

PROCEEDINGS OF SPIE

Liquid Crystals XXIV

Iam Choon Khoo

Editor

24 August – 4 September 2020

Online Only, United States

Sponsored and Published by
SPIE

Volume 11472

Proceedings of SPIE 0277-786X, V. 11472

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

Liquid Crystals XXIV, edited by Iam Choon Khoo, Proceedings of SPIE
Vol. 11472, 1147201 · © 2020 SPIE · CCC code: 0277-786X/20/\$21
doi: 10.1117/12.2581637

Proc. of SPIE Vol. 11472 1147201-1

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 *Liquid Crystals XXIV*, edited by lam Choon Khoo, Proceedings of SPIE Vol. 11472 (SPIE, Bellingham, WA, 2020) Seven-digit Article CID Number.

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

ISBN: 9781510637504
ISBN: 9781510637511 (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 © 2020, 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/20/\$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

PHASE TRANSITION VORTICES AND PHOTOVOLTAIC

11472 0D **Vortex triplet in a nematic liquid crystal layer (Invited Paper)** [11472-12]

NOVEL OPTICAL PHENOMENA AND DEVICES

11472 0J **Preparing templated optics using cellulose nanocrystal LC (Invited Paper)** [11472-17]

NOVEL OPTICAL PROCESSES

11472 0O **Optical properties of nematic microlenses doped with chiral nanoparticles (Invited Paper)**
[11472-22]

11472 0P **A liquid crystal alignment layer that can be applied to preformed cavities (Invited Paper)**
[11472-23]

11472 0Q **Vector beam demultiplexing via a crossed-fork shaped polarization grating fabricated by using photocrosslinkable liquid crystal polymer film (Invited Paper)** [11472-24]

PHOTOALIGNMENT, THZ OPTICS, AND LASER ACTION

11472 0U **Numerical modeling of optical modes in nematic droplets (Invited Paper)** [11472-28]

POSTER SESSION

11472 19 **Color-selective geometric phase lens for apochromatic lens system** [11472-43]

