PROCEEDINGS OF SPIE

SPIDigitalLibrary.org/conference-proceedings-of-spie

Front Matter: Volume 11831

, "Front Matter: Volume 11831," Proc. SPIE 11831, Infrared Sensors, Devices, and Applications XI, 1183101 (17 August 2021); doi: 10.1117/12.2606383

Event: SPIE Optical Engineering + Applications, 2021, San Diego, California, United States

PROCEEDINGS OF SPIE

Infrared Sensors, Devices, and Applications XI

Ashok K. Sood
Priyalal Wijewarnasuriya
Arvind I. D'Souza
Editors

1–5 August 2021
San Diego, California, United States

Sponsored by and Published by
SPIE

Volume 11831

Proceedings of SPIE 0277-786X, V. 11831

SPIE is an international society advancing an interdisciplinary approach to the science and application of light.

Infrared Sensors, Devices, and Applications XI, edited by Ashok K. Sood, Priyalal Wijewarnasuriya,
Arvind I. D'Souza, Proc. of SPIE Vol. 11831, 1183101 · © 2021 SPIE
CCC code: 0277-786X/21/\$21 · doi: 10.1117/12.2606383

Proc. of SPIE Vol. 11831 1183101-1

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 SPIDigitalLibrary.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 *Infrared Sensors, Devices, and Applications XI*, edited by Ashok K. Sood, Priyalal Wijewarnasuriya, Arvind I. D'Souza, Proc. of SPIE 11831, Seven-digit Article CID Number (DD/MM/YYYY); (DOI URL).

ISSN: 0277-786X

ISSN: 1996-756X (electronic)

ISBN: 9781510645004

ISBN: 9781510645011 (electronic)

Published by

SPIE

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

Telephone +1 360 676 3290 (Pacific Time)

SPIE.org

Copyright © 2021 Society of Photo-Optical Instrumentation Engineers (SPIE).

Copying of material in this book for internal or personal use, or for the internal or personal use of specific clients, beyond the fair use provisions granted by the U.S. Copyright Law is authorized by SPIE subject to payment of fees. To obtain permission to use and share articles in this volume, visit Copyright Clearance Center at copyright.com. Other copying for republication, resale, advertising or promotion, or any form of systematic or multiple reproduction of any material in this book is prohibited except with permission in writing from the publisher.

Printed in the United States of America by Curran Associates, Inc., under license from SPIE.

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

SPIE. DIGITAL LIBRARY
SPIDigitalLibrary.org

Paper Numbering: A unique citation identifier (CID) number is assigned to each article in the Proceedings of SPIE 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

NOVEL DETECTORS

- 11831 03 **Development of high-performance graphene-HgCdTe detector technology for mid-wave infrared applications** [11831-6]
- 11831 04 **Hot carrier induced photothermal effect on metal-semiconductor Schottky junction** [11831-1]

DETECTOR APPLICATION & CHARACTERIZATION

- 11831 0A **Accurate evaluation of Cr/n-Si Schottky barrier height using thermionic emission theory and external resistors** [11831-7]
- 11831 0C **Visible and infrared broadband plasmonic absorber** [11831-10]

SPACE & AIRBORNE FPAS

- 11831 0G **Methane gas leak quantification employing infrared sensing at suspected leak sites** [11831-19]
- 11831 0H **Recent uncooled IR development based on state of the art digital ROIC** [11831-16]
- 11831 0I **Infrared phase imaging using complex scattering media** [11831-18]

BIO APPLICATIONS OF IR DETECTORS

- 11831 0L **Convolutional neural network model for Augmentation Index prediction based on photoplethysmography** [11831-21]
- 11831 0M **Age-related ocular surface modifications assessment combining thermal infrared and deep learning approach** [11831-22]
- 11831 0N **Pixel luminance artifact measurement, calibration, and correction for accurate thermographic body temperature determination** [11831-23]
- 11831 0O **Methods to evaluate sensitivity of biomedical thermographic systems for body temperature determination** [11831-24]
- 11831 0P **Driver drowsiness evaluation by means of thermal infrared imaging: preliminary results** [11831-25]

POSTER SESSION

- 11831 0Q **Research on coherent accumulation of multi-aperture receiver array based on FMCW coherent lidar [11831-11]**