Serguei Brazovskii

List of Publications by Year
in descending order

152	3,186	218381	168136
papers	citations	26 h-index	53 g-index

162	162	162	2717
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Pattern Formation and Aggregation in Ensembles of Solitons in Quasi One-Dimensional Electronic Systems. Symmetry, 2022, 14, 972.	1.1	2
2	Phase Slips, Dislocations, Half-Integer Vortices, Two-Fluid Hydrodynamics, and the Chiral Anomaly in Charge and Spin Density Waves. Journal of Experimental and Theoretical Physics, 2021, 132, 714-726.	0.2	2
3	Intertwined chiral charge orders and topological stabilization of the light-induced state of a prototypical transition metal dichalcogenide. Npj Quantum Materials, 2019, 4, .	1.8	51
4	Phase transitions and pattern formation in ensembles of phase-amplitude solitons in quasi-one-dimensional electronic systems. Physical Review E, 2019, 99, 022114.	0.8	3
5	Multi-Fluid Hydrodynamics in Charge Density Waves with Collective, Electronic, and Solitonic Densities and Currents. Journal of Experimental and Theoretical Physics, 2019, 129, 659-668.	0.2	5
6	From chiral anomaly to two-fluid hydrodynamics for electronic vortices. Annals of Physics, 2019, 403, 184-197.	1.0	7
7	Modeling of networks and globules of charged domain walls observed in pump and pulse induced states. Scientific Reports, 2018, 8, 4043.	1.6	22
8	Hall voltage drives pulsing counter-currents of the sliding charge density wave and of quantized normal carriers at self-filled Landau levels. Npj Quantum Materials, 2017, 2, .	1.8	3
9	Three-dimensional resistivity and switching between correlated electronic states in 1T-TaS2. Scientific Reports, 2017, 7, 46048.	1.6	32
10	The excitonic insulator route through a dynamical phase transition induced by an optical pulse. Journal of Experimental and Theoretical Physics, 2016, 122, 412-425.	0.2	2
11	Fast electronic resistance switching involving hidden charge density wave states. Nature Communications, 2016, 7, 11442.	5.8	151
12	Phase transitions in ensembles of solitons induced by an optical pumping or a strong electric field. Physical Review B, 2016, 94, .	1.1	6
13	Dynamical phase transitions and pattern formation induced by a pulse pumping of excitons to a system near a thermodynamic instability. Physical Review B, 2016, 94, .	1.1	3
14	Electronic ferroelectricity in carbon based materials. Synthetic Metals, 2016, 216, 11-22.	2.1	10
15	Ultrafast optical switching between hidden states of electronic matter under non-equilibrium conditions. , 2016, , .		0
16	Controlling the metal-to-insulator relaxation of the metastable hidden quantum state in 1T-TaS ₂. Science Advances, 2015, 1, e1500168.	4.7	128
17	Multi-vortex Dynamics in Junctions of Charge Density Waves. Journal of Superconductivity and Novel Magnetism, 2015, 28, 1343-1347.	0.8	5
18	Modeling of Evolution of a Complex Electronic System to an Ordered Hidden State: Application to Optical Quench in 1T-TaS2. Journal of Superconductivity and Novel Magnetism, 2015, 28, 1349-1353.	0.8	11

