

PUBLICATION LIST

of Dr. habil. Oleksandr Dobrovolskiy

Peer-reviewed papers

as of November 23, 2016

- [1] *Zero-bias Shapiro steps in asymmetric pinning nanolandscapes*
O. V. Dobrovolskiy, V. V. Sosedkin, R. Sachser, V. A. Shklovskij, R. V. Vovk, M. Huth
J. Supercond. Nov. Magnet. **xx**, yy (2016).
- [2] *Abrikosov fluxonics in washboard nanolandscapes*
O. V. Dobrovolskiy
Physica C, xx-yy (2016).
- [3] *Magnetic moment jumps in flat and nanopatterned Nb thin-walled cylinders*
M. I. Tsindlekht, V. M. Genkin, I. Felner, F. Zeides, N. Katz, S. Gazi, S. Chromik,
O. V. Dobrovolskiy, R. Sachser, and M. Huth
Physica C, xx-xx (2016).
- [4] *Peculiarities in the pseudogap behavior in optimally doped $YBa_2Cu_3O_{7-\delta}$ single crystals under pressure up to 1 GPa*
A. L. Solovjov, L. V. Omelchenko, R. V. Vovk, O. V. Dobrovolskiy, S. N. Kamchatnaya, and D. M. Sergeev
Curr. Appl. Phys. **16**, 931–938 (2016).
- [5] *AC and DC magnetic properties of thin-walled Nb cylinders with and without antidots*
M. I. Tsindlekht, V. M. Genkin, I. Felner, F. Zeides, N. Katz, S. Gazi, S. Chromik,
O. V. Dobrovolskiy, R. Sachser, and M. Huth
J. Phys. Cond. Matter **28**, 215701–1-9 (2016)
- [6] *Hydrostatic pressure effects on the pseudogap in slightly doped $YBa_2Cu_3O_{7-\delta}$ single crystals*
A. L. Solovjov, L. V. Omelchenko, R. V. Vovk, O. V. Dobrovolskiy, D. M. Sergeev, Z. F. Nazyrov, S. N. Kamchatnaya
Physica B **493**, 58–67 (2016)
- [7] *Interplay of flux guiding and Hall effect in Nb films with nanogrooves*
O. V. Dobrovolskiy, M. Hanefeld, M. Zörb, M. Huth, and V. A. Shklovskij
Supercond. Sci. Technol. **29**, 065009–1-7 (2016)
- [8] *Modification of superconducting and resistive properties of $HoBa_2Cu_3O_{7-\delta}$ single crystals under application-removal of high hydrostatic pressure*
R. V. Vovk, G. Ya. Khadzhai, O. V. Dobrovolskiy, S. N. Kamchatna, and A. Chreneos
Mod. Phys. Lett. B **30**, 1650188 (2016)
- [9] *Electric charge transfer and scattering of its carriers in cuprates of the 1-2-3 system*
R. V. Vovk, G. Ya. Khadzhai, O. V. Dobrovolskiy, S. N. Kamchatnaya, Z. F. Nazyrov
J. Low Temp. Phys. **183**, 59–68 (2016)
- [10] *Excess conductivity and the pseudogap state in Hf-doped $YBa_2Cu_3O_{7-\delta}$ ceramics*
S. V. Savich, A. V. Samoilov, R. V. Vovk, O. V. Dobrovolskiy, S. N. Kamchatna,
Ya. V. Dolgoplova, and O. A. Chernovol-Tkachenko
Mod. Phys. Lett. B **30**, 1650034–1-9 (2016)
- [11] *Alternating current-driven microwave loss modulation in a fluxonic metamaterial*
O. V. Dobrovolskiy, M. Huth, and V. A. Shklovskij
Appl. Phys. Lett. **107**, 162603–1-5 (2015)
- [12] *Influence of planar and point defects on the basal-plane conductivity of $HoBaCuO$ single crystals*
R. V. Vovk, G. Ya. Khadzhai, O. V. Dobrovolskiy, Z. F. Nazyrov, and A. Chreneos
Physica C **515**, 58–61 (2015)
- [13] *Transverse resistance in $HoBa_2Cu_3O_{7-\delta}$ single crystals*
R. V. Vovk, G. Ya. Khadzhai, O. V. Dobrovolskiy, Z. F. Nazyrov, and A. Chreneos
Mod. Phys. Lett. B **31**, 1550232-1-8 (2015)
- [14] *Effect of structural relaxation on the metal–insulator transition in heavily underdoped $YBa_2Cu_3O_{7-\delta}$ single crystals*
R. V. Vovk, O. V. Dobrovolskiy, Z. F. Nazyrov, K. A. Kotvitskaya, and A. Chreneos
J. Low Temp. Phys. **180**, 277–283 (2015)

