Front Matter: Volume 9555
### Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>v</td>
<td>Authors</td>
<td></td>
</tr>
<tr>
<td>vii</td>
<td>Conference Committee</td>
<td></td>
</tr>
<tr>
<td>ix</td>
<td>Nano-bio-optomechanics: nanoaperture tweezers probe single nanoparticles, proteins, and their interactions (Plenary Paper)</td>
<td>[9544-501]</td>
</tr>
</tbody>
</table>

#### UV DETECTORS AND FOCAL PLANE ARRAYS

- **9555 02** Solar-blind photodetectors and focal plane arrays based on AlGaN [9555-1]
- **9555 03** Superlattice infrared photodetector research at the Jet Propulsion Laboratory (Invited Paper) [9555-8]

#### AVALANCHE PHOTODIODES AND SINGLE-PHOTON DETECTORS

- **9555 0B** Ultraviolet avalanche photodiodes [9555-4]
- **9555 0C** Effect of temperature on superconducting nanowire single-photon detector noise [9555-14]

#### OPTICAL SENSORS AND IMAGERS FOR IR, AND THZ

- **9555 0E** Si based mid-infrared GeSn photo detectors and light emitters (Invited Paper) [9555-16]

#### MODELING AND SPECTROSCOPY OF NANOSTRUCTURED OPTICAL SENSORS

- **9555 0I** 3D numerical modeling for ultra-sensitive noninvasive size-dependent nanoparticle detection technique using subwavelength silicon microcavities [9555-20]

#### ADVANCED ROIC AND IMAGER CONCEPTS

- **9555 0L** Benefits of small pixel focal plane array technology (Invited Paper) [9555-23]
- **9555 0M** Design methodology: edgeless 3D ASICs with complex in-pixel processing for pixel detectors [9555-24]
- **9555 0N** Fusion: ultra-high-speed and IR image sensors (Invited Paper) [9555-25]
NOVEL CONCEPTS IN NANOENGINEERED SENSORS

9555 0Q  Dielectrophoresis based integration of nanostructures and their sensorial application [9555-28]

9555 0S  Localized surface plasmon fiber device coated with carbon nanotubes for the specific detection of CO2 [9555-30]

9555 0T  A novel sensing and tracing technology based on the hollow-core plastic optical fiber and cone-shape optical coupler [9555-31]

9555 0U  Growth of AlGaN on silicon substrates: a novel way to make back-illuminated ultraviolet photodetectors (Invited Paper) [9555-3]

APPLICATIONS II

9555 0Y  With electroluminescence microscopy towards more reliable AlGaN/GaN transistors (Invited Paper) [9555-35]

9555 10  Polarization-based optical fiber sensor of steel corrosion [9555-37]

POSTER SESSION

9555 17  Modeling and analysis of hybrid pixel detector deficiencies for scientific applications [9555-45]
Authors

Numbers in the index correspond to the last two digits of the six-digit citation identifier (CID) article numbering system used in Proceedings of SPIE. The first four digits reflect the volume number. Base 36 numbering is employed for the last two digits and indicates the order of articles within the volume. Numbers start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B...0Z, followed by 10-1Z, 20-2Z, etc.

Allsop, T., 0S
Altmann, Frank, 0Y
Ambacher, Oliver, 0Y
Anant, Vikas, 0C
Arif, R., 0S
Baumann, Martin, 0Y
Bahgat Shehata, A., 0C
Benkhelifa, Fouad, 0Y
Berg, Steffen, 0Q
Berggren, Karl K., 0C
Bronner, Wolfgang, 0Y
Brönstrup, Gerald, 0Q
Brückner, Peter, 0Y
Caulfield, John, 0L
Chen, Wei, 10
Culverhouse, P., 0S
Curzan, Jon, 0L
Dammann, Michael, 0Y
Dao, V. T. S., 0N
Deptuch, Grzegorz W., 0M, 17
Dionne, Jeffrey P., 0I
Du, Wei, 0E
Etoh, T. Goji, 0N
Fagerlind, Martin, 0Y
Fahim, Farah, 0M, 17
Fisher, A., 03
Fritzsche, Wolfgang, 0Q
Gao, Min, 10
George, Rashna, 0Y
Ghetmni, Seyed A., 0E
Gordon, Reuven, ix
Graff, Andreas, 0Y
Gunapala, S. D., 03
Guo, Donglai, 10
Hill, C. J., 03
Hoff, James R., 0M, 17
Höglund, L., 03
Hu, Wenbin, 10
Jahr, Norbert, 0Q
Kalli, K., 0S
Keo, S. A., 03
Khoshakhlagh, A., 03
Kimata, M., 0N
Konstanzer, Helmer, 0Y
Kundrát, V., 0S
Kuznetsova, Lyuba, 0I
Leiterer, Christian, 0Q
Lewis, Jay, 0L
Li, Baohua, 0E

