

PROCEEDINGS OF SPIE

International Symposium on Silicon-based Optoelectronics (ISSBO 2024)

Junbo Feng
Editor

31 July – 2 August 2024
Chongqing, China

Organized by
CUMEC (China)
Chongqing University (China)
Chongqing University of Posts and Telecommunications (China)
Southwest University (China)
Xiyong Micro-electronics Industry Park (China)
A. J. Optoelectronic (China)

Sponsored by
Luceda Photonics (China)

Published by
SPIE

Volume 13485

Proceedings of SPIE 0277-786X, V. 13485

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

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 *International Symposium on Silicon-based Optoelectronics (ISSBO 2024)*, edited by Junbo Feng, Proc. of SPIE 13485, Seven-digit Article CID Number (DD/MM/YYYY); (DOI URL).

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

ISBN: 9781510687592
ISBN: 9781510687608 (electronic)

Published by
SPIE
P.O. Box 10, Bellingham, Washington 98227-0010 USA
Telephone +1 360 676 3290 (Pacific Time)
SPIE.org
Copyright © 2025 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

v *Conference Committee*

INTERNATIONAL SYMPOSIUM ON SILICON-BASED OPTOELECTRONICS

- 13485 02 **High reflection tolerance quantum dots LC-DFB laser for hybrid-silicon photonic integrated circuit** [13485-1]
- 13485 03 **Enhancement of bandwidth-efficiency capability in apodized grating couplers by improving mode matching at multiwavelengths** [13485-3]
- 13485 04 **Simulation and experiment study of carbon dioxide snow cleaning in silicon material** [13485-2]