

PUBLICATIONS LIST OF B.SPIVAK

References

- [1] "About stability of superconducting states with negative superfluid density", A.G. Aronov, B.Z. Spivak, Fiz. Tverd. Tela **17**, 2806 (1975) (Sov. Phys. Solid State **17**, 1874 (1975)).
- [2] "Properties of superconductors with nonequilibrium excitations", A.G. Aronov, B.Z. Spivak. Fiz. Tverd. Tela **18**, 541 (1976) (Sov. Phys. Solid State **18**, 312 (1976)).
- [3] "Nonequilibrium excitations in superconductors and phonon fluorescence", A.G. Aronov, M.A. Zelickman, B.Z. Spivak. Fiz. Tverd. Tela **18**, 2209 (1976) (Sol. Phys. Solid State **18**, 1286, (1976)).
- [4] "Photoeffect in Josephson junction", A.G. Aronov, B.Z. Spivak, Pis'ma Zh. Eksp. Teor. Fiz. **22**, 218 (1975) (JETP. Lett **22**, 101 (1975)).
- [5] "Nonequilibrium states in superconducting tunnel junction Sn-SnOx-Pb", J.M. Gerbshtein, E.M. Niculin, B.Z. Spivak, Fiz. Tverd. Tela **20**, 1067 (1978) (Sov. Phys. Solid State **20**, 616 (1978)).
- [6] "Nonequilibrium distribution in superconductors", A.G. Aronov, B.Z. Spivak, J. Low Temp. Phys. **29**, 149 (1977).
- [7] "Stability of microwave irradiated nonequilibrium superconductors", E.V. Ginzburg, B.Z. Spivak, Zh. Eksp. Teor. Fiz. **80**, 2013, (1981), (Sov. Phys. JETP **53**, 1047 (1981)).
- [8] "Electron-electron scattering in nonequilibrium superconductors", A.G. Aronov, B.Z. Spivak. Zh. Eksp. Teor. Fiz. **81**, 2118 (1981) (Sov. Phys. JETP **54**, 2151 (1981)).
- [9] "Stability of nonequilibrium states in superconductors with population imbalance between electron and hole-like branches of spectrum", Ju.M. Gal'perin, V.I. Kozub, B.Z. Spivak, Zh. Eksp. Teor. Fiz. **81**, 2118 (1981) (Sov. Phys. JETP **54**, 1126 (1981)).

- [10] “Stability of nonequilibrium states of superconductors with respect to finite fluctuations”, A.G. Aronov, B.Z. Spivak, Phys. Lett. **78A**, 391 (1980).
- [11] “Ferromagnetic ordering in nonequilibrium superconductors”, A.G. Aronov, B.Z. Spivak, J. Low Temp. Phys. **40**, 155 (1980).
- [12] “Tunnel injection and tunnel stimulation of superconductivity: The role of branch imbalance”, Yu.M. Gal’perin, V.I. Kozub, B.Z. Spivak, J. Low Temp. Phys. **50**, 185 (1983).
- [13] “On the enhancement of superconductivity by microwave irradiation in bulk superconductors”, V.I. Kozub, B.Z. Spivak, J. Low Temp. Phys. **42**, 395 (1981).
- [14] “The role of relaxation process in the Kapiza temperature jump formation at the boundary between a superconductor and dielectric”, M.A. Zelikman, B.Z. Spivak. Zh. Eksp. Teor. Fiz. **76** 752 (1979) (Sov. Phys. JETP **49**, 377 (1975)).
- [15] “Nonequilibrium distributions in superconductors (Review)”, A.G. Aronov, B.Z. Spivak, Sov. Fiz. Nizk. Temp. **4**, 1365 (1978). (Sov. J. Low Temp. **4**, 1365 (1978)).
- [16] “Aharonov-Bohm effect in disordered metals”, B.L. Al’tshuler, A.G. Aronov, B.Z. Spivak. Pis’ma Zh. Eksp. Teor. Fiz. **33**, 101 (1981) (JETP Lett **33**, 3394 (1981)).
- [17] “The influence of localization effect on the properties of *SNS* junction”, D.E. Khmel’nitskiy, B.Z. Spivak, Pis’ma Zh. Eksp. Teor. Fiz. **35**, 334 (1982) (JETP Lett **35**, 412).

