Front Matter: Volume 10052
Optogenetics and Optical Manipulation

Samarendra K. Mohanty
Nitish V. Thakor
E. Duco Jansen
Editors

28–29 January 2017
San Francisco, California, United States

Sponsored and Published by
SPIE
# Contents

<table>
<thead>
<tr>
<th>v</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>vii</td>
<td>Conference Committee</td>
</tr>
</tbody>
</table>

## DETECTION I

10052 02  **Super-duper chemiluminescent proteins applicable to wide range of bioimaging (Keynote Paper)** [10052-1]

10052 04  **Using stereotactic brain atlases for small rodents and nonhuman primates for optrode array customization** [10052-3]

## DETECTION II

10052 07  **Micro-device combining electrophysiology and optical imaging for functional brain monitoring in freely moving animals** [10052-6]

## STIMULATION II

10052 0G  **3D Monte Carlo model with direct photon flux recording for optimal optogenetic light delivery** [10052-15]

## STIMULATION III

10052 0J  **Short infrared laser pulses block action potentials in neurons** [10052-17]

10052 0K  **Active implant for optoacoustic natural sound enhancement** [10052-18]

## APPLICATION

10052 0Q  **Multi-characteristic opsin enabled vision restoration** [10052-24]
Authors

Numbers in the index correspond to the last two digits of the seven-digit citation identifier (CID) article numbering system used in Proceedings of SPIE. The first five 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...0Z, followed by 10-1Z, 20-2Z, etc.

Beier, Hope T., 0J
Bhattacharya, Sulagna, 0Q
Blair, Steve, 04
Boutte, Ronald W., 04
Burch, T., 0K
Daly, A., 0K
Fretz, M., 0K
Gajjeraman, Sivakumar, 0Q
Garnham, C., 0K
Griffiths, Brandon, 04
Ibey, Bennett L., 0J
Jose James, R., 0K
Kim, Dongmok, 0G
Kral, A., 0K
Kwon, Hyuk-Sang, 0G
Lee, Jihoon, 0G
Li, Miao, 07
Mahapatra, Vasu, 0Q
Martens, Stacey L., 0J
Merlin, Sam, 04
Miao, Peng, 07
Milani, R., 0K
Mohanty, Samarendra, 0Q
Mohrdiek, S., 0K
Nagai, Takeharu, 02
Noell, W., 0K
Ortsiefer, M., 0K
Parry, Trent, 04
Pradhan, Sanjay, 0Q
Putkonen, M., 0K
Rettenmaier, A., 0K
Shah, D., 0K
Shin, Younghoon, 0G
Spinola Durante, G., 0K
Suzuki, Kazushi, 02
Thakor, Nitish V., 07
Tolstykh, Gleb P., 0J
Tripathy, Ashutosh, 0Q
Vinciguerra, V., 0K
Walsh, Alex J., 0J
Wang, Qihong, 07
Wright, Weldon, 0Q
Zhang, Lingke, 07
Conference Committee

Symposium Chairs

James G. Fujimoto, Massachusetts Institute of Technology (United States)
R. Rox Anderson, Wellman Center for Photomedicine, Massachusetts General Hospital (United States) and Harvard School of Medicine (United States)

Program Track Chairs:

Rafael Yuste, Columbia University (United States)
David Boas, Massachusetts General Hospital, Harvard Medical School (United States)

Conference Chairs

Samarendra K. Mohanty, Nanoscope Technologies, LLC (United States)
Nitish V. Thakor, Johns Hopkins University (United States) and National University of Singapore (Singapore)
E. Duco Jansen, Vanderbilt University (United States)

Conference Program Committee

Antoine Adamantidis, McGill University (Canada)
George J. Augustine, Duke-NUS Graduate Medical School (Singapore)
Klaus B. Gerwert, Ruhr-Universität Bochum (Germany)
Xue Han, Boston University (United States)
Elizabeth M. Hillman, Columbia University (United States)
Richard Kramer, University of California, Berkeley (United States)
Alfred L. Nuttall, Oregon Health & Science University (United States)
Anna W. Roe, Vanderbilt University (United States)
Ulrich T. Schwarz, Technische Universität Chemnitz (Germany)
Shy Shoham, Technion-Israel Institute of Technology (Israel)
John P. Welsh, University of Washington (United States)
Rafael Yuste, Columbia University (United States)

Session Chairs

1 Detection I
Samarendra K. Mohanty, Nanoscope Technologies, LLC (United States)
2 Detection II  
E. Duco Jansen, Vanderbilt University (United States)  

3 Stimulation I  
Nitish V. Thakor, Johns Hopkins University (United States) and National University of Singapore (Singapore)  

4 Stimulation II  
Shy Shoham, Technion-Israel Institute of Technology (Israel)  

5 Stimulation III  
Samarendra K. Mohanty, Nanoscope Technologies, LLC (United States)  

6 Stimulation IV  
Nitish V. Thakor, Johns Hopkins University (United States) and National University of Singapore (Singapore)  

7 Keynote  
Samarendra K. Mohanty, Nanoscope Technologies, LLC (United States)  
Nitish V. Thakor, Johns Hopkins University (United States) and National University of Singapore (Singapore)  

8 Application  
E. Duco Jansen, Vanderbilt University (United States)