- [15] *Tunable magnetism on the lateral mesoscale by post-processing of Co/Pt heterostructures*
O. V. Dobrovolskiy, M. Kompaniets, F. Porrati, R. Sachser, Ch. Gspan, H. Plank, and M. Huth,
Beilstein J. Nanotechnol. **6**, 1082–1090 (2015)
- [16] *Dual cut-off direct current-tunable microwave low-pass filter on superconducting Nb microstrips with asymmetric nanogrooves*
O. V. Dobrovolskiy and M. Huth
Appl. Phys. Lett. **106**, 142601–1-5 (2015)
- [17] *Transverse resistance of $YBa_2Cu_3O_{7-\delta}$ single crystals*
R. V. Vovk, G. Ya. Khadzhai, O. V. Dobrovolskiy, Z. F. Nazyrov, and A. Chreneos
Current Appl. Phys. **15**, 617–621 (2015)
- [18] *Superconducting proximity effect in crystalline Co and Cu nanowires*
M. Kompaniets, O. Dobrovolskiy, C. Neetzel, W. Ensinger, and M. Huth
J. Supercond. Nov. Magnet. **28**, 431–436 (2015)
- [19] *AC quantum interference effects in nanopatterned Nb microstrips*
O. V. Dobrovolskiy
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- [20] *^4He sample probe for combined microwave and dc electrical transport measurements*
O. V. Dobrovolskiy, J. Franke, and M. Huth
Meas. Sci. Technol. **26**, 035502–1-9 (2015)
- [21] *Effect of defects on the basal-plane resistivity of $YBa_2Cu_3O_{7-\delta}$ and $Y_{1-y}Pr_yBa_2Cu_3O_{7-x}$ single crystals*
R. V. Vovk, G. Ya. Khadzhai, O. V. Dobrovolskiy, N. R. Vovk, and Z. F. Nazyrov
J. Mater. Sci. Mater. Electron. **26**, 1435–1440 (2015)
- [22] *Post-growth purification of Co nanostructures prepared by focused electron beam induced deposition*
E. Begun, O. V. Dobrovolskiy, M. Kompaniets, R. Sachser, Ch. Gspan, H. Plank, and M. Huth
Nanotechnol. **26**, 075301–1-11 (2015)
- [23] *Resistive measurements of the pseudogap in lightly Pr-doped $Y_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$ single crystals under high hydrostatic pressure*
R. V. Vovk, G. Ya. Khadzhai, and O. V. Dobrovolskiy
Solid State Commun. **204**, 64–66 (2015)
- [24] *Conductivity anisotropy in $Y_{1-y}Pr_yBa_2Cu_3O_{7-\delta}$ single crystals in a wide range of praseodymium concentrations*
R. V. Vovk, G. Ya. Khadzhai, and O. V. Dobrovolskiy
Mod. Phys. Lett. B **28**, 1450245–1-10 (2014)
- [25] *Magnetization reversal assisted by half antivortex states in nanostructured circular Co disks*
A. Lara, O. V. Dobrovolskiy, J. L. Prieto, M. Huth, and F. G. Aliev
Appl. Phys. Lett. **105**, 182402–1-5 (2014)
- [26] *Evolution of the electrical resistance of $YBa_2Cu_3O_{7-\delta}$ single crystals in the course of long-term aging*
R. V. Vovk, N. R. Vovk, G. Ya. Khadzhai, O. V. Dobrovolskiy, and Z. F. Nazyrov
J. Mater. Sci.: Mater. Electr. **25**, 5226–5230 (2014)
- [27] *Effect of high pressure on the fluctuation paraconductivity in $Y_{0.95}Pr_{0.05}Ba_2Cu_3O_{7-\delta}$ single crystals*
R. V. Vovk, N. R. Vovk, G. Ya. Khadzhai, O. V. Dobrovolskiy, and Z. F. Nazyrov
Curr. Appl. Phys. **14**, 1779–1782 (2014)
- [28] *Transverse conductivity in $Pr_yY_{1-y}Ba_2Cu_3O_{7-\delta}$ single crystals in a wide range of praseodymium concentrations*
R. V. Vovk, G. Ya. Khadzhai, and O. V. Dobrovolskiy
Appl. Phys. A **117**, 997–1002 (2014)
- [29] *Proximity-induced superconductivity in crystalline Cu and Co nanowires and Co nanogranular structures*
M. Kompaniets, O. V. Dobrovolskiy, C. Neetzel, E. Begun, F. Porrati, W. Ensinger, and M. Huth
J. Appl. Phys. **116**, 073906–1-10 (2014)