- [18] “Quantum magnetic properties of the interface between solid and liquid He ”, M.A. Meyerovich, B.Z. Spivak, *Pis'ma Zh. Eksp. Theor. Fiz.* **34**, 575 (1981) (*JETP Lett* 34, (1981)).
- [19] “Localization effect in normal metal and supercurrent through SNS junction”, B.L. Al'tshuler, D.E. Khmel'nitskiy, B.Z. Spivak. *Sol. state comm.* **48**, 841 (1983).
- [20] “Aharonov-Bohm effect in disordered metals”, B.L. Al'tshuler, A.G. Aronov, B.Z. Spivak, Ju.V. Sharvin, D.Ju. Sharvin, *Pis'ma Zh. Eksp. Theor. Fiz.* **35**, 479 (1982) (*JETP Lett* **35**, 588 (1982)).
- [21] “Anomalous spin magnetoresistance in variable range hopping conductivity”, B.Z. Spivak, *Pis'ma Zh. Eksp. Theor. Fiz.* **87**, 1371 (1984) (*Sov. Phys. JETP* **60**, 787 (1984)).
- [22] “Aharonov-Bohm oscillations in variable range hopping conductivity”, V.L. Nguen, B.Z. Spivak, B.I. Shklovskii, *Pis'ma Zh. Eksp. Theor. Fiz.* **41**, 35 (1985) (*JETP Lett.* **41**, 43 (1985)).
- [23] “Effect of impurity scattering of tunneling electron on variable range hopping”, B.I. Shklovskii, B.Z. Spivak, *J. of Statistical Phys.* **38**, 267 (1985).
- [24] “Tunnel hopping in disordered system”, V.L. Nguen, B.Z. Spivak, B.I. Shklovskii, *Zh. Eksp. Theor. Fiz.* **89**, 1770 (1985) (*Sov. Phys. JETP* **62**, 1021 (1985)).
- [25] “Change of random potential realization and conductivity of small size sample.” B.L. Al'tshuler, B.Z. Spivak, *Pis'ma Zh. Eksp. Fiz.* **42**, 363 (1985) (*JETP Lett* **42**, 447 (1985)).
- [26] “Friedel oscillation in disordered metals”, A.Ju. Zyuzin, B.Z. Spivak, *Pis'ma Zh. Eksp. Fiz.* **43**, 185 (1986) (*JETP Lett.* **43**, 234 (1986)).

- [27] “Langevin description of mesoscopic fluctuations in disordered media”, A.Ju. Zyuzin, B.Z. Spivak, Zh. Eksp. Theor. Fiz. **93**, 994 (1987) (Sov. Phys. JETP **66**, 560 (1987)).
- [28] “Low temperature spatial current fluctuations in disordered metal”, A.G. Aronov, A.Ju. Zyuzin, B.Z. Spivak, Pis'ma Zh. Eksp. Teor. Fiz. **43**, 431 (1986) (Sov. Phys. JETP **43**, 555 (1986)).
- [29] “Mesoscopic fluctuations in *SNS* junction.” B.A. Al'tshuler, B.Z. Spivak, Zh. Eksp. Theor. Fiz. **92**, 607 (1987) (Sov. Phys. JETP **65**, 343 (1987)).
- [30] “Properties of strongly correlated metals”, B.Z. Spivak, Zh. Eksp. Theor. Fiz. **90**, 1299 (1986) (Sov. Phys. JETP **63**, 759 (1986)).
- [31] “Theory of mesoscopic fluctuations in the intricate geometry samples.” A.Ju. Zyuzin, B.Z. Spivak, V.N. Sokolov, Fiz. Tverd. Tela **22**, 341 (1988).
- [32] “Mesoscopic fluctuations of supercurrent density in disordered superconductors”, B.Z. Spivak, A.Ju. Zyuzin, Pis'ma Zh. Eksp. Fiz. **47**, 221 (1988) (Sov. Phys. JETP Lett **47**, 267 (1988)).
- [33] “Fluctuations of coherent light transmission through disordered media”, B.Z. Spivak, A.Ju. Zyuzin, Sol. State Comm. **65**, 311 (1988).
- [34] “Mesoscopic fluctuations of current density in an intricate geometry sample”, A. Ju. Zyuzin, B.Z. Spivak, Sol. State Comm. **67**, 75 (1988).
- [35] “Mesoscopic fluctuations of thermoelectric power in disordered superconductors”, A.Ju. Zyuzin, B.Z. Spivak, Europhys. Lett. **8**, 669 (1989).
- [36] “Sign phase transition in disordered Ising model”, B.V. Kagan, B.Z. Spivak, Fiz. Tverd. Tela **31**, 293 (1989).

