Contents

REVIEWS OF TOPICAL PROBLEMS

457  Semiclassical model of the structure of matter  
     G V Shpatakovskaya  
     429

495  Electrohydrodynamics  
     A I Zhakin  
     465

FROM THE CURRENT LITERATURE

521  Fe–C and Fe–H systems at pressures of the Earth’s inner core  
     Z G Bazhanova, A R Oganov, O Gianola  
     489

531  Electronic structure of silicon nitride  
     V A Gritsenko  
     498

INSTRUMENTS AND METHODS OF INVESTIGATION

543  Photoemission from metal nanoparticles  
     I E Protsenko, A V Uskov  
     508

METHODOLOGICAL NOTES

555  Hybrid ramified Sierpinski carpet: percolation transition,  
     critical exponents, and force field  
     A N Herega, N G Drik, A P Ugol’nikov  
     519

Continued overleaf
### CONFERENCES AND SYMPOSIA

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>559</td>
<td>50 years of the Condensed Matter Physics Research Council of the Russian Academy of Sciences (Scientific session of the Physical Sciences Division of the Russian Academy of Sciences, 9 November 2011):</td>
<td>A M Glezer</td>
</tr>
</tbody>
</table>

### BIBLIOGRAPHY

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>567</td>
<td>New books on physics and related sciences</td>
<td>E V Zakharova</td>
</tr>
<tr>
<td>568</td>
<td>Physics news on the Internet</td>
<td>Yu N Eroshenko</td>
</tr>
</tbody>
</table>