems or disasters*

Optical Coating TAC Co-Chairs: Ulrike Schulz, Fraunhofer Institut für Angewandte Optik und Feinmechanik IOF, Germany (49/3641 807 344; ulrike.schulz@iof.fraunhofer.de); Bryant Hichwa, Sonoma State University (retired) (707/785-1922); bhichwa@earthlink.net); James N. Hilfiker, J.A. Woollam Co., Inc. (402/477-7501; jhifiker@jwoollam.com)