

PHYSICS– USPEKHI

English edition of *Uspekhi Fizicheskikh Nauk*
March 2007 Volume 177 Number 3

Contents

Volume 50
Number 3
2007
Pages 225 – 330

REVIEWS OF TOPICAL PROBLEMS

Mechanical properties of carbon nanostructures and related materials 225
A V Eletskii

Waves in systems with cross-diffusion as a new class of nonlinear waves 263
M A Tsyganov, V N Biktashev, J Brindley,
A V Holden, G R Ivanitsky

METHODOLOGICAL NOTES

Forward and backward waves: three definitions and their interrelation and applicability 287
V V Shevchenko

Impedance model for quantum-mechanical barrier problems 293
E A Nelin

CONFERENCES AND SYMPOSIA

Joint meeting of the Editorial Board 301
of the Journal “Izvestiya Vuzov. Radiofizika”
and the Scientific Council of the Institute of Applied Physics
of the Russian Academy of Sciences
dedicated to the ninetieth birthday of Vitalii Lazarevich Ginzburg
(4 October 2006):

Chirality: optical rotation, the detailed balance principle, and life 301
A A Andronov

Continued overleaf

Fast moving radiators and their use in high-frequency electronics V L Bratman	303
Cosmic accelerators for ultrahigh-energy particles E V Derishev, V V Kocharovsky, Vl V Kocharovsky	308
Modification of the earth's ionosphere by high-power high-frequency radio waves V L Frolov, N V Bakhmet'eva, V V Belikovich, G G Vertogradov, V G Vertogradov, G P Komrakov, D S Kotik, N A Mityakov, S V Polyakov, V O Rapoport, E N Sergeev, E D Tereshchenko, A V Tolmacheva, V P Uryadov, B Z Khudukon	315
PERSONALIA	
In memory of Andrei Grigor'evich Bashkirov V V Adushkin, S I Anisimov, N V Vdovichenko, A V Vityazev, V G Kadyshevskii, A A Kirsh, O N Golubeva, G V Pechernikova, N M Plakida, A D Sukhanov, E E Tareeva, Yu A Tserkovnikov	325
BIBLIOGRAPHY	
New books on physics and related sciences E V Zakharova	327
Physics news on the Internet Yu N Eroshenko	329