#	Article	IF	Citations
19	Direct observation of single-electron solitons and Friedel oscillations in a quasi-one dimensional material with incommensurate charge-density waves. Physica B: Condensed Matter, 2015, 460, 88-92.	1.3	7
20	Critical dynamics and domain motion from permittivity of the electronic ferroelectric (TMTTF)2AsF6. Physica B: Condensed Matter, 2015, 460, 79-82.	1.3	5
21	Modeling of dislocations in a CDW junction: Interference of the CDW and normal carriers. Physica B: Condensed Matter, 2015, 460, 16-20.	1.3	4
22	Dynamical patterns of phase transformations from self-trapping of quantum excitons. Physica B: Condensed Matter, 2015, 460, 73-78.	1.3	7
23	Inhomogeneous and nonstationary Hall states of the CDW with quantized normal carriers. Physica B: Condensed Matter, 2015, 460, 236-240.	1.3	0
24	Electronic ferroelectricity in carbon-based systems: from reality of organic conductors to promises of polymers and graphene nano-ribbons. Journal of Physics: Conference Series, 2014, 486, 012009.	0.3	1
25	Excitonic Mechanism of Local Phase Transformations by Optical Pumping. Journal of Superconductivity and Novel Magnetism, 2014, 27, 1009-1013.	0.8	5
26	Ultrafast Switching to a Stable Hidden Quantum State in an Electronic Crystal. Science, 2014, 344, 177-180.	6.0	502
27	Modeling of dynamics of field-induced transformations in charge density waves. European Physical Journal: Special Topics, 2013, 222, 1035-1046.	1.2	7
28	Coherent topological defect dynamics and collective modes in superconductors and electronic crystals. Journal of Physics Condensed Matter, 2013, 25, 404206.	0.7	7
29	Scanning-Tunneling Microscope Imaging of Single-Electron Solitons in a Material with Incommensurate Charge-Density Waves. Physical Review Letters, 2012, 108, 096801.	2.9	45
30	Probing spin-charge relation by magnetoconductance in one-dimensional polymer nanofibers. Physical Review B, 2012, 86, .	1.1	8
31	Reconstruction of the Charge Density Wave State Under the Applied Electric Field. Journal of Superconductivity and Novel Magnetism, 2012, 25, 1323-1327.	0.8	4
32	Evolution of the spin-density wave-superconductivity texture in the organic superconductor (TMTSF)2PF6 under pressure. Physica B: Condensed Matter, 2012, 407, 1806-1809.	1.3	2
33	Modeling of nonlinear and non-stationary multi-vortex behavior of CDWs at nanoscales in restricted geometries of internal junctions. Physica B: Condensed Matter, 2012, 407, 1839-1844.	1.3	5
34	Charge-density waves studied at the surface and at the atomic scale in NbSe3. Physica B: Condensed Matter, 2012, 407, 1845-1847.	1.3	2
35	Non-linear transport by solitons in nanofibers of polymers in high magnetic field. Physica B: Condensed Matter, 2012, 407, 1939-1942.	1.3	3
36	Femtosecond Coherent Non-equilibrium Electronic Ordering andÂDynamics of Topological Defect in Charge Density Waves. Journal of Superconductivity and Novel Magnetism, 2011, 24, 1191-1193.	0.8	3

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37	Coherent dynamics of macroscopic electronic order through a symmetry breaking transition. Nature Physics, 2010, 6, 681-684.	6.5	189
38	Domain walls at the spin-density-wave endpoint of the organic superconductor<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mrow><mml:mo>(</mml:mo><mml:mrow><mml:mtext>TMTSF</mml:m pressure. Physical Review B, 2010, 81, .	1.1	35
39	Surface Charge Density Wave Phase Transition in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>NbS</mml:mi><mml:msub><mml:mi mathvariant="bold">e</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review Letters, 2010, 104, 256402.	2.9	32
40	Suppression of the magneto resistance in high electric fields of polyacetylene nanofibers. Synthetic Metals, 2010, 160, 1349-1353.	2.1	14
41	Physical theory of excitons in conducting polymers. Chemical Society Reviews, 2010, 39, 2453.	18.7	118
42	Hall effect in the pinned and sliding charge density wave state of NbSe₃. Journal of Physics Condensed Matter, 2009, 21, 435601.	0.7	13
43	Microscopic solitons in correlated electronic systems: theory versus experiment. , 2009, , .		4
44	Self-trapping and Binding of Particles from Singular Pockets inÂWeakly Doped AFM Mott Insulator. Journal of Superconductivity and Novel Magnetism, 2009, 22, 229-233.	0.8	0
45	Polarons near Van Hove points in 2D charge or spin density waves. Physica B: Condensed Matter, 2009, 404, 552-555.	1.3	1
46	Solitons: From charge density waves to FFLO in superconductors. Physica B: Condensed Matter, 2009, 404, 482-486.	1.3	9
47	Appearance of dislocation arrays in moving or strained charge density waves. Physica B: Condensed Matter, 2009, 404, 565-569.	1.3	6
48	Ferroelectricity: From organic conductors to conducting polymers. Physica B: Condensed Matter, 2009, 404, 382-384.	1.3	11
49	Ferroelectricity in synthetic metals: Reality and hypotheses. Synthetic Metals, 2009, 159, 2205-2207.	2.1	6
50	New routes to solitons in quasi-one-dimensional conductors. Solid State Sciences, 2008, 10, 1786-1789.	1.5	10
51	Theory of subgap interchain tunneling in quasi 1D conductors. Physical Review B, 2008, 77, .	1.1	3
52	Interlayer tunnelling spectroscopy of charge density waves. Superconductor Science and Technology, 2007, 20, S87-S92.	1.8	7
53	Solitons and Their Arrays: From Quasi 1D Conductors to Stripes. Journal of Superconductivity and Novel Magnetism, 2007, 20, 489-493.	0.8	16
54	Subgap Collective Tunneling and Its Staircase Structure in Charge Density Waves. Physical Review Letters, 2006, 96, 116402.	2.9	31

