XX International Youth Scientific School on Coherent Optics and Optical Spectroscopy (COOS 2016)

Journal of Physics: Conference Series Volume 859

Kazan, Russia 18 – 20 October 2016

ISBN: 978-1-5108-4194-9

ISSN: 1742-6588

Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2016) by the Institute of Physics All rights reserved. The material featured in this book is subject to IOP copyright protection, unless otherwise indicated.

Printed by Curran Associates, Inc. (2017)

For permission requests, please contact the Institute of Physics at the address below.

Institute of Physics Dirac House, Temple Back Bristol BS1 6BE UK

Phone: 44 1 17 929 7481 Fax: 44 1 17 920 0979

techtracking@iop.org

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

Email: curran@proceedings.com Web: www.proceedings.com

Table of contents

Volume 859

XX International Youth Scientific School "Coherent Optics and Optical Spectroscopy"

18-20 October 2016, Kazan, Russian Federation

Accepted papers received: 26 May 2017

Published online: 2 June 2017

Preface

011001 OPEN ACCESS

XX International Youth Scientific School "Coherent Optics and Optical Spectroscopy"

011002 OPEN ACCESS Peer review statement

Papers

012001

OPEN ACCESS

Transmission and reflection of self-assembled hybrid plasmonic-photonic crystals

A A Akhmadeev, A V Koryukin, A F Valitova and M Kh Salakhov.....1

012002

OPEN ACCESS

The influence of collisions on the temporary shape of stimulated echo hologram in gas

E N Akhmedshina, L A Nefediev, G I Garnaeva and E D Shigapova.....5

012003 OPEN ACCESS

Evolution of a two-level quantum particle in the noise classical e.-m. field within and beyond the resonant approximation

A M Basharov....10

012004 OPEN ACCESS

Low-frequency emission in resonant processes

A M Basharov.....16

012005

OPEN ACCESS

<u>Investigation of the domain structure transformation under mechanical deformations in permalloy microparticles</u>

D A Bizyaev, A A Bukharaev, N I Nurgazizov and T F Khanipov.....23

012006

OPEN ACCESS

Probing optical near-fields with photoreactive azo-polymers

M D Dmitrieva, A R Asadullina and M Kh Salakhov.....27

012007

OPEN ACCESS

Suppression of transition dipole moments in radioactive atoms

R Kh Gainutdinov, A S Petrova and A A Mutygullina....31

012008

OPEN ACCESS

Particle swarm optimization of broadband field enhancement with a grating-assisted plasmonic taper nanoantenna

A R Gazizov, M Zohrabi and M Kh Salakhov.....37

012009

OPEN ACCESS

FTIR spectroscopy of conformational probes introduced into binary blends of polymers

D I Kamalova, L R Abdrazakova and S N Naumova....41

012010

OPEN ACCESS

Photon echo in the ensemble of semiconductor quantum dots spread on a glass substrate

K R Karimullin, M V Knyazev, A I Arzhanov, L A Nurtdinova and A V Naumov.....46

012011

OPEN ACCESS

PPLN-based photon-pair source compatible with solid state quantum memories and telecom optical fibers

I Z Latypov, A V Shkalikov, D O Akat'ev and A. A. Kalachev.....50

012012

OPEN ACCESS

A polyphase sequences with low autocorrelations

A N Leukhin....54

012013

OPEN ACCESS

Quantum fluctuations in semiconductor quantum dots and their contributions to the selfenergy functions of exciton states

A A Mutygullina, M A Khamadeev, D O Blum and A H Shirdelhavar.....60

012014

OPEN ACCESS

Correlated signals of the accumulated photon echo on CdSe – CdS quantum dots

V V Samartsev and T G Mitrofanova.....67

012015 OPEN ACCESS

On the approximations of slowly varying envelope and slowly varying profile in nonlinear optics

S V Sazonov.....72