

Contents

Vol. 54, No. 6, 2018

A simultaneous English language translation of this journal is available from Allerton Press, Inc.,

Distributed worldwide by Springer. *Optoelectronics, Instrumentation and Data Processing* ISSN 8756-6990.

Optical Information Technologies

Multichannel Confocal Microscope Based on a Diffraction Focusing Multiplier
with Automatic Synchronization of Scanning

*V. P. Bessmeltsev, M. V. Maksimov, V. V. Vileiko, N. V. Goloshevskii,
and V. S. Terent'ev* 531

Stretch Vibrations of CH₂ as a Measure of Conformational and Lateral Orders
in Fatty Acid and Phospholipid Layers

*S. V. Adishchev, T. A. Duda, Yu. V. Zaitseva, V. A. Zykova, A. G. Milekhin,
K. A. Okotrub, and N. V. Survtsev* 538

Analysis and Imaging of Internal Inhomogeneities in Transparent Optical Materials
by Three-Dimensional Laser Heterodyne Microprobing

I. Sh. Steinberg, P. E. Tverdokhlebov, and A. Yu. Belikov 546

Calculation and Analysis of the Pulse Response of Spatially Non-Invariant
Projection Systems

Yu. V. Chugui 557

Advanced Design of Scanning Infrared Focal Plane Arrays

*S. A. Dvoretzskii, A. P. Kovchavtsev, I. I. Lee, V. G. Polovinkin, G. Yu. Sidorov,
and M. V. Yakushev* 569

Analysis of the Photonic Crystal Power Splitter Based on the Junction Defect Radius
for Optimum Resonance

P. Jindal and H. J. Kaur 576

Analysis and Synthesis of Signals and Images

Spectral-Spatial Methods for Hyperspectral Image Classification. Review

S. M. Borzov and O. I. Potaturkin 582

Measuring the Quantitative Characteristics of Local Vortices on a Plane of
a Deformed Material

V. V. Kibitkin, A. I. Solodushkin, and V. S. Pleshanov 600

Quantization Noise of Multilevel Discrete Wavelet Transform Filters in Image Processing

N. I. Chervyakov, P. A. Lyakhov, and N. N. Nagornov 608

Modeling in Physical and Technical Research

Identification of the Dynamics of a Moving Object with the Use of Neural Networks

*Yu. N. Zolotukhin, K. Yu. Kotov, A. M. Svitova, E. D. Semenyuk,
and M. A. Sobolev* 617

Simulation of the Spatial Distribution of the Local Quantum Efficiency and Photoelectric
Characteristics of Photodiode-Based Infrared Focal Plane Arrays

V. G. Polovinkin, V. A. Stuchinsky, A. V. Vishnyakov, and I. I. Lee 623