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55	Method of interlayer tunneling for studies of layered high temperature superconductors and charge density wave materials. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 3110-3113.	0.8	6
56	Disorder effects on the charge-density waves structure in V- and W-doped blue bronzes: Friedel oscillations and charge-density wave pinning. Physical Review B, 2006, 74, .	1.1	29
57	New Insight to Excitons in Conjugated Polymers. ChemInform, 2005, 36, no.	0.1	0
58	Switching effects and sliding-induced charge transfer between the coexistingQ1andQ2charge density waves in NbSe3. European Physical Journal Special Topics, 2005, 131, 125-127.	0.2	0
59	Soluble model for X-ray scattering from CDWs with dislocations. European Physical Journal Special Topics, 2005, 131, 147-150.	0.2	6
60	Interlayer tunneling spectroscopy of layered CDW materials. European Physical Journal Special Topics, 2005, 131, 197-202.	0.2	9
61	Theory of subgap interchain tunneling in quasi 1D conductors. European Physical Journal Special Topics, 2005, 131, 83-86.	0.2	1
62	Recent views on solitons in Density Waves. European Physical Journal Special Topics, 2005, 131, 77-80.	0.2	6
63	Subgap tunneling through channels of polarons and bipolarons in chain conductors. Physical Review B, 2005, 72, .	1.1	6
64	Optical excitation in the creep phase of plastic charge-density waves. Physical Review B, 2005, 71, .	1.1	13
65	Victor J. Emery and recent applications of his ideas. Synthetic Metals, 2005, 152, 309-312.	2.1	1
66	Observation of Charge Density Wave Solitons in Overlapping Tunnel Junctions. Physical Review Letters, 2005, 95, 266402.	2.9	39
67	Conduction and optical effects in the plastic charge-density waves. European Physical Journal Special Topics, 2005, 131, 123-124.	0.2	1
68	Theory of the ferroelectric phase in organic conductors: From physics of solitons to optics. European Physical Journal Special Topics, 2004, 114, 9-13.	0.2	3
69	Sliding-Induced Decoupling and Charge Transfer between the CoexistingQ1andQ2Charge Density Waves inNbSe3. Physical Review Letters, 2004, 93, 106404.	2.9	13
70	Electronic interactions and excitons in conducting polymers. Current Applied Physics, 2004, 4, 473-478.	1.1	8
71	Pinning and sliding of driven elastic systems: from domain walls to charge density waves. Advances in Physics, 2004, 53, 177-252.	35.9	141
72	Conjugated polymers at the verge of strongly correlated systems and 1D semiconductors. Synthetic Metals, 2004, 141, 139-147.	2.1	8

