ISSN 1560-8034 ISSN 1605-6582 (On-line) ISSN 1606-1365 (CD-ROM)

National Academy of Sciences of Ukraine

V. Lashkaryov Institute of Semiconductor Physics

Technology Park "Semiconductor Technologies and Materials, Optoelectronics and Sensor Technique"

Ukrainian Society for Optical Engineering

## SEMICONDUCTOR PHYSICS QUANTUM ELECTRONICS & OPTOELECTRONICS

Volume 17, N 4

2014

Subscription index 10004

Registered by The State Committee for Informational Policy and Broadcasting of Ukraine. Certificate № 4350

Published since 1998

© V. Lashkaryov Institute of Semiconductor Physics, National Academy of Sciences of Ukraine

Department of optic and optoelectronic registering media, V. Lashkaryov Institute of Semiconductor Physics National Academy of Sciences of Ukraine Web: www.journal-spqeo.org.ua



Editorial Board Address: 41, prospect Nauky, 03028 Kyiv, Ukraine Phone: +380 (44) 525 6205, Fax: +380 (44) 525 5430 E-mail: journal@journal-spqeo.org.ua E-mail: journal@isp.kiev.ua