

К 75-летию открытия сверхтекучести

Ответственные за выпуск Э.Я. Рудаковский и С.С. Соколов

Содержание

Вступление	935
Сверхтекучесть и бозе-эйнштейновская конденсация	
<i>Vilchynskyy S.I., Yakimenko A.I., Isaeva K.O., and Chumachenko A.V.</i> The nature of superfluidity and Bose-Einstein condensation: from liquid ^4He to dilute ultracold atomic gases (Review Article)	937
Сверхтекучий ^4He и ^3He	
<i>Vakarchuk I.O., Pastukhov V.S., and Prytula R.J.</i> Theory of structure and thermodynamic functions of liquid ^4He (Review Article)	958
<i>Amrit J. and Ramiere A.</i> Kapitza resistance between superfluid helium and solid: role of the boundary	970
<i>Адаменко И.Н., Немченко Е.К.</i> Трансформация фононов на границе раздела сверхтекучий гелий–твердое тело	975
<i>Benningshof O.W.B. and Jochemsen R.</i> Spin waves in the B-phase of superfluid ^3He in confined cylindrical geometry	986
<i>Полуэктов Ю.М., Рыбалко А.С.</i> О возможности двух фазовых переходов в жидком гелии	992
<i>Ципенюк Ю.М., Kirichek O. and Petrenko O.</i> Малоугловое рассеяние нейтронов в нормальном и сверхтекучем жидком гелии	1001
Сверхтекучесть в низкоразмерных системах и в условиях ограниченной геометрии	
<i>Matsuda H., Ochi A., Isozaki R., Nomura R., and Okuda Y.</i> Formation of superfluid liquid pocket in aerogel and its solidification by cooling	1006
<i>Wada N., Hieda M., Toda R., and Matsushita T.</i> Observation of superfluidity in two- and one-dimensions	1012
<i>Arrigoni F., Vitali E., Galli D.E., and Reatto L.</i> Excitation spectrum in two-dimensional superfluid ^4He	1021
<i>Бирченко А.П., Вехов Е.О., Михин Н.П., Рудаковский Э.Я.</i> Спин-решеточная релаксация в сверхтекучих включениях, образованных в матрице твердого гелия	1031
<i>Хроника</i>	
Памяти Вадима Григорьевича Манжеля (1933–2013)	1041

On the 75th Anniversary of the Discovery of Superfluidity

Guest Editors E.Ya. Rudavskii and S.S. Sokolov

Contents

Preface	935
Superfluidity and Bose-Einstein Condensation	
<i>Vilchynskyy S.I., Yakimenko A.I., Isaeva K.O., and Chumachenko A.V.</i> The nature of superfluidity and Bose-Einstein condensation: from liquid ^4He to dilute ultracold atomic gases (Review Article)	937
Superfluid ^4He and ^3He	
<i>Vakarchuk I.O., Pastukhov V.S., and Prytula R.J.</i> Theory of structure and thermodynamic functions of liquid ^4He (Review Article)	958
<i>Amrit J. and Ramiere A.</i> Kapitza resistance between superfluid helium and solid: role of the boundary	970
<i>Adamenko I.N. and Nemchenko E.K.</i> Phonon transformation at the superfluid helium–solid interface	975
<i>Benningshof O.W.B. and Jochemsen R.</i> Spin waves in the <i>B</i> -phase of superfluid ^3He in confined cylindrical geometry	986
<i>Poluektov Yu.M. and Rybalko A.S.</i> On possibility of two phase transitions in liquid helium	992
<i>Tsipenyuk Yu.M., Kirichek O., and Petrenko O.</i> Small-angle scattering of neutrons from normal and superfluid liquid helium	1001
Superfluidity in Low-Dimensional Systems and under the Conditions of Restricted Geometry	
<i>Matsuda H., Ochi A., Isozaki R., Nomura R., and Okuda Y.</i> Formation of superfluid liquid pocket in aerogel and its solidification by cooling	1006
<i>Wada N., Hieda M., Toda R., and Matsushita T.</i> Observation of superfluidity in two- and one-dimensions	1012
<i>Arrigoni F., Vitali E., Galli D.E., and Reatto L.</i> Excitation spectrum in two-dimensional superfluid ^4He	1021
<i>Birchenko A.P., Vekhov Ye.O., Mikhin N.P., and Rudavskii E.Ya.</i> The spin-lattice relaxation in superfluid inclusions formed in the solid helium matrix	1031
<i>Chronicle</i>	
In commemoration of Vadim Grigorievich Manzhelii (1933–2013)	1041