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73	Pseudogaps in incommensurate charge density waves and one-dimensional semiconductors. Journal of Experimental and Theoretical Physics, 2003, 96, 555-563.	0.2	8
74	The theory for the ferroelectric Mottâ€“Hubbard phase in organic conductors. Synthetic Metals, 2003, 133-134, 301-303.	2.1	6
75	Topological character of excitations in strongly correlated electronic systems: confinement and dimensional crossover. Synthetic Metals, 2003, 133-134, 41-43.	2.1	1
76	Unified theory for optics of conducting polymers. Synthetic Metals, 2003, 135-136, 461-462.	2.1	5
77	The ferroelectric Mott-Hubbard phase in organic conductors. Synthetic Metals, 2003, 137, 1331-1333.	2.1	10
78	Interlayer tunnelling spectroscopy of the charge density wave state in NbSe3. Journal of Physics A, 2003, 36, 9323-9335.	1.6	24
79	Friedel oscillations and charge density wave pinning in quasi-one dimensional conductors: Thermal effects. European Physical Journal Special Topics, 2002, 12, 9-14.	0.2	3
80	Optical and electrooptical absorption in conducting polymers. Thin Solid Films, 2002, 403-404, 419-424.	0.8	6
81	Hydrodynamic theory of plastic flows with conversion. European Physical Journal Special Topics, 2002, 12, 173-176.	0.2	2
82	Theory of pseudogaps in charge density waves in application to photo electron spectroscopy. European Physical Journal Special Topics, 2002, 12, 73-73.	0.2	0
83	Theory of the ferroelectric Mott-Hubbard phase in organic conductors. European Physical Journal Special Topics, 2002, 12, 149-152.	0.2	1
84	Friedel oscillation and charge density wave pinning in vanadium-doped blue bronze. European Physical Journal Special Topics, 2002, 12, 79-80.	0.2	0
85	Singlet exciton binding energy in poly(phenylene vinylene). Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 13496-13500.	3.3	84
86	Friedel oscillations and charge-density waves pinning in quasi-one-dimensional conductors. Synthetic Metals, 2001, 120, 1075-1076.	2.1	0
87	Electric field induced ionization of the exciton in poly(phenylene vinylene). Synthetic Metals, 2001, 119, 503-506.	2.1	18
88	Excitations and optical properties of phenylene based polymers: effects of electric field. Synthetic Metals, 2001, 119, 651-652.	2.1	5
89	Confinement, dimensional crossover and topological coupling in quasi one dimensional electronic systems. Synthetic Metals, 2001, 120, 691-694.	2.1	0
90	Exciton binding energy in poly(phenylene vinylene). Synthetic Metals, 2001, 125, 93-98.	2.1	27