- [30] *Transverse resistance in $Y_{1-y}Pr_yBa_2Cu_3O_{7-\delta}$ at large praseodymium concentrations*
R. V. Vovk, G. Ya. Khadzhai, and O. V. Dobrovolskiy
Physica B **451**, 84–86 (2014)
- [31] *Stochastic resonance of vortices in nanostructured superconductor films with a washboard pinning potential*
V. A. Shklovskij and O. V. Dobrovolskiy
Physica C **503**, 128–131 (2014)
- [32] *Phase segregation and the effect of high pressure on the electro-transport in $Y_{0.95}Pr_{0.05}Ba_2Cu_3O_{7-\delta}$ single crystals*
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Mod. Phys. Lett. B **28**, 1450142–1-8 (2014)
- [33] *DC to AC converter on Abrikosov vortices in a washboard pinning potential*
V. A. Shklovskij and O. V. Dobrovolskiy
J. Phys.: Conf. Ser. **507**, 012007–1-4 (2014)
- [34] *Transverse conductivity in $Y_{1-y}Pr_yBa_2Cu_3O_{7-\delta}$ single crystals*
R. V. Vovk, G. Ya. Khadzhai, O. V. Dobrovolskiy, Z. F. Nazyrov, and I. L. Goulatis
Mater. Res. Expr. **1**, 026303–1-8 (2014)
- [35] *Effect of structural relaxation on the in-plane electrical resistance of oxygen-underdoped $ReBa_2Cu_3O_{7-\delta}$ ($Re=Y, Ho$) single crystals*
R. V. Vovk, N. R. Vovk, and O. V. Dobrovolskiy
J. Low Temp. Phys. **175**, 614–630 (2014)
- [36] *Long-range superconducting proximity effect in polycrystalline Co nanowires*
M. Kompaniets, O. V. Dobrovolskiy, C. Neetzel, F. Porrati, J. Brötz, W. Ensinger, and M. Huth
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- [37] *Vortex ratchet reversal in an asymmetric washboard pinning potential subject to combined dc and ac stimuli*
V. A. Shklovskij, V. V. Sosedkin, and O. V. Dobrovolskiy
J. Phys.: Condens. Matter **26**, 025703–1-12 (2014)
- [38] *Aging effect on electrical conductivity of pure and Al-doped $YBa_2Cu_3O_{7-\delta}$ single crystals with a given topology of planar defects*
R. V. Vovk, N. R. Vovk, and O. V. Dobrovolskiy
Adv. Condens. Matter Phys. **2013**, 931726–1-7 (2013)
- [39] *Material composition – Pinning strength correlation in Nb thin films with focused ion beam-milled washboard nanostructures*
O. V. Dobrovolskiy, E. Begun, M. Huth, and V. A. Shklovskij
Physica C **494**, 102–105 (2013)
- [40] *Noise-assisted microwave up-conversion by vortices in thin film superconductors with a dc-biased washboard pinning potential*
V. A. Shklovskij, O. V. Dobrovolskiy, and M. Huth
J. Supercond. Nov. Magnet. **26**, 2079–2083 (2013)
- [41] *Determination of coordinate dependence of a pinning potential from a microwave experiment with vortices*
V. A. Shklovskij and O. V. Dobrovolskiy
Low Temp Phys. **39**, 120–124 (2013)
- [42] *Determination of the coordinate dependence of a pinning potential from the microwave experiment with vortices*
V. A. Shklovskij and O. V. Dobrovolskiy
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- [43] *Nonadiabatic ratchet effect in superconducting films with a tilted cosine pinning potential*
V. A. Shklovskij and O. V. Dobrovolskiy
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- [44] *Electrical transport and pinning properties of Nb thin films patterned with focused ion beam-milled washboard nanostructures*
O. V. Dobrovolskiy, E. Begun, M. Huth, and V. A. Shklovskij
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- [45] *Current-controlled filter on superconducting films with a tilted washboard pinning potential*
O. V. Dobrovolskiy, V. A. Shklovskij, and M. Huth
Phys. Procedia **36**, 7–10 (2012)
- [46] *Crossover from dirty to clean superconducting limit in dc magnetron-sputtered thin Nb films*
O. V. Dobrovolskiy and M. Huth
Thin Solid Films **520**, 5985–5990 (2012)
- [47] *Fluxonic properties of vortices in a washboard pinning potential fabricated by focused particle beam techniques*
O. V. Dobrovolskiy, M. Huth, and V. A. Shklovskij
Acta Phys. Polon. A **121**, 82–84 (2012)
- [48] *Frequency-dependent ratchet effect in superconducting films with a tilted washboard pinning potential*
V. A. Shklovskij and O. V. Dobrovolskiy
Phys. Rev. B **84**, 054515–1-12 (2011)
- [49] *Vortex lattice matching effects in a washboard pinning potential induced by Co nanostripe arrays*
O. V. Dobrovolskiy, E. Begun, M. Huth, V. A. Shklovskij, M. Tsindlekht
Physica C **471**, 449–452 (2011)
- [50] *Fabrication of artificial washboard pinning structures in thin niobium films*
O. V. Dobrovolskiy, M. Huth, and V. A. Shklovskij
J. Supercond. Novel Magnet. **24**, 375–380 (2011)
- [51] *Anisotropic magnetoresistive response in thin Nb films decorated by an array of Co stripes*
O. V. Dobrovolskiy, M. Huth, and V. A. Shklovskij
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- [52] *Two-dimensional frequency- and temperature-dependent vortex dynamics in a tilted washboard pinning potential*
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- [53] *AC-driven vortices and the Hall effect in a superconductor with a tilted washboard pinning potential*
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- [54] *Influence of point-like disorder on the guiding of vortices in a rotating-current scheme*
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Physica C **460–462**, 1253–1254 (2007)
- [55] *Influence of point-like disorder on the guiding of vortices and the Hall effect in a washboard planar pinning potential*
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Monographs

