

Volume 64  
 Number 7  
 2021  
 Pages 641–745

# PHYSICS- USPEKHI

English edition of *Uspekhi Fizicheskikh Nauk*  
 July 2021 Volume 191 Number 7

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

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

## Contents

### REVIEWS OF TOPICAL PROBLEMS

- |     |  |            |
|-----|--|------------|
| 673 | <b>Spin-polaron concept in the theory of normal and superconducting states of cuprates</b> | <b>641</b> |
|     | V V Val'kov, D M Dzebisashvili,<br>M M Korovushkin, A F Barabanov                          |            |
| 705 | <b>Formation and properties of metallic atomic chains and wires</b>                        | <b>671</b> |
|     | A G Syromyatnikov, S V Kolesnikov,<br>A M Saletsky, A L Klavsyuk                           |            |
| 738 | <b>Neutron scattering in studies of Fe-based functional alloys (Fe–Ga, Fe–Al)</b>          | <b>702</b> |
|     | A M Balagurov, I S Golovin   |            |

### INSTRUMENTS AND METHODS OF INVESTIGATION

- |     |  |            |
|-----|--|------------|
| 760 | <b>Broadband integrated optical modulators: achievements and prospects</b> | <b>722</b> |
|     | V M Petrov, P M Agruzov, V V Lebedev,<br>I V Il'ichev, A V Shamray         |            |

*Continued overleaf*

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

*Contents continued*

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

**BIBLIOGRAPHY**

781	<b>New books on physics and related sciences</b> E V Zakharova	<b>740</b>
783	<b>Physics news on the Internet</b> Yu N Eroshenko	<b>743</b>