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91	Optics of polymers in the light of solid state physics. Synthetic Metals, 2001, 125, 129-138.	2.1	16
92	High resolution X-ray scattering techniques for studying the sliding CDWS distortions, in NbSe3. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2001, 467-468, 1010-1013.	0.7	2
93	X-ray scattering evidence for macroscopic strong pinning centers in the sliding CDW state of NbSe 3. Europhysics Letters, 2001, 56, 289-295.	0.7	21
94	Statistics of charged solitons and formation of stripes. Journal of Physics Condensed Matter, 2001, 13, 4015-4031.	0.7	9
95	Ferroelectric Mott-Hubbard Phase of Organic(TMTTF)2XConductors. Physical Review Letters, 2001, 86, 4080-4083.	2.9	245
96	Phase slippage at the interface: normal metal/sliding charge-density wave. Physica B: Condensed Matter, 2000, 280, 317-322.	1.3	0
97	Direct observation of temperature-dependent Fermi surface nesting vectors in a quasi-one-dimensional conductor. Journal of Physics Condensed Matter, 2000, 12, L191-L198.	0.7	24
98	Friedel oscillations and charge-density wave pinning in quasi-one-dimensional conductors: An x-ray diffraction study. Physical Review B, 2000, 62, R16231-R16234.	1.1	26
99	Plastic sliding of charge density waves: X-ray space resolved-studies versus theory of current conversion. Physical Review B, 2000, 61, 10640-10650.	1.1	51
100	Topological character of excitations in strongly correlated electronic systems : Confinement and dimensional crossover. European Physical Journal Special Topics, 2000, 10, Pr3-169-Pr3-175.	0.2	5
101	Topological defects in spin density waves. European Physical Journal Special Topics, 2000, 10, Pr3-183-Pr3-189.	0.2	2
102	The model for optical properties of PPP-type polymers.. Synthetic Metals, 1999, 101, 271-272.	2.1	5
103	A systematic theory for optical properties of phenylene-based polymers. Synthetic Metals, 1999, 100, 29-53.	2.1	67
104	Plastic sliding, strained states and current conversion in Density Waves. Synthetic Metals, 1999, 103, 2589-2592.	2.1	1
105	Excitations and optical properties of phenylene based polymers. Synthetic Metals, 1999, 101, 188-191.	2.1	5
106	Combined topological defects in spin density waves and the NBN generation. Synthetic Metals, 1999, 103, 1831-1832.	2.1	0
107	Stability of bipolarons in conjugated polymers. Synthetic Metals, 1999, 101, 325-326.	2.1	18
108	X-ray diffraction from pinned charge density waves. European Physical Journal Special Topics, 1999, 09, Pr10-23-Pr10-26.	0.2	1

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109	Excitations and optical properties of phenylene-based conjugated polymers and oligomers. Optical Materials, 1998, 9, 472-479.	1.7	41
110	Theory of electronic states and excitations in PPV. Optical Materials, 1998, 9, 465-471.	1.7	28
111	Stability of bipolarons in conjugated polymers. Optical Materials, 1998, 9, 502-506.	1.7	26
112	Condensed matter physics for non-destructive 100T magnets. Physica B: Condensed Matter, 1998, 246-247, 61-66.	1.3	4
113	Direct Observation of Charge Density Wave Current Conversion by Spatially Resolved Synchrotron X-Ray Studies inNbSe3. Physical Review Letters, 1998, 80, 5631-5634.	2.9	70
114	Thermal dependence of the x-ray white-line interference effect for charge-density waves in alloys of organic conductors. Physical Review B, 1997, 55, 3426-3434.	1.1	13
115	Dopant complexes and their effect on optical and contact processes. Synthetic Metals, 1997, 85, 1413-1414.	2.1	4
116	Vortex dynamics in organic superconductors. Synthetic Metals, 1997, 85, 1487-1491.	2.1	0
117	NMR in the (BEDT)2X organic superconductors. Synthetic Metals, 1997, 85, 1511-1514.	2.1	4
118	Nonlinear conduction and anomalous susceptibility of sliding electronic crystals: Charge and spin density waves. Synthetic Metals, 1997, 86, 2223-2224.	2.1	5
119	Electrons, excitons and insulator-metal phase transition in A4C60 and A2C60. Synthetic Metals, 1997, 86, 2385-2386.	2.1	0
120	Contact kinetics in conducting polymers. Synthetic Metals, 1996, 76, 229-232.	2.1	26
121	Insulator-metal transition in Rb4C60 under pressure: Jahn-Teller theory versus NMR experiments. Synthetic Metals, 1996, 77, 205-208.	2.1	11
122	Insulator-metal transition in Rb4C60 under pressure from 13C-NMR. Journal of Physics and Chemistry of Solids, 1996, 57, 143-152.	1.9	47
123	Two-Dimensional Vortex Melting in BEDT Organic Superconductors and NMR Relaxation Induced by Vortex Structure Defects. Physical Review Letters, 1996, 76, 4951-4954.	2.9	15
124	NMR in the 2D Organic Superconductors. Journal De Physique, I, 1996, 6, 2011-2041.	1.2	43
125	Intrinsic Defects and Plasticity in Charge and Spin Density Waves. NATO ASI Series Series B: Physics, 1996, , 465-473.	0.2	0
126	On origin of the low-temperature, low-frequency dielectric susceptibility peak in Charge and Spin Density Waves. Solid State Communications, 1995, 93, 275-279.	0.9	36

