

Volume 55
 Number 11
 2012
 Pages 1061 – 1167

PHYSICS- USPEKHI

English edition of *Uspekhi Fizicheskikh Nauk*
 November 2012 Volume 182 Number 11

*Russian original
 reference*
Usp. Fiz. Nauk
 Vol. **182**, pages

Contents

*English translation
 reference*
Phys. Usp.
 Vol. **55**, pages

REVIEWS OF TOPICAL PROBLEMS

- | | | |
|------|---|-------------|
| 1137 | Where is the supercritical fluid on the phase diagram?
V V Brazhkin, A G Lyapin, V N Ryzhov,
K Trachenko, Yu D Fomin, E N Tsiok | 1061 |
| 1157 | Light propagation in composite materials with gain layers
A V Dorofeenko, A A Zyablovsky, A A Pukhov,
A A Lisyansky A P Vinogradov | 1080 |

PHYSICS OF OUR DAYS

- | | | |
|------|--|-------------|
| 1177 | Searching for non-Gaussianity
 in observational cosmic microwave background data
O V Verkhodanov | 1098 |
|------|--|-------------|

INSTRUMENTS AND METHODS OF INVESTIGATION

- | | | |
|------|--|-------------|
| 1195 | Parametric oscillatory instability in gravitational wave laser detectors
S P Vyatchanin, S E Strigin | 1115 |
|------|--|-------------|

METHODOLOGICAL NOTES

- | | | |
|------|---|-------------|
| 1205 | On the existence conditions for a fast surface wave
A V Kukushkin, A A Rukhadze, K Z Rukhadze | 1124 |
|------|---|-------------|

Continued overleaf

*Russian original
reference
Usp. Fiz. Nauk
Vol. 182, pages*

Contents continued

*English translation
reference
Phys. Usp.
Vol. 55, pages*

FROM THE HISTORY OF PHYSICS

- 1217 **Lev Yakovlevich Strum and the hypothesis
of the existence of tachyons** **1134**
G B Malykin, V S Savchuk, E A Romanets (Shcherbak)

CONFERENCES AND SYMPOSIA

- 1223 **Physical properties of graphene** **1140**
(Scientific session of the Physical Sciences Division
of the Russian Academy of Sciences, 28 March 2012):
- 1223 **Magneto-optics of graphene layers** 1140
L A Falkovsky
- 1229 **Anomalous thermoelectric
and thermomagnetic properties of graphene** 1146
A A Varlamov, A V Kavokin,
I A Luk'yanchuk, S G Sharapov

LETTERS TO THE EDITORS

- 1235 **Spatial structures can form in stochastic dynamic systems
due to near-zero-probability events** **1152**
V I Klyatskin
- 1238 **Memory about the past is beneficial for survival and reproduction** **1155**
G R Ivanitskii

PERSONALIA

- 1245 **In memory of Sergei Petrovich Kapitza** **1161**
A F Andreev, O M Belotserkovskii, G D Bogomolov,
V P Bykov, Yu M Kagan, N V Karlov,
L B Luganskii, L P Pitaevskii, L A Prozorova,
Yu A Ryzhov, V E Fortov, Yu M Tsipenyuk
- 1247 **In memory of Leonid Petrovich Grishchuk** **1163**
V B Braginsky, N S Kardashev, B V Komberg,
V G Kurt, I D Novikov, A G Polnarev,
K A Postnov, V A Rubakov, V N Rudenko,
K S Thorne, A M Cherepashchuk, N I Shakura
- 1176 **Physics news on the Internet** **1166**
Yu N Eroshenko