PROGRESS IN BIOMEDICAL OPTICS AND IMAGING Vol. 22 No. 32

Optical Interactions with Tissue and Cells XXXII

Bennett L. Ibey Norbert Linz Editors

6–11 March 2021 Online Only, United States

Sponsored and Published by SPIE

Volume 11640

Proceedings of SPIE, 1605-7422, V. 11640

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 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 *Optical Interactions with Tissue and Cells XXXII*, edited by Bennett L. Ibey, Norbert Linz, Proceedings of SPIE Vol. 11640 (SPIE, Bellingham, WA, 2021) Seven-digit Article CID Number.

ISSN: 1605-7422 ISSN: 2410-9045 (electronic)

ISBN: 9781510641150 ISBN: 9781510641167 (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 1605-7422/21/\$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.



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

ULTRAFAST LASER PHENOMENA IN CELLS AND TISSUE

11640 04 Evaluating the potential eye hazard at visible wavelengths of the supercontinuum generated by a NIR femtosecond laser in water [11640-23] 11640 05 Experimental analysis of morphological change in melanin for multiscale modeling of picosecond laser skin treatment [11640-24] PHOTOTHERMAL, PHOTOCHEMICAL, PHOTO-OXIDATIVE, AND PHOTOMECHANICAL INTERACTIONS 11640 0D **3D** optimal light distribution in brain tumors for photodynamic therapy [11640-19] 11640 OF Application of Raman fiber lasers in a wavelength-dependent cell-viability study for cancerous and healthy cells [11640-21] **OPTICAL PROPERTIES OF TISSUES AND CELLS** 11640 OH Influence of human epidermal thickness on penetration depth of detected photons in spatiallyresolved diffuse reflectance spectroscopy: a numerical study [11640-10] 11640 OI Optical propagation of partially coherent light through anisotropic biological tissues by Green's functions [11640-11] NOVEL APPLICATIONS OF LASERS AND LIGHT 11640 ON In-vitro investigations on the hard tissue ablation quality and efficiency of the diode pumped Er:YAG laser with a new temporal pulse regime [11640-5] 11640 OQ Laser-induced hypotensive effect in treatment of the resistant open-angle glaucoma [11640-8] POSTER SESSION 11640 OU Computation of specific absorption rate for four-layered human head model exposed to HF electromagnetic waves [11640-28]

11640 0V **Prospective respiration-gated optical-resolution photoacoustic microscopy to eliminate motion artifacts caused by respiratory of mouse** [11640-29]