

Contents

Vol. 27, No. 3, 2019

Laser Spectroscopy

- Investigation of the Interaction of Water Molecules with the Surface of a Quartz Tube Using Diode Laser Spectroscopy
A. V. Bernatskiy, V. V. Lagunov, and V. N. Ochkin 165
- Isofrequency Temperature Anomalies of Raman Scattering Intensity in Quartz Crystals
V. S. Gorelik and A. Yu. Pyatyshev 178
- Laser-Pulse Excitation of Coherent Vibrations of Dielectric Nanospheres in an Aqueous Suspension
A. F. Bunkin, M. A. Davydov, S. M. Pershin, N. V. Suyazov, and A. N. Fedorov 187
-

Wave Phenomena in Plasma

- Surface-Plasmon-Assisted Cooper Pair Formation in Ordered Gold Films at Room Temperature
P. Rácz and N. Kroó 192
- Influence of Quantum Effects on Faraday Rotation in Overdense Plasma
M. K. Khadivi Borougeni, L. Rajaei, A. Gharaati, and S. Miraboutalebi 197
-

Quantum Optics of Heterostructures

- A Modified Planar Graphene-Based Heterostructure (Barrier–Quantum Well)
P. L. Pekh and A. P. Silin 204
-

Solid-State Lasers

- Lasing Characteristics of Fe:Cr:ZnSe Polycrystals
K. N. Firsov, E. M. Gavrishchuk, V. B. Ikonnikov, S. Yu. Kazantsev, I. G. Kononov, S. V. Kurashkin, S. V. Podlesnykh, S. A. Rodin, D. V. Savin, and A. A. Sirotkin 211
-

Fiber-Optic Effects

- Study and Analysis of Light Scattering Loss in Irregular Integrated Optical Waveguides
A. A. Egorov 217
-

Ultrashort Laser Pulses

- Recording of the Temporal Profile of the Laser Pulse Front at the Luch Facility with a Large Dynamic Range and Picosecond Resolution
I. A. Belov, A. Yu. Voronin, L. A. Dushina, D. S. Kornienko, A. G. Kravchenko, D. N. Litvin, K. V. Starodubtsev, and V. M. Tarakanov 229
- Optimization of the $\text{YVO}_4\text{-Nd}^{3+}\text{:YVO}_4$ Laser Spectrum for Femtosecond Pulse Generation
A. A. Sirotkin 233
-

Underwater Acoustics

- Direction Finding of a Noise Sound Source
G. N. Kuznetsov, V. M. Kuz'kin, G. A. Lyakhov, S. A. Pereselkov, and D. Yu. Prosovetskiy 237
-

Wave Phenomena in Biological Tissues

- Investigation of Coupling Efficiency of Slow-Wave Propagation Mode along Cochlea
T. Kitamura 242
-
-