Optical Interference Coatings
Postdeadline Paper Abstracts

Tuesday, June 8, 2010

TuD • Deposition Control and Applications

Grand Ballroom Salon B&C
3:15 p.m.–4:35 p.m.
Robert Schaffer; Evaporated Coatings, Inc., USA, Presider
François R. Flory; Ecole Centrale Marseille, France, Presider

PDTuD10 • 4:20 p.m.
From Passive to Active: Future Optical Security Devices, ***Bill Baloukas****, Jean-Michel Lamarre, Ludvik Martinu; École Polytechnique de Montréal, Canada.* Nowadays, passive devices offer good but limited anti-counterfeiting protection. We demonstrate design and fabrication of new color shifting security devices based on implementing an active electrochromic material, thus offering new optical features and enhanced protection.

Wednesday, June 9, 2010

WD • Coating Stress

Grand Ballroom Salon B&C
3:05 p.m.–4:45 p.m.
Xinbin Cheng; Tongji Univ., China, Presider
Bob Hallock; Semrock/IDEX Corp., USA, Presider

PDWD13 • 4:25 p.m.
Omnidirectional Structural Color, ***Debasish Banerjee****, Minjuan Zhang; Toyota Res. Inst. of North America, USA.* Avoiding angular-shift of an interference-based structural color remains a challenge. The design-criteria for first-ever omnidirectional structural colors have been discussed by treating a quarter-wave stack of alternating dielectric material layers as a one-dimensional photonic crystal.

PDWD14 • 4:30 p.m.
Design and Fabrication of Multi-channel Si/SiO_2 Autocloned Photonic Crystal Edge Filters, ***Yasuo Ohtera****, Hirohito Yamada; Tohoku Univ., Japan.* Si/SiO_2 multilayers having zigzag layer interfaces are fabricated on a patterned substrate using Autocloning method. The multilayer was designed as multichannel edge filters. Shift of the cut-off wavelengths by 190nm in NIR was experimentally demonstrated.

PDWD15 • 4:35 p.m.
Ultra-precise Optical Components with Machinable Silicon Layer, *Mark Schürmann, Paul-Johannes Jobst,* ***Norbert Kaiser****, Andreas Kolbmüller, Sandra Müller, Andreas Gebhardt, Stefan Risse, Ramona Eberhardt; Fraunhofer IOF, Germany.* Several micron thick silicon films deposited by magnetron sputtering have a nearly amorphous structure. Optical elements coated with theses films can be machined, polished, and structured in order to achieve ultra-precise optical components.

PDWD16 • 4:40 p.m.
An Environmentally Stable Replacement for Silver, ***Rick K. Nubling****, W. Michael Robbins; Sonoma Photonics, Inc., USA.* To date, few remedies have been available to circumvent long-term degradation effects of silver-based coatings. We present the results of a highly-reflective, environmentally-stable, coating that could replace silver-based mirror coatings.

Thursday, June 10, 2010

ThE • Measurement III

Grand Ballroom Salon B&C
3:10 p.m.–4:10 p.m.
Angela Duparré; Fraunhofer Inst. Angewandte Optik und Feinmechanik, Germany, Presider
Noriaki Toyoda; Univ. of Hyogo, Japan, Presider

PDThE6 • 3:55 p.m.
Mixed-Flowing-Gas Testing of Gold Mirror Coatings, ***Chung-Tse Chu****, Christopher J. Panetta, Diana R. Alaan; The Aerospace Corp., USA.* Atmospheric corrosion of four different gold mirror coatings was investigated with a mixed-flowing-gas environment. We report correlation of changes in optical properties of mirror samples with the morphology of the corrosion features on mirror surface.