PROCEEDINGS OF SPIE

Technologies for Optical Countermeasures XVII; and High-Power Lasers: Technology and Systems, Platforms, Effects IV

David H. Titterton Robert J. Grasso Mark A. Richardson Willy L. Bohn Harro Ackermann Editors

21 – 25 September 2020 Online Only, United Kingdom

Sponsored by SPIE

Cooperating Organisations
European Optical Society
Cranfield University (United Kingdom)
Technology Scotland (United Kingdom)
Visit Scotland (United Kingdom)
CENSIS (United Kingdom)

Published by SPIE

Volume 11539

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 Technologies for Optical Countermeasures XVII; and High-Power Lasers: Technology and Systems, Platforms, Effects IV, edited by David H. Titterton, Robert J. Grasso, Mark A. Richardson, Willy L. Bohn, Harro Ackermann, Proceedings of SPIE Vol. 11539 (SPIE, Bellingham, WA, 2020) Seven-digit Article CID Number.

ISSN: 0277-786X

ISSN: 1996-756X (electronic)

ISBN: 9781510638914

ISBN: 9781510638921 (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.



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

	LASER EFFECTS
11539 07	Out-of-band laser damage to an anti-reflection coated germanium window [11539-4]
11539 08	Shift-free fixed-line laser protection filter technology [11539-5]
11539 09	Countermeasure Leveraging Optical Attractor Kits (CLOAK): interpretational disruption of a visual-based workflow [11539-6]
	LASER ARCHITECTURES FOR POWER SCALING AND PLATFORMS
11539 0A	30kW laser experiments against drones (Invited Paper) [11539-7]
11539 OC	Investigations of transient thermal optics effects in 10-kW fiber laser effector [11539-9]
11539 0D	Numerical simulation of terahertz radiation by laser-driven plasma dipole oscillation [11539-10]
	FIBER LASERS, BEAM COMBINING AND INTERACTION
11539 OH	FIBER LASERS, BEAM COMBINING AND INTERACTION Filaments and post-filaments formation during high-power Ti:sapphire laser pulses propagation in air and optical glasses [11539-13]
11539 OH 11539 OI	Filaments and post-filaments formation during high-power Ti:sapphire laser pulses propagation
	Filaments and post-filaments formation during high-power Ti:sapphire laser pulses propagation in air and optical glasses [11539-13]
	Filaments and post-filaments formation during high-power Ti:sapphire laser pulses propagation in air and optical glasses [11539-13]
	Filaments and post-filaments formation during high-power Ti:sapphire laser pulses propagation in air and optical glasses [11539-13] The effects of M² factor on steel materials [11539-14]
11539 01	Filaments and post-filaments formation during high-power Ti:sapphire laser pulses propagation in air and optical glasses [11539-13] The effects of M² factor on steel materials [11539-14] POSTER SESSION