PROCEEDINGS OF SPIE

Advanced Fabrication Technologies for Micro/Nano Optics and Photonics XVII

Georg von Freymann
Eva Blasco
Debashis Chanda
Editors

28–31 January 2024
San Francisco, California, United States

Sponsored by
SPIE

Cosponsored by
Opti-Cal GmbH (Germany)

Published by
SPIE

Volume 12898

Proceedings of SPIE 0277-786X, V. 12898

Advanced Fabrication Technologies for Micro/Nano Optics and Photonics XVII, edited by
Georg von Freymann, Eva Blasco, Debashis Chanda, Proc. of SPIE Vol. 12898,
1289801 · © 2024 SPIE · 0277-786X · doi: 10.1117/12.3030034

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 *Advanced Fabrication Technologies for Micro/Nano Optics and Photonics XVII*, edited by Georg von Freymann, Eva Blasco, Debashis Chanda, Proc. of SPIE 12898, Seven-digit Article CID Number (DD/MM/YYYY); (DOI URL).

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

ISBN: 9781510670563
ISBN: 9781510670570 (electronic)

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

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
SPIEDigitalLibrary.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

Conference Committee

Symposium Chairs

Ulrich T. Schwarz, Technische Universität Chemnitz (Germany)
Karin Hinzer, University of Ottawa (Canada)

Symposium Co-chairs

Sonia M. García-Blanco, Universiteit Twente (Netherlands)
Bernd Witzigmann, Friedrich-Alexander-Universität Erlangen-Nürnberg (Germany)

Program Track Chairs

Georg von Freymann, Rheinland-Pfälzische Technische Universität Kaiserslautern-Landau (Germany)

Conference Chairs

Georg von Freymann, Rheinland-Pfälzische Technische Universität Kaiserslautern-Landau (Germany)
Eva Blasco, Ruprecht-Karls- Universität Heidelberg (Germany)
Debashis Chanda, University of Central Florida (United States)

Conference Co-chair

Christophe Moser, Ecole Polytechnique Fédérale de Lausanne (Switzerland)

Conference Program Committee

Andrea Alù, The City University of New York Advanced Science Research Center (United States)
Ruth Houbertz, ThinkMade Engineering & Consulting (Germany)
Saulius Juodkazis, Swinburne University of Technology (Australia)
Stephen M. Kuebler, University of Central Florida (United States)
Mangirdas Malinauskas, Vilnius University (Lithuania)
Virgilio Mattoli, Istituto Italiano di Tecnologia (Italy)
Robert R. McLeod, University of Colorado Boulder (United States)
Hernán R. Míguez García, Instituto de Ciencia de Materiales de Sevilla (Spain)

Aaron J. Pung, Sandia National Labs. (United States)
Junsuk Rho, Pohang University of Science and Technology (Korea, Republic of)
Winston V. Schoenfeld, CREOL, The College of Optics and Photonics, University of Central Florida (United States)
Michael Thiel, Nanoscribe GmbH & Company KG (Germany)
Augustine M. Urbas, Air Force Research Laboratory (United States)