- [56] *Vortices at microwave frequencies*
E. Silva, N. Pompeo, and O. V. Dobrovolskiy
in “Superconductors at the Nanoscale: From Basic Research to Applications”
(eds.) R. Wördenweber, V. Moshchalkov, S. Bending, F. Tafuri
De Gruyter, Berlin, 2017, chap. 18, pp. xx-yy
ISBN 978-3-11-045620-2
- [57] *Microwave Absorption by Vortices in Superconductors with a Washboard Pinning Potential*
V. A. Shklovskij and O. V. Dobrovolskiy
in “Superconductors - Materials, Properties and Applications” ed. by A. Gabovich
InTech, Rijeka (2012), chapter 11, pp. 263–288
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Theses

- [58] *Superconductivity and vortex dynamics in nanostructures*
O. V. Dobrovolskiy. — Habilitation in Physics
Goethe University Frankfurt (2016) 228 p
- [59] *Nonlinear vortex dynamics in superconducting niobium films with anisotropic pinning nanostructures*
O. V. Dobrovolskiy. — Thesis submitted for the degree of Doctor of Sciences
in Physics and Mathematics on speciality Superconductivity (*in Ukrainian*)
B. Verkin Institute for Low Temperature Physics and Engineering
of the National Academy of Sciences of Ukraine (2016) 288 p
- [60] *Guided vortex motion and the Hall effect in superconductors with a washboard pinning potential*
O. V. Dobrovolskiy. — Thesis submitted for the degree of Candidate of Sciences (Dr. rer. nat.)
in Physics and Mathematics on speciality Superconductivity (*in Russian*)
B. Verkin Institute for Low Temperature Physics and Engineering
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Lecture notes

- [61] *Electronic properties of nanostructures*
Lecture notes (*in German*)
O. V. Dobrovolskiy,
Goethe University Frankfurt (2016) 97 p
- [62] *Introduction to Superconductivity*
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- [63] *Pinning and vortex dynamics in superconductors*
Lecture notes (*in Russian*)
V. A. Shklovskij and O. V. Dobrovolskiy
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- [64] *Pinning and vortex dynamics in superconductors*
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Lectures notes (*in Russian*)
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Conference contributions

- [66] *Nanopatterned superconductors as building blocks for fluxonic metamaterials*
O. V. Dobrovolskiy, V. A. Shklovskij, R. V. Vovk, V. Kruglyak, and M. Huth
in Proc. Metamaterials-2016 (Crete, Greece, 2016), p. 34
- [67] *Magnon-fluxonics*
O. V. Dobrovolskiy, V. A. Shklovskij, R. V. Vovk, V. Kruglyak, and M. Huth
in Proc. Magnonics-2016 (Exeter, UK, 2016)
Invited lecture

