PROCEEDINGS OF SPIE

Wide Bandgap Power and Energy Devices and Applications III

Mohammad Matin
Srabanti Chowdhury
Achyut K. Dutta
Editors

20–21 August 2018
San Diego, California, United States

Sponsored and Published by SPIE

Volume 10754

Proceedings of SPIE 0277-786X, V. 10754

Wide Bandgap Power and Energy Devices and Applications III, edited by Mohammad Matin, Srabanti Chowdhury, Achyut K. Dutta, Proc. of SPIE Vol. 10754, 1075401 · © 2018 SPIE · CCC code: 0277-786X/18/$18 · doi: 10.1117/12.2514605

The papers in this volume were part of the technical conference cited on the cover and title page. Papers were selected and subject to review by the editors and conference program committee. Some conference presentations may not be available for publication. Additional papers and presentation recordings may be available online in the SPIE Digital Library at SPIEDigitalLibrary.org.

The papers reflect the work and thoughts of the authors and are published herein as submitted. The publisher is not responsible for the validity of the information or for any outcomes resulting from reliance thereon.

Please use the following format to cite material from these proceedings:
Author(s), "Title of Paper," in *Wide Bandgap Power and Energy Devices and Applications III*, edited by Mohammad Matin, Srabanti Chowdhury, Achyut K. Dutta, Proceedings of SPIE Vol. 10754 (SPIE, Bellingham, WA, 2018) Seven-digit Article CID Number.

ISSN: 0277-786X
ISSN: 1996-756X (electronic)

ISBN: 9781510620797
ISBN: 9781510620803 (electronic)

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

Printed in the United States of America.

Publication of record for individual papers is online in the SPIE Digital Library.

SPIE. DIGITAL LIBRARY
SPIEDigitalLibrary.org

Paper Numbering: *Proceedings of SPIE* follow an e-First publication model. A unique citation identifier (CID) number is assigned to each article at the time of publication. Utilization of CIDs allows articles to be fully citable as soon as they are published online, and connects the same identifier to all online and print versions of the publication. SPIE uses a seven-digit CID article numbering system structured as follows:

- The first five digits correspond to the SPIE volume number.
- The last two digits indicate publication order within the volume using a Base 36 numbering system employing both numerals and letters. These two-number sets start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B … 0Z, followed by 10-1Z, 20-2Z, etc. The CID Number appears on each page of the manuscript.

Contents

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, 0B...0Z, followed by 10-1Z, 20-2Z, etc.

Conference Committee

Program Track Chair

Ruyan Guo, The University of Texas at San Antonio (United States)

Conference Chairs

Mohammad Matin, University of Denver (United States)
Srabanti Chowdhury, University of California, Davis (United States)
Achyut K. Dutta, Banpil Photonics, Inc. (United States)

Conference Program Committee

Mowafak M. Al-Jassim, National Renewable Energy Laboratory (United States)
Abdul A. S. Awwal, Lawrence Livermore National Laboratory (United States)
Daniel F. Feezell, The University of New Mexico (United States)
David Wenzhong Gao, University of Denver (United States)
M. Saif Islam, University of California, Davis (United States)
Andrew P. Lange, Lawrence Livermore National Laboratory (United States)
Hidenori Mimura, Shizuoka University (Japan)
Rebecca J. Nikolic, Lawrence Livermore National Laboratory (United States)
Madan Niraula, Nagoya Institute of Technology (Japan)
Nezih Pala, Florida International University (United States)
Xiaolong Qiang, Northeastern University (China)

Session Chairs

1 Advanced Wide Bandgap Materials Technologies
Andrew P. Lange, Lawrence Livermore National Laboratory (United States)
Achyut K. Dutta, Banpil Photonics, Inc. (United States)

2 Advanced Wide Bandgap Devices
Mohammad A. Matin, University of Denver (United States)
Andrew P. Lange, Lawrence Livermore National Laboratory (United States)

3 Advanced Devices and Applications I
Girija Gaur, Kramer Levin Naftalis & Frankel LLP (United States)
Amrita Sahu, Altria Group, Inc. (United States)