

PROCEEDINGS OF SPIE

***Chemical, Biological,
Radiological, Nuclear, and
Explosives (CBRNE) Sensing XI***

**Augustus W. Fountain III
Patrick J. Gardner**
Editors

**6–8 April 2010
Orlando, Florida, United States**

Sponsored and Published by
SPIE

Volume 7665

Proceedings of SPIE, 0277-786X, v. 7665

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Author(s), "Title of Paper," in *Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE) Sensing XI*, edited by Augustus W. Fountain III, Patrick J. Gardner, Proceedings of SPIE Vol. 7665 (SPIE, Bellingham, WA, 2010) Article CID Number.

ISSN 0277-786X

ISBN 9780819481290

Published by

SPIE

P.O. Box 10, Bellingham, Washington 98227-0010 USA

Telephone +1 360 676 3290 (Pacific Time) • Fax +1 360 647 1445

SPIE.org

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Printed in the United States of America.

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Introduction

This year we held our eleventh annual conference for the Chemical, Biological, Radiological, Nuclear and Explosives (CBRNE) sensing at the SPIE Defense, Security and Sensing (DSS) Symposium in Orlando, Florida U.S.A. The conference continues to grow in strength, both in the number and quality of the technical presentations. The topics being presented at the conference are clearly showing the convergence of multiple CBRNE detection modalities for sensing threats to National Security.

Through the CBRNE Sensing Conference, we continue to see exciting and promising technologies for both point and standoff detection of CBRNE threats. The most exciting advances are in chemical imaging of threats on surfaces. Not only is it capable to identify the specific threat, but now you can correlate it spatially within an image scene. Standoff detection, while still a challenge, continues to show promise. There were several new presentations in multi-photon, laser plasma, non-linear spectroscopic and tunable Quantum Cascade Laser (QCL) approaches. We also saw continued growth in explosives sensing as well in detecting radiological and nuclear threats.

As always, the strength and importance of the SPIE DSS Symposium is that it provides an unprecedented international forum for authors from government, industry, and academia to gather and address a wide variety of sensing issues and technologies. The authors in these conference proceedings represent nearly an equal one-third partition among those groups and are leaders in each of their respective fields.

We want to take this time to particularly thank the members of the program committee for helping us plan, organize, and orchestrate this year's conference. They each work behind scenes all year long to make this conference not only possible, but truly a first rate affair. Whether they come from government laboratories, agencies, industry or academia they bring a tremendous amount of energy and professionalism to help run this conference and make it successful.

We hope that each of you will find value in the proceedings from this year's conference.

Augustus W. Fountain III
Patrick J. Gardner