- [37] “Fluctuations of intensity of $1/f$ noise in disordered metals”, B.L. Al’tshuler, B.Z. Spivak, Pis’ma Zh. Eksp. Theor. Fiz. **49**, 456 (1989) (JETP Lett. **49**, 523 (1989)).
- [38] “Magnetic field dependence of impurity hopping rate in disordered metal”, B.L. Al’tshuler, B.Z. Spivak, Pis’ma Zh. Eksp. Theor. Fiz. **49**, 671 (1989) (JETP Lett. **49**, 772 (1989)).
- [39] “Scattering and interference effect in variable range hopping conduction (Review)”, B.I. Shklovskiy, B.Z. Spivak, in “*Hopping conduction in semiconductors*”, ed. by Pollak and Shklovski (North-Holland, Elsevier,1991).
- [40] “Mesoscopic fluctuations of current density in disordered conductors (Review)”, A.Ju. Zyuzin, B.Z. Spivak, in “*Mesoscopic Phenomena in Solids vol.30*”, ed. by B.Altshuler, P.A.Lee, R.Webb (North-Holland,Elsevier Science Publisher,1991).
- [41] “Mesoscopic fluctuations of the point contact resistance”, A.Ju. Zyuzin, B.Z. Spivak, Sov.Phys.JETP. **71**, 563, (1990).
- [42] ”Negative local superfluid densities:The difference between dirty superconductors and dirty Bose liquids”, B.Spivak, S.Kivelson, Phys.Rev. **B. 43** 3740 (1991).
- [43] ”Negative magnetoresistance in variable range hopping conduction, Hui Lin Zhao, B.Spivak, M.Gelfand, Shechao Feng, Phys.Rev. **B44**, 10760 (1991).
- [44] ”Voltage Fluctuations in Mesoscopic Conductors with Single-Channel Leads: Electronic Speckle Patterns. B.Spivak, S.Feng, Phys.Rev. **B44**, 4014, (1991).

- [45] "Friedel Oscillations in Disordered Metals" B.Spivak A.Zyuzin, in "Trends in Theoretical Physics" vol.2 Ed.J.Elis, Y.Tang (1992).
- [46] " $hc/4e$ period of Aharonov Bohm oscillations in disordered superconductors." B.Spivak, S.Kivelson Phys. Rev **B.45**, 10490, (1992).
- [47] "Magnetic field dependence of chemical reactions rates at high temperatures" B.Spivak, Fei Zhou Phys. Rev.E. **49**, 2623, (1993).
- [48] "Magnetic field shift of mobility edge near metall insulator transition" .B.Spivak, Hui Lin, S.Feng, Pis'ma Zh.Eksp.Teor.Fis. **59**, 939, (1994).
- [49] "Mesoscopic Mechanisms of the Photovoltaic Effect and Microwave Absorption in Granular Metals" B.Spivak, Fei Zhou, M.T.Beal Monod, Phys.Rev. **B 51**, 13226 (1994).
- [50] "Coherence effects in superconductor-insulator-normal metal junction" Fei Zhou, B.Spivak, A.Y.Zyuzin. Phys.Rev. **B52**, 4467 (1995).
- [51] "Mesoscopic Effects in Disordered Superconductors near H_{c2} " B.Spivak, Fei Zhou, Phys.Rev.Lett.**74**, 2800, (1995).
- [52] "Sign phase transition and directed paths in random media", B. Spivak, S. Feng and F. Zeng, JETP Lett., **64**, 313, (1996).
- [53] "Giant microwave absorption in metallic grains: relaxation mechanism", F. Zhou, B. Spivak. N. Taniguchi and B. Altshuler, Phys. Rev. Lett. **77**, 1958, (1996).
- [54] "Resistance of superconductor-normal metal junction" F.Zhou, B.Spivak, In "Correlated fermions and transport in mesoscopic systems" Ed. by T.Martin, G.Montambaux and J.Tran Thanh Van, Editions Frontieres, 1996.

