

2016 IEEE 13th International Conference on Laser and Fiber-Optical Networks Modeling (LFNM 2016)

**Odessa, Ukraine
13-15 September 2016**



**IEEE Catalog Number: CFP16502-POD
ISBN: 978-1-5090-1010-3**

**Copyright © 2016 by the Institute of Electrical and Electronics Engineers, Inc
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP16502-POD
ISBN (Print-On-Demand):	978-1-5090-1010-3
ISBN (Online):	978-1-5090-1009-7
ISSN:	2473-8557

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

RETROREFLECTIVE LASER DETECTOR OF ACOUSTIC OSCILLATIONS.....	4
<i>G. N. Dolya , E. S. Litvinova</i>	
INFLUENCE OF STRONG PULSED LASER FIELDS AT RESONANT AND COHERENT QUANTUM ELECTRODYNAMICS PROCESSES	7
<i>Sergei P. Roshchupkin</i>	
NONRESONANT ELECTRON-NUCLEUS SPONTANEOUS BREMSSTRAHLUNG IN THE FIELD OF TWO PULSED LASER WAVES	18
<i>Elena Padusenko , Alexandr Lebed , Sergei Roshchupkin , Viktor Dubov</i>	
RESONANT LASER-MODIFIED ELECTRON-ELECTRON SCATTERING BY A STRONG BICHROMATIC PULSED FIELD.....	21
<i>Alexandr Lebed , Elena Padusenko , Sergei Roshchupkin , Viktor Dubov</i>	
ANALYSIS OF INTENSITY MODULATION RESPONSE OF ANALOG FIBER-OPTIC LINKS	24
<i>V. V. Shcherbakov , A. F. Solodkov , A. A. Zadernovsky</i>	
OPTIMIZATION METAL-COATED GRATINGS FOR SENSORS APPLICATIONS.....	30
<i>H. A. Petrovska , I. Ya. Yaremchuk , V. M. Fitio , O. D. Suriadova , Ya. V. Bobitski</i>	
MODELING ABSORPTION AND SCATTERING CROSS SECTIONS OF THE MULTILAYER NANOSHELLS IN THE NEAR INFRARED SPECTRUM REGION	35
<i>T. O. Bulavinets , I. Ya. Yaremchuk , A. Y. Kotsko , Ya. V. Bobitski</i>	
RESEARCH OF OUTPUT SIGNAL SPECTRUM OF ACTIVE RUNNING-WAVE INTERFEROMETER.....	45
<i>A. G. Lazarenko , A. N. Andreev , O. N. Andreeva , A. V. Kanaev</i>	
UMOV-POYNTING VECTOR IN VISUALIZATION OF PLASMONS	48
<i>E. A. Velichko , A. P. Nickolaenko</i>	
LASER RESONATOR WITH INFINITELY ADJUSTABLE OF LIGHT OUTPUT	51
<i>M. I. Dzyubenko , V. A. Maslov , V. P. Radionov</i>	
PHOTONIC CRYSTAL AND BRAGG WAVEGUIDES FOR THZ ELECTRON DEVICES.....	53
<i>Eugene N. Odarenko , Alexander A. Shmat'Ko</i>	
SOFT- AND HARD-PHOTON EMISSION FROM PAIR ANNIHILATION IN LASER FIELD	56
<i>O. I. Denisenko</i>	
MONTE CARLO WAVE FUNCTION METHOD IN THE PROBLEMS OF ATOMIC MOTION IN THE FIELD OF LASER RADIATION.....	59
<i>Victor Romanenko , Olena Udovitska , Leonid Yatsenko</i>	
A STUDY OF STRESS EFFECTS ON SOLIDIFICATION MICROSTRUCTURES AT LASER SINTERING OF POWDERS USING A PHASE FIELD APPROACH	62
<i>F. Kh. Mirzade</i>	
THE ACOUSTO-OPTIC EFFECT MAXIMA IN SRB_4O_7 CRYSTALS	65
<i>Buryy Oleh , Andruschchak Nazariy , Demyanyshyn Natalia , Andruschchak Anatoliy , Mytsyk Bohdan</i>	
MODELING OF DEGRADATION PROCESS IN NANOSTRUCTURED $\text{Cu}_{0.1}\text{Ni}_{0.8}\text{Co}_{0.2}\text{Mn}_{1.9}\text{O}_4$ CERAMICS	67
<i>H. Klym , R. Dunets , I. Vasylychshyn , I. Karbovnyk</i>	
TO THE PROBLEM OF FIELD MACROSTATE DESCRIPTION AND INVESTIGATION	74
<i>Sergiy F. Lyagushyn , Alexander I. Sokolovsky</i>	
ESSENTIALS AND MERITS OF THE METHOD OF ANALYTICAL REGULARIZATION IN COMPUTATIONAL OPTICS AND PHOTONICS	77
<i>Alexander I. Nosich , Mykhaylo V. Balaban , Volodymyr O. Byelobrov , Denys M. Natarov , Olga V. Shapoval</i>	
ULTRABROADBAND CHIRPED MIRROR DESIGN BASED ON FDTD METHOD	86
<i>Erick R. Baca-Montero</i>	
Author Index	