- [68] *Abrikosov fluxonics in washboard nanolandscapes*
O. V. Dobrovolskiy, M. Huth, and V. A. Shklovskij
in *Proc. LTP-2016* (Kharkiv, Ukraine, 2016), p. xx
Invited talk
- [69] *Zero-bias Shapiro steps in Nb films with asymmetric nanogrooves*
O. V. Dobrovolskiy, M. Huth, and V. A. Shklovskij
in *Proc. ICSM 2016* (Fethiye, Turkey, 2016), p. 484
Invited talk
- [70] *Probing pinning forces by microwave spectroscopy*
O. V. Dobrovolskiy
in *Proc. PSN-2016* (Saas Fee, Switzerland, 2016), p. 30
Invited talk
- [71] *Assessment of periodic pinning in superconductors at microwaves*
O. V. Dobrovolskiy, M. Huth, and V. A. Shklovskij
in *Proc. Vortex IX* (Rhodes, Greece, 2015), p. 88
Invited talk
- [72] *Magnetic properties of thin-walled Nb cylinders with and without a row of antidots*
M. I. Tsindlekht, V. M. Genkin, I. Felner, F. Zeides, N. Katz, S. Gazi, S. Chromik,
O. V. Dobrovolskiy, R. Sachser, and M. Huth
in *Proc. Vortex IX* (Rhodes, Greece, 2015), p. 124
- [73] *DC-tunable low-pass microwave filter on superconducting nanopatterned Nb microstrips*
O. V. Dobrovolskiy, M. Huth, and V. A. Shklovskij
in *Proc. EUCAS 2015* (Lyon, France, 2015), p. 22
Invited talk
- [74] *Microstructure – magnetic properties correlation in Co and Co/Pt hybrid nanostructures*
O. V. Dobrovolskiy, M. Kompaniets, E. Begun, F. Porrati, R. Sachser, Ch. Gspan, H. Plank, and M. Huth
in *Proc. ECN 2015* (Odesa, Ukraine, 2015), p. xx
- [75] *Superconducting proximity effect in Pb/Au nanowires*
O. V. Dobrovolskiy, M. Kompaniets, M. Winhold, R. Sachser, and M. Huth
in *Proc. SHybrids* (Arcachon, France, 2015), p. 40
Invited talk
- [76] *Coupling effects in the vortex dynamics in Nb films with nanogroove arrays*
O. V. Dobrovolskiy, M. Huth, and V. A. Shklovskij
in *Proc. VORTEX 2015* (El Escorial, Spain, 2015), p. 51
Invited talk
- [77] *Tunable magnetism of Co/Pt heterostructures for proximity-induced triplet superconductivity*
O. V. Dobrovolskiy, M. Kompaniets, F. Porrati, R. Sachser, and M. Huth
in *Proc. SHyNeD* (Santa Maria Castellabate, Italy, 2014), p. 49
Invited talk
- [78] *Vortex ratchet reversal in an asymmetric washboard pinning potential subject to combined dc and ac stimuli*
V. A. Shklovskij, V. V. Sosedkin, and O. V. Dobrovolskiy.
in *Proc. LT 27* (Buenos Aires, Argentina, 2014), p. 19
- [79] *Superconducting proximity effect in metallic and ferromagnetic nanowires and structures*
M. Kompaniets, O. V. Dobrovolskiy, C. Neetzel, E. Begun, F. Porrati, W. Ensinger, and M. Huth.
in *Proc. LT 27* (Buenos Aires, Argentina, 2014), p. 20
- [80] *Purification of directly written Co nanostructures*
E. Begun, O. V. Dobrovolskiy, M. Kompaniets, and M. Huth.
in *Proc. FEBIP 2014* (Frankfurt am Main, Germany, 2014), pp. 146-147