- [55] "Resistance of SNS Junctions" F.Zhou B.Spivak, Pisma JhETP, **65**, 347, 352, (1997).
- [56] "Sign memory of Ruderman-Kittel interaction in disordered metals" B.Spivak, A.Zyuzin, Sov.Phys.Uspehi, (1997).
- [57] F.Zhou, P.Charlat, B.Spivak, B.Pannetier, "Density of states in SNS junctions" JLTP **11**, 3/4, 841, (1998).
- [58] "Hall effect in SN junctions" B.Spivak, Fei Zhou PRL, **80**, 3847, (1998).
- [59] "Glassy state of disordered superconducting films in parallel magnetic field" Fei Zhou, B.Spivak, PRL, **80**,5647, (1998).
- [60] "Mesoscopic mechanism of adiabatic charge transport" F.Zhou, B.Spivak, B.Altshuler, Phys.Rev.Lett. Phys. Rev. Lett. **82**, 608 (1999)
- [61] B.Spivak, A.Zyuzin "Mesoscopic sensitivity of speckles in disordered nonlinear media to changes of disordered potential", Phys.Rev.Lett. **84**, 1970, (2000).
- [62] B.Spivak, A.Zyuzin, Phys.Rev.Lett., "Theory of $\pi/2$ Josephson junctions" Phys.Rev.B. **61**,5902, (2000).
- [63] B.Spivak, Fei Zhou, "Ferromagnetic correlations in quasi-one-dimensional conducting channels" Phys.Rev.B. **61**, 16730, (2000).
- [64] A.Zyuzin, B.Spivak, I.Vagner, "Mesoscopic mechanism of exchange interaction in magnetic multilayers" Phys.Rev.B **62**, 13899, (2000).
- [65] F. Chudnovskii, S. Luryi, B.Spivak, "Switching device based on first-order metal-insulator phase transition induced by external electric field" in "Trends in microelectronics" ed. by S.Luryi, Wiley, (2001).

- [66] B.Spivak "Properties of the strongly correlated two-dimensional electron gas in Si MOSFET's" Phys.Rev.B. **64**, 085317, (2001).
- [67] B.Spivak, A.Zyuzin, M.Hruska, "Quantum superconductor-metal transition", Phys.Rev.B. **64**, 132502, (2001).
- [68] M.Hruska, B.Spivak, "Conductivity of classical two-dimensional electron gas" Phys. Rev. **B 65**, 033315 (2002).
- [69] E.Ivchenko, B,Spivak, "Chiral properties of carbon nanotubes" Phys. Rev. B **66**, 155404, 2002.
- [70] A.Zyuzin, M.Hruska, B.Spivak, "Theory of mesoscopic superconductor-ferromagnet-superconductor junctions", cond-mat/0204123; Europhys. Lett. **62** ..1, 2003.
- [71] B.Spivak, "Phase separation in 2D electron system in MOSFET's" Phys. Rev. **B 67**, 125205 (2003)
- [72] B.Spivak, Properties of 2D electron liquid in Si MOSFET's", J. de Physique **12**, Pr9-37, 2002.
- [73] E.L. Ivchenko, B. Spivak "Circular photogalvanic effect and related effects in chiral carbon nanotubes", Physica **E 17**, 376, 2003.
- [74] B. Spivak, A. Zyuzin, "Propagation of nonlinear waves in disordered media" J. Opt. Soc. Am. **B21**, 177, 2004.
- [75] S. Barankov, L.Levitov, B.Spivak "Collective Rabi oscillations and solitons in a time-dependent BCS pairing problem", Phys.Rev.Lett. **93**, 16, 2004.
- [76] B.Spivak, S. Kivelson, "Phases intermediate between a two-dimensional electron liquid and Wigner crystal" Phys. Rev. B **70**, 155114 (2004).

- [77] B.Spivak, A.Zyuzin, "Signature of the Electron-Electron Interaction in the Magnetic-Field Dependence of Nonlinear I-V Characteristics in Mesoscopic Systems," Phys. Rev. Lett. **93**, 226801 (2004).
- [78] Reza Jamei, Steven Kivelson, Boris Spivak, " Universal Aspects of Coulomb Frustrated Phase Separation" Phys. Rev. Lett. **94**, 056805 (2005).
- [79] B. Spivak and S. A. Kivelson "Drag resistance of two-dimensional electronic microemulsions" Phys. Rev. B **72**, 045355 (2005).
- [80] Mesoscopic Oscillations of the Conductance of Disordered Metallic Samples as a Function of Temperature B. Spivak, A. Zyuzin, and D. H. Cobden Phys. Rev. Lett. **95**, 226804 (2005).
- [81] A. Kastalskii, S. Suryi B. Spivak, "Semiconductor high-energy radiation scintillation detector" Accepted in "Nucl. Instr. and Methods in Physics Research, A" **565**, 650, (2006).
- [82] B.Spivak, S. Kivelson, "Transport in two dimensional electronic microemulsions" Annals of Physics, **321**, 2071, (2006).
- [83] O. Agam, B. Spivak, A. Andreev, "Statistics of speckle patterns", cond-mat/0603141, accepted in Phys. Rev. Lett. **97**, 223901 (2006)
- [84] E. Deyo, B. Spivak, and A. Zyuzin, Signature of the electron-electron interaction in the magnetic-field dependence of nonlinear I-V characteristics in mesoscopic conductors Phys. Rev. B **74**, 104205 (2006).
- [85] Oded Agam, A. V. Andreev, and B. Spivak , Phys. Rev. **B 76**, 174204 (2007).