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Nanotechnology for Standoff Detection and Counterterrorism

Operations II: Joint Session with Conference 8373

Michael K. Rafailov, The Reger Group (United States)

Thomas G. Thundat, University of Alberta (Canada)

Introduction

The thirteenth meeting of the Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE) Sensing conference was far from "unlucky". SPIE's decision to move the Defense Security + Sensing Symposium from Orlando to Baltimore was very good for this conference. The CBRNE Sensing conference had more submitted papers this year than any previous meeting. Likewise the quality of the papers remained quite high. All in all, I am quite pleased with the conference this year.

While the titles of the individual sessions this year appear similar to last year's meeting, the contributed papers reflect shifts in funded research over the past few years. The keynote address was given by Dr. Franca Jones from the Office of Science and Technology Policy (OSTP), Executive Office of the President, on Biosurveillance. While the first day of the conference focused on bio-detection, many of the papers highlighted recent policy and funding shifts away from developing stand-off biological detection using LIDAR to more disease monitoring and point-of-care diagnosis. Explosives detection remains a popular forum where groups across the inter-agency and academia are reporting on some exciting advances in point and stand-off detection of traditional and homemade (HME) explosives. The number of traditional chemical sensing papers was actually down this year, reflecting a downturn in defense funding in chemical warfare agent sensor development. The radiological and nuclear sensing session continues to grow in technical strength and attendee popularity. We also held a joint session with the Micro and Nanotechnology Sensors, Systems, and Applications IV conference on the development of nanosensors for counter-terrorism operations.

There continues to be interest in reliable methodologies and technologies for point- and stand-off detection of chemical, biological, radiological, special nuclear, and explosive (CBRNE) materials. This conference remains an important forum where diverse organizations and interests can share their labors to develop chemical and biological detection capabilities for the defense, medical, law enforcement, explosive ordinance disposal (EOD), environmental protection, industrial and critical infrastructure protection, and food processing communities.

As always, a tremendous 'thank you' to my program committee. I would not be able to organize and run this conference without their help.

Augustus Way Fountain III, Ph.D.

