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Special issue on

Nanosensors for Defense & Security

For well over a decade now, nanoscale science and technology (Nano-S&T) related subjects have represented an exponentially growing portion of nearly all scientific and engineering disciplines. Indeed, the possibility of leveraging fundamental mechanisms at the nanoscale and molecular levels through a progressively increasing capability to understand, prescribe and control all the basic properties (structural, chemical, mechanical, electronic and photonic) of ultrasmall systems seems to offer fantastic and unlimited new possibilities for the future. This special issue will focus on research and development (R&D) from the areas of nanoscience, nanomaterials, nanofabrication and nanoengineering that are actively bridging the intellectual gap between nanoscale concept and practical nanoelectronic device/system for sensor applications. Collectively, these vast and multidisciplinary efforts are developing important technological roadmaps to futuristic sensors with new modalities, significantly enhanced effectiveness and integrated functionality (data processing, computation and communications) which when properly organized will have important relevance to defense and security applications – e.g., the sensing and monitoring of chemical, biological and radiological threats to the warfighters and private sectors. Therefore, this special issue on “Nanosensors for Defense & Security” will seek to organize the very best pioneering works from the spectrum of Nano-S&T activities around the world into a unique and invaluable technology roadmap that will be useful for identifying the most promising paths towards advancing defense and security sensor systems.

This special issue seeks contributions from around the world. Speakers from the annual IEEE SENSORS Conference and those from other specialty meetings such as the “Nanoelectronic Devices for Defense & Security Conference,” to be held in Crystal City, VA, June 18-22, 2007 (see www.nano-dds.com) are encouraged to submit their work. All papers will undergo the standard IEEE Sensors Journal peer review process. For manuscript preparation and submission, please follow the guidelines in the *Information for Authors* section at the IEEE Sensors Journal web page (<http://www.ieee.org/sensors/sj>). All manuscripts must be submitted on-line via the *IEEE Manuscript Central*TM process (<http://sensors-ieee.manuscriptcentral.com>). During this online submission process, twelve screens of information must be completed by the submitting author. Please indicate your “Manuscript Type” as “Special Issue on Nanosensors for Defense & Security” using the pull-down menu on Screen 1. Authors are encouraged to **suggest names of potential reviewers** for their manuscripts in the space provided for this purpose on Screen 7.

Deadlines:

- Manuscript Submission: August 1, 2007
- Notification of Acceptance: December 1, 2007
- Final Manuscript due: February 1, 2008
- Tentative publication date: July 2008

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