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Technologies and Materials XII***

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Introduction

The international conference on Window and Dome Technologies and Materials XII was held in Orlando, Florida on April 27 and 28 as part of the SPIE Defense, Security and Sensing Symposium. This was the twelfth conference in this series dating back to 1989. Topics addressed can be grouped into three categories, namely optical materials synthesis, finishing and characterization. While this taxonomy has remained a constant over the years, new topics of interest continue to emerge demonstrating once again that the enthusiasm for window and dome technologies remains unabated.

Large aperture, infrared windows was a theme this year, driven by reconnaissance and shipboard imaging applications and also by the requirements for transparent armor. Advancing the state of manufacturing technology associated with processing of associated large area ceramics was highlighted by the spinel scale up underway at ArmorLine Corporation. The treatment of window and dome surfaces with metallic and/or microstructural features to selectively control or enhance transmittance was also a theme. For example, microstructures have been realized in a number of infrared materials and in coatings on these materials resulting in broadband antireflection performance.

Finally, Dr. Dan Harris treated the audience to an engaging historical overview of *History of Magnetorheological Finishing*: one of a number of invited historical overviews that Dan has authored to date making these proceedings an invaluable resource.

I won't summarize the conference program here; the table of contents of these proceedings will serve that purpose. In the end, both conference program committee members (to whom I owe a debt of gratitude for their individual efforts) and attendees came away energized by what they had heard. I hope that this same enthusiasm is conveyed to the reader in these proceedings and that this conference will continue to serve as a unique forum for Window and Dome and Materials Technologies for the foreseeable future.

Randal W. Tustison