- [81] *FEBID for Abrikosov fluxonics applications: Tuning the magneto-resistive response of a superconductor via ferromagnetic decorations* O. V. Dobrovolskiy and M. Huth in Proc. **FEBIP 2014** (Frankfurt am Main, Germany, 2014), pp. 155-156
- [82] *Magnetization reversal through multivortex states in Co disks with nanoholes* A. Lara, O. Dobrovolskiy, J. Prieto, E. Begun, F. Aliev, and M. Huth in Proc. **FEBIP 2014** (Frankfurt am Main, Germany, 2014), pp. 158-159
- [83] *Mesoscopically resolved tunable magnetism in Co/Pt heterostructures* M. Kompaniets, O. V. Dobrovolskiy, F. Porrati, R. Sachser, and M. Huth in Proc. **FEBIP 2014** (Frankfurt am Main, Germany, 2014), pp. 181-182
- [84] *Microwave power absorption by vortices in dc-biased nanopatterned Nb microstrips* O. V. Dobrovolskiy, M. Huth and V. A. Shklovskij. in Proc. **LTP 2014** (Kharkiv, Ukraine, 2014), p. 39
Best talk award
- [85] *Suppression of superconductivity and tuning flux-flow properties in Nb thin films via focused particle beams processing* O. V. Dobrovolskiy, M. Zörb, M. Hanefeld, L. Köhs, and M. Huth. in Proc. **ANS 2014** (Miraflores de la Sierra, Spain, 2014), pp. 71-72
- [86] *Superconducting proximity effect in crystalline Cu and Co nanowires* M. Kompaniets, O. V. Dobrovolskiy, C. Neetzel, J. Brötz, W. Ensinger, M. Huth in Proc. **ICSM 2014** (Istanbul, Antalya, 2014), p. 674
- [87] *Synchronization effects in nanopatterned Nb microstrips under combined dc/ac drive* O. V. Dobrovolskiy, R. Sachser, M. Hanefeld, M. Huth, and V. A. Shklovskij in Proc. **ICSM 2014** (Istanbul, Antalya, 2014), p. 983
- [88] *Magnetization reversal through multivortex states in circular Co dots with nanoholes* A. Lara, O. V. Dobrovolskiy, E. Begun, J. L. Prieto, and F. G. Aliev in Proc. **GEFES 2014** (Castilla-La Mancha, Spain, 2014), p. 102
- [89] *Focused particle beams: An application to fluxon manipulation via mask-less nanopatterning* O. V. Dobrovolskiy, M. Huth, and V. A. Shklovskij in Proc. **ECN 2013** (Yalta, Ukraine, 2013), p. 40
Invited talk
- [90] *Stochastic resonance of vortices in nanostructured superconductor films with a washboard pinning potential* V. A. Shklovskij and O. V. Dobrovolskiy in Proc. **Vortex VIII** (Rhodes, Greece, 2013), p. 103
- [91] *Nonlinear vortex dynamics in niobium thin films with anisotropic washboard pinning nanostructures* O. V. Dobrovolskiy, M. Huth, and V. A. Shklovskij in Proc. **Vortex VIII** (Rhodes, Greece, 2013), p. 86
Invited talk
- [92] *Generation of voltage pulses by dc current in superconducting films with periodic pinning potential* V. A. Shklovskij and O. V. Dobrovolskiy in Proc. **EUCAS 2013** (Genova, Italy, 2013), p. 624
- [93] *DC-tunable microwave loss in as-grown and nanostructured superconducting Nb films* O. V. Dobrovolskiy, M. Huth, and V. A. Shklovskij in Proc. **EUCAS 2013** (Genova, Italy, 2013), p. 620
- [94] *Nonlinear anisotropic magnetoresistive response in niobium microstrips with an array of uniaxial grooves* O. V. Dobrovolskiy, M. Huth, and V. A. Shklovskij in Proc. **YRLTP III** (Kharkiv, Ukraine, 2013), p. 21
- [95] *Insertable ⁴He sample probe for combined microwave and dc electrical transport measurements* O. V. Dobrovolskiy, Jörg Franke, and M. Huth in Proc. **DPG SM** (Regensburg, Germany, 2013), TT 58.23

- [96] *Electrical transport and pinning properties of Nb films with washboard-like nanostructures*
O. V. Dobrovolskiy, E. Begun, M. Huth, and V. A. Shklovskij
in Proc. **DPG SM** (Regensburg, Germany, 2013), TT. 64.11
- [97] *Electrical transport and pinning properties of Nb thin films with washboard-like nanostructures*
O. V. Dobrovolskiy, E. Begun, M. Huth, and V. A. Shklovskij
in Proc. **ISS 2012** (Tokyo, Japan, 2012), p. 108
- [98] *Nonlinear vortex dynamics in thin niobium films with anisotropic washboard pinning nanostructures*
O. V. Dobrovolskiy, V. A. Shklovskij, E. Begun, and M. Huth
in Proc. **M2S 2012** (Washington, USA, 2012), P3-71
- [99] *Nonlinear microwave response of vortices in superconducting films with a dc-biased washboard pinning potential*
O. V. Dobrovolskiy, V. A. Shklovskij, and M. Huth
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