Contents

REVIEWS OF TOPICAL PROBLEMS

Application of cybernetic methods in physics
A L Fradkov 103

Metal–insulator transitions and the effects of electron–electron interactions in two-dimensional electron systems
A A Shashkin 129

Statistical properties of dynamical chaos
V S Anishchenko, T E Vadivasova,
G A Okrokvertskhov, G I Strelkova 151

ANNUS MIRABILIS. METHODOLOGICAL NOTES

Superluminal localized structures of electromagnetic radiation
N N Rozanov 167

CONFERENCES AND SYMPOSIA

A few comments on superconductivity research
V L Ginzburg 173

First International Conference
“Fundamental Problems of High-Temperature Superconductivity”
V I Belyavskii, Yu V Kopaev 177

Continued overleaf
Joint scientific session of the Physical Sciences Division of the Russian Academy of Sciences and the Joint Physical Society of the Russian Federation “Absolute Negative Conductivity” (27 October 2004):

Absolute negative conductivity phenomena in non-equilibrium three-dimensional semiconductors
V F Elesin

Magnetoimpurity resonances as indicators of an inverse photoelectron distribution function in semiconductors
V F Gantmakher, V N Zverev

Microwave-induced negative conductivity and zero-resistance states in two-dimensional electronic systems: history and current status
V I Ryzhiǐ

Millimeter-wave response in the magnetoconductivity of highly perfect two-dimensional electron systems
S I Dorozhkin

Physics news on the Internet
Yu N Eroshenko

PERSONALIA

In memory of Mikhail Adol'fovich Miller

In memory of Aleksandr Mikhailovich Dykhne

BIBLIOGRAPHY

New books on physics and related sciences
E V Zakharova
Contents

Application of cybernetic methods in physics
A L Fradkov 103

Metal–insulator transitions and the effects of electron–electron interactions in two-dimensional electron systems
A A Shashkin 129

Statistical properties of dynamical chaos
V S Anishchenko, T E Vadivasova, G A Okrokvertskhov, G I Strelkova 151

Superluminal localized structures of electromagnetic radiation
N N Rozanov 167

A few comments on superconductivity research
V L Ginzburg 173

First International Conference
“Fundamental Problems of High-Temperature Superconductivity”
V I Belyavskii, Yu V Kopaev 177

Joint scientific session of the Physical Sciences Division of the Russian Academy of Sciences and the Joint Physical Society of the Russian Federation
“Absolute Negative Conductivity” (27 October 2004):
contributions by V F Elesin; V F Gantmakher, V N Zverev; V I Ryzhii; S I Dorozhkin 183

Physics news on the Internet
Yu N Eroshenko 204

In memory of Mikhail Adol’fovich Miller 205

In memory of Aleksandr Mikhailovich Dykhne 207

New books on physics and related sciences
E V Zakharova 209

In the next issue

High-power picosecond electronics
G A Mesyats, M I Yalandin

Intramolecular heavy-atom effect in the photophysics of organic molecules
K N Solov’ev, E A Borisevich

Fundamental physical constants: their role in physics and metrology, and new recommended values
S G Karshenboim

Quantum corrections to the equilibrium rate constants of inelastic processes
A V Eletski, A N Starostin, M D Taran

Conferences and symposia

Bibliography

Physics news on the Internet