

PHYSICS– USPEKHI

Volume 64
Number 8
2021
Pages 747–859

English edition of *Uspekhi Fizicheskikh Nauk*
August 2021 Volume 191 Number 8

Russian original
reference
Usp. Fiz. Nauk
Vol. 191, pages

English translation
reference
Phys. Usp.
Vol. 64, pages

Contents

REVIEWS OF TOPICAL PROBLEMS

- | | | |
|-----|--|-----|
| 785 | Gas envelopes of exoplanets—hot Jupiters | 747 |
| | D V Bisikalo, V I Shematovich, P V Kaygorodov, A G Zhilkin | |

PHYSICS OF OUR DAYS

- | | | |
|-----|---|-----|
| 846 | Nonlinear dynamics of creative thinking. Multimodal processes and the interaction of heteroclinic structures | 801 |
| | M I Rabinovich, P Varona | |

FROM THE CURRENT LITERATURE

- | | | |
|-----|--|-----|
| 861 | Applied superconductivity: frustrations and hopes | 815 |
| | E Yu Klimenko | |

INSTRUMENTS AND METHODS OF INVESTIGATION

- | | | |
|-----|--|-----|
| 874 | Uncertainty relation for modulated broadband laser pulses | 828 |
| | K B Yushkov, V Ya Molchanov, E A Khazanov | |

Continued overleaf

*Russian original
reference
Usp. Fiz. Nauk
Vol. **191**, pages*

Contents continued

*English translation
reference
Phys. Usp.
Vol. **64**, pages*

METHODOLOGICAL NOTES

- 882 **Two scales of quantum effects
in a mesoscopic system of degenerate electrons** 836
S E Kuratov, D S Shidlovski, S I Blinnikov, S Yu Igashov

PERSONALIA

- 899 **In memory of Vladislav Ivanovich Pustovoit** 852
A L Aseev, A S Bugaev, E P Velikhov,
Yu V Gulyaev, G Ya Krasnikov, A V Latyshev,
V Ya Panchenko, O V Rudenko, A N Saurov,
A S Sigov, Yu A Chaplygin, V A Cherepenin
- 901 **In memory of Igor Ekhiel'evich Dzyaloshinskii** 854
A F Andreev, S A Brazovskii, E I Kats,
P S Kondratenko, N M Kreines, V V Lebedev,
V P Mineev, S P Novikov, S P Obukhov,
L P Pitaevskii, N Spaldin, D E Khmel'nitskii

BIBLIOGRAPHY

- 902 **New books on physics and related sciences** 855
E V Zakharova
- 904 **Physics news on the Internet** 858
Yu N Eroshenko