Liu, Xiaolei, 0T
Liu, Deming, 0T
Liu, J. K., 03
Lorenzini, Martino, 0Y
Luong, E. M., 03
Margetis, Joe, 0E
Maroldt, Stephan, 0Y
McClintock, Ryan, 02, 0B, 0U
Mikulla, Michael, 0Y
Mohseni, Hooman, 0M, 17
Mosleh, Aboozar, 0E
Müller, Stefan, 0Y
Mumolo, J. M., 03
Najafi, F., 0C
Naseem, Hameed A., 0E
Neal, R., 0S
Nguyen, Quang A., 0N
Pham, Thach, 0E
Polyakov, Vladimir M., 0Y
Quay, Rüdiger, 0Y
Rafol, S. B., 03
Razeghi, Manijeh, 02, 0B, 0U
Roedle, Thomas, 0Y
Rohin, A., 0S
Ruggeri, A., 0C
Simon-Najasek, Michél, 0Y
Soibel, A., 03
Song, P., 0C
Soref, Richard A., 0E
Stellari, F., 0C
Sun, Greg, 0E
Sunter, K., 0C
Ting, D. Z., 03
Tolle, John, 0E
Tran, Huong, 0E
van der Wel, Paul J., 0Y
Wagner, Joachim, 0Y
Waltereit, Patrick, 0Y
Webb, D. J., 0S
Weger, Alan J., 0C
Wespel, Matthias, 0Y
Yu, Shui-Qing, 0E
Zhang, Lingyu, 0T
Zheng, Xing, 10
Zhou, Simin, 0T
Zhu, Cheng, 10
Conference Committee

Symposium Chairs

Satoshi Kawata, Osaka University (Japan)
Manijeh Razeghi, Northwestern University (United States)

Symposium Co-chairs

David L. Andrews, University of East Anglia (United Kingdom)
James G. Grote, Air Force Research Laboratory (United States)

Conference Chairs

Manijeh Razeghi, Northwestern University (United States)
Dorota S. Temple, RTI International (United States)

Conference Co-chair

Gail J. Brown, Air Force Research Laboratory (United States)

Conference Program Committee

Ravi Athale, Office of Naval Research (United States)
James W. Beletic, Teledyne Imaging Sensors (United States)
Arvind I. D’Souza, DRS Sensors & Targeting Systems, Inc. (United States)
Takeharu Goji Etoh, Ritsumeikan University (Japan)
Christoph H. Grein, University of Illinois at Chicago (United States)
Carl Jackson, SensL (Ireland)
Gerasimos Konstantatos, ICFO - Institut de Ciències Fotòniques (Spain)
Jay Lewis, Defense Advanced Research Projects Agency (United States)
Aizhen Li, Shanghai Institute of Microsystem and Information Technology (China)
Ryan McClintock, Northwestern University (United States)
Hooman Mohseni, Northwestern University (United States)
Philip Perconti, U.S. Army Research Laboratory (United States)
Usha Varshney, National Science Foundation (United States)
Yong-Hang Zhang, Arizona State University (United States)
Session Chairs

1 UV Detectors and Focal Plane Arrays
   Dorota S. Temple, RTI International (United States)
   Jay S. Lewis, Defense Advanced Research Projects Agency (United States)

2 IR Detectors and Focal Plane Arrays: Colloidal Quantum Dots and Superlattices
   Philip Perconti, U.S. Army Research Laboratory (United States)
   Gail J. Brown, Air Force Research Laboratory (United States)

3 Avalanche Photodiodes and Single-Photon Detectors
   Jay S. Lewis, Defense Advanced Research Projects Agency (United States)
   Martina Baeumler, Fraunhofer-Institut für Angewandte Festkörperphysik (Germany)

4 Optical Sensors and Imagers for IR, and THz
   James W. Beletic, Teledyne Imaging Sensors (United States)
   Richard D. Schaller, Argonne National Laboratory (United States)

5 Modeling and Spectroscopy of Nanostructured Optical Sensors
   Arvind I. D'Souza, DRS Sensors & Targeting Systems, Inc. (United States)
   Shuiqing Yu, University of Arkansas (United States)
   Ting Mei, Northwestern Polytechnical University (China)

6 Advanced ROIC and Imager Concepts
   Hooman Mohseni, Northwestern University (United States)
   Philippe Guyot-Sionnest, The University of Chicago (United States)
   Ting Mei, Northwestern Polytechnical University (China)

7 Novel Concepts in Nanoengineered Sensors
   Gail J. Brown, Air Force Research Laboratory (United States)
   Ryan McClintock, Northwestern University (United States)

8 Applications I
   Takeharu Goji Etoh, Ritsumeikan University (Japan)
   Martin U. Pralle, SiOnyx Inc. (United States)

9 Applications II
   Dorota S. Temple, RTI International (United States)
   Seth Bank, The University of Texas at Austin (United States)