

# PHYSICS OF WAVE PHENOMENA

Volume 13, Number 1, 2005

## CONTENTS

### OPTICAL SPECTROSCOPY

- Oriental Ordering of Protein Micro- and Nanoparticles in a Nonuniform Magnetic Field  
*I.G. Lyakhov, T.D. Schneider, G.A. Lyakhov, and N.V. Suyazov* ..... 1
- Study of Particle Motion and Backscattering Signal in Plume During Laser Evaporation of Biotissues  
*A.K. Dmitriev, S.V. Ivanov, A.N. Konovalov, V.N. Kortunov, A.V. Koshcheev, and V.A. Ul'yanov* ..... 15

### NONLINEAR ACOUSTICS

- Second Harmonic Generation by Phase Conjugate Ultrasonic Wave in Medium with Nonlinear Inclusion  
*S.V. Preobrazhensky, V.L. Preobrazhensky, and D. Pernod*..... 24

### NONLINEAR OPTICAL SPECTROSCOPY

- Four-Photon Spectroscopy of Rayleigh Wing in Water after Ultrasonic Exposure under Cavitation Conditions  
*A.F. Bunkin, A.A. Nurmatov, and S.M. Pershin* ..... 30

### REMOTE SENSING OF NATURAL MEDIA

- Lidar Measurement of Dynamics of Spatial Characteristics of Aerosol in Boundary Atmospheric Layer under Urban Conditions  
*A.F. Bunkin and S.M. Pershin*..... 37
- High-Efficiency Piezoelectric Transducer of Acoustic Beams  
*V.A. Babintsev, E.A. Vinogradov, V.I. Golovanov, and K.F. Shipilov* ..... 44
- Study of Natural Media Perturbations using Parametric Wave Array with Sounding Beam  
*A.G. Inozemtsev, S.A. Inozemtsev, S.I. Kutakov, I.A. Maslov, V.V. Rogotsky, V.D. Rubtsov, and D.V. Rubtsov* ..... 49