Photonics in Dermatology and Plastic Surgery 2021

Bernard Choi Haishan Zeng Editors

6–11 March 2021 Online Only, United States

Sponsored and Published by SPIE

Volume 11618

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 *Photonics in Dermatology and Plastic Surgery* 2021, edited by Bernard Choi, Haishan Zeng, Proc. of SPIE 11618, Seven-digit Article CID Number (DD/MM/YYYY); (DOI URL).

ISSN: 1605-7422

ISSN: 2410-9045 (electronic)

ISBN: 9781510640719

ISBN: 9781510640726 (electronic)

Published by

SPIE

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

SPIE.org

Copyright © 2021 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.



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

	PHOTOTHERAPEUTICS
11618 06	HSP47 expression in fibroblasts by NIR laser irradiation in vitro [11618-2]
	ост
11618 0C	In vivo dual-mode full-field optical coherence tomography for differentiation of different types of melanocytic nevus [11618-8]
11618 0D	Optical coherence tomography monitoring of vulvar lichen sclerosus therapy [11618-9]
	BURNS/WOUND HEALING
11618 OH	A compact spatial frequency domain burn imager employing a compound—eye camera [11618-13]
11618 OI	Effects of timolol in skin tissue repair: a longitudinal and multimodal in vivo imaging study with two-photon excitation fluorescence and second harmonic generation microscopy [11618-14]
	THERAPY MONITORING
11618 OK	Effectiveness of scalpel debridement in diabetics using near infrared imaging technology for ulcer prevention [11618-16]
11618 OM	Correlation of tissue oxygenation and skin toxicity to determine the effectiveness of photon vs proton therapy in breast cancer subjects [11618-18]
11618 ON	Asymmetry in oxygenation flow patterns between irradiated and contralateral breast tissues in relation to radiation dermatitis [11618-19]
	SKIN CANCER
11618 OW	Quantitative collagen analysis for the detection of basal cell carcinoma with ex vivo multiphoton microscopy [11618-28]
11618 0Y	Identification of cancerous lesions from healthy skin using an infrared, optical filter based approach [11618-30]

An iterative method to quantify epidermal melanin concentration using spatial frequency domain Imaging and a layered Monte Carlo model [11618-33] POSTER SESSION

Monitoring superficial water content for systemic burn resuscitation with spatial frequency domain imaging [11618-42]

11618 11