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127	Spin excitations carry charge currents: one-dimensional Hubbard model. Journal De Physique, I, 1994, 4, 571-578.	1.2	12
128	The current conversion kinetics in charge density waves. Synthetic Metals, 1993, 56, 2702-2707.	2.1	1
129	Towards the theory of metal-polymer contact. Synthetic Metals, 1993, 57, 4385-4392.	2.1	19
130	Charge density wave structure near a side metal contact. Synthetic Metals, 1993, 56, 2696-2701.	2.1	5
131	A general approach to charge/spin density waves electrodynamics. Journal De Physique, I, 1993, 3, 2417-2435.	1.2	15
132	Intrinsic defects in density waves. European Physical Journal Special Topics, 1993, 03, C2-185-C2-187.	0.2	1
133	Universality of charge/spin density waves linear properties. European Physical Journal Special Topics, 1993, 03, C2-267-C2-272.	0.2	0
134	Solitons, Twistons, Bubbles and Crystallinity in Conducting Polymers. Molecular Crystals and Liquid Crystals, 1992, 216, 151-156.	0.3	6
135	The charge density wave structure near a side metal contact. Journal De Physique, I, 1992, 2, 409-422.	1.2	17
136	Space-time distributions of solitons for the current conversion problem in charge density waves. Journal De Physique, I, 1992, 2, 725-740.	1.2	7
137	Solitons in charge density wave crystals. Synthetic Metals, 1991, 43, 4019-4024.	2.1	1
138	Solitons and crystallinity in conducting polymers. Synthetic Metals, 1991, 43, 3639-3642.	2.1	1
139	Symmetry of electronic states in antiferromagnets; applications to CuO2 planes. Physica C: Superconductivity and Its Applications, 1991, 185-189, 1583-1584.	0.6	0
140	On the current conversion problem in charge density wave crystals. II. Dislocations. Journal De Physique, I, 1991, 1, 1173-1185.	1.2	14
141	On the current conversion problem in charge density wave crystals. I. Solitons. Journal De Physique, I, 1991, 1, 269-280.	1.2	19
142	Amplitude solitons in spin density wave systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 1989, 140, 44-46.	0.9	0
143	Quantization and soliton charge in the Peierls model. Physics Letters, Section A: General, Atomic and Solid State Physics, 1989, 140, 47-50.	0.9	0
144	Solitons in Crystals of Charge Density Waves. Modern Problems in Condensed Matter Sciences, 1989, 25, 425-446.	0.1	5

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145	Possible superconductivity on the junction surface of dielectric La2CuO4. Physics Letters, Section A: General, Atomic and Solid State Physics, 1988, 132, 290-292.	0.9	13
146	On the theory of the superconducting phase in organic conductors. Journal De Physique, 1986, 47, 175-180.	1.8	3
147	Exactly solvable XY model of the spin Peierls transition. Journal of Statistical Physics, 1985, 38, 115-124.	0.5	2
148	On the possible superfluidity of bipolarons on the junction surface. Solid State Communications, 1985, 55, 187-191.	0.9	18
149	On the theory of phase transitions in organic superconductors. Journal De Physique (Paris), Lettres, 1985, 46, 111-116.	2.8	51
150	SOLITONS IN CHARGE AND SPIN DENSITY WAVE SYSTEMS. Journal De Physique Colloque, 1983, 44, C3-1525-C3-1530.	0.2	7
151	Exactly soluble peierls models. Physics Letters, Section A: General, Atomic and Solid State Physics, 1982, 91, 40-42.	0.9	12
152	The influence of phonons on the optical properties and the conductivity of quasi-one-dimensional metals. Solid State Communications, 1981, 38, 745-748.	0.9	4