

Volume 55  
 Number 10  
 2012  
 Pages 949–1060

# PHYSICS- USPEKHI

English edition of *Uspekhi Fizicheskikh Nauk*  
 October 2012 Volume 182 Number 10

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

## Contents

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

PHYSICS OF OUR DAYS		
1017	<b>Large Hadron Collider's discovery of a new particle with Higgs boson properties</b> V A Rubakov	<b>949</b>
1026	<b>Particle physics prospects: August 1981</b> L B Okun	<b>958</b>
1031	<b>Epilogue to the discovery of a particle similar to the Higgs boson: August 2012</b> L B Okun	<b>963</b>
REVIEWS OF TOPICAL PROBLEMS		
1033	<b>High-energy particle colliders: the past 20 years, the next 20 years, and the distant future</b> V D Shiltsev	<b>965</b>
1047	<b>Intramolecular vibrational redistribution: from high-resolution spectra to real-time dynamics</b> A A Makarov, A L Malinovsky, E A Ryabov	<b>977</b>
1081	<b>Statistical theory of the boundary friction of atomically flat solid surfaces in the presence of a lubricant layer</b> A V Khomenko, I A Lyashenko	<b>1008</b>

*Continued overleaf*

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

*Contents continued*

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

CONFERENCES AND SYMPOSIA

1111	<b>Plasmonics</b> (Scientific session of the Physical Sciences Division of the Russian Academy of Sciences, 21 February 2012):	<b>1035</b>
1111	<b>Plasmonics and magnetoplasmonics based on graphene and a topological insulator</b> Yu E Lozovik	1035
1116	<b>Theory of the dipole nanolaser</b> I E Protsenko	1040
1122	<b>Quantum plasmonics of metamaterials: loss compensation using spasers</b> A P Vinogradov, E S Andrianov, A A Pukhov, A V Dorofeenko, A A Lisyansky	1046
1130	<b>Using chiral nano-meta-particles to control chiral molecule radiation</b> V V Klimov, D V Guzatov	1054
1136	<b>Physics news on the Internet</b> Yu N Eroshenko	<b>1059</b>