PROCEEDINGS OF SPIE

SPIDigitalLibrary.org/conference-proceedings-of-spie

Front Matter: Volume 11688

, "Front Matter: Volume 11688," Proc. SPIE 11688, 2D Photonic Materials and Devices IV, 1168801 (20 April 2021); doi: 10.1117/12.2596757

SPIE.

Event: SPIE OPTO, 2021, Online Only

PROCEEDINGS OF SPIE

2D Photonic Materials and Devices IV

Arka Majumdar
Carlos M. Torres
Hui Deng
Editors

6–11 March 2021
Online Only, United States

Sponsored and Published by
SPIE

Volume 11688

Proceedings of SPIE 0277-786X, V. 11688

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

2D Photonic Materials and Devices IV, edited by Arka Majumdar, Carlos M. Torres
Hui Deng, Proc. of SPIE Vol. 11688, 1168801 · © 2021 SPIE
CCC code: 0277-786X/21/\$21 · doi: 10.1117/12.2596757

Proc. of SPIE Vol. 11688 1168801-1

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 *2D Photonic Materials and Devices IV*, edited by Arka Majumdar, Carlos M. Torres, Hui Deng, Proceedings of SPIE Vol. 11688 (SPIE, Bellingham, WA, 2021) Seven-digit Article CID Number.

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

ISBN: 9781510642119
ISBN: 9781510642126 (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
Copyright © 2021, Society of Photo-Optical Instrumentation Engineers.

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 copying fees. The Transactional Reporting Service base fee for this volume is \$21.00 per article (or portion thereof), which should be paid directly to the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, MA 01923. Payment may also be made electronically through CCC Online 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. The CCC fee code is 0277-786X/21/\$21.00.

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: *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

2D MATERIAL OPTOELECTRONICS AND INTEGRATED NANOPHOTONICS

- 11688 03 **Black phosphorus optoelectronics for mid-infrared silicon photonics (Invited Paper)** [11688-1]
- 11688 07 **Modulating the electronic transport properties of single-layer WSe₂ using zero-dimensional defect engineering** [11688-5]

2D MATERIAL EXCITON-POLARITON

- 11688 0K **Harmonic generation from 2D materials coupled to resonant metasurfaces (Invited Paper)** [11688-18]

GRAPHENE OPTOELECTRONICS

- 11688 0S **Photonic mixer device (PMD) based on graphene for high-resolution 3D sensors** [11688-26]
- 11688 0T **Activating graphene's optoelectronic response through interactions with fullerene and metallofullerene clusters** [11688-27]
- 11688 0W **Graphene oxide for enhanced optical nonlinear performance in CMOS compatible integrated devices** [11688-30]
- 11688 0X **Demonstration of ultra-small MIR acoustic-graphene-plasmon cavities based on magnetic resonators** [11688-31]