

**BULLETIN OF THE RUSSIAN ACADEMY OF SCIENCES. PHYSICS
SUPPLEMENT**

PHYSICS OF VIBRATIONS

Volume 61, Number 3, 1997

CONTENTS

NONLINEAR SPECTROSCOPY

- Four-Photon Spectroscopy of Liquid Water and Aqueous Solutions
A.F. Bunkin, G.A. Lyakhov, A.A. Nurmatov, and N.V. Suyazov 135
- Four-Photon Rayleigh-Wing Spectroscopy in Binary Aqueous Solutions: a New Approach
to the Investigation of Liquid State Structure
A.F. Bunkin, N.F. Bunkin, A.V. Lobejev, and A.A. Nurmatov..... 153
- Temperature Anomalies in the Envelope of Spontaneous Raman Scattering at O—H Vibrations
in Liquid Water
A.F. Bunkin and S.M. Pershin..... 158

LASER REMOTE SENSING

- Versatile Compact Lidar for Remote Characterization of Natural Water, Soil, and Vegetation
A.F. Bunkin and S.M. Pershin..... 164

ELECTROMAGNETIC WAVES IN THE ATMOSPHERE

- Electrode Effect as an Earthquake Precursor
K.A. Boyarchuk, A.M. Lomonosov, and S.A. Pulinets 175

NONLINEAR ACOUSTICS

- Nonlinear Acoustics of Wide Beams in Marine Sediments
N.I. Pushkina..... 180

FLUID DYNAMICS

- Stability of Elastic–Gravity Waves
A.V. Marchenko 185