

# Goran Karapetrov

## List of Publications by Year in descending order

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131  
papers

3,680  
citations

159585

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138484

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131  
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131  
docs citations

131  
times ranked

4871  
citing authors

#	ARTICLE	IF	CITATIONS
1	Photoinduced chiral charge density wave in $\text{TiSe}_2$ . Physical Review B, 2022, 105, .	3.2	15
2	Nanoporous metals from thermal decomposition of transition metal dichalcogenides. Acta Materialia, 2020, 184, 79-85.	7.9	17
3	Controlling $T_c$ of iridium films using the proximity effect. Journal of Applied Physics, 2020, 128, .	2.5	7
4	Evidence for pseudo-Jahn-Teller distortions in the charge density wave phase of $\text{TiSe}_2$ . Physical Review B, 2020, 101, .	3.2	15
5	Unconventional Applications of Superconducting Nanowire Single Photon Detectors. Nanomaterials, 2020, 10, 1198.	4.1	22
6	Spontaneous gyrotropic electronic order in a transition-metal dichalcogenide. Nature, 2020, 578, 545-549.	27.8	80
7	Superconducting nanowires as high-rate photon detectors in strong magnetic fields. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 959, 163543.	1.6	16
8	Ultrafast dynamics in the high-symmetry and in the charge density wave phase of $\text{TiSe}_2$ . Physical Review B, 2020, 102, .	3.2	15
9	Spectroscopic fingerprints of many-body renormalization in $\text{TiSe}_2$ . Physical Review B, 2019, 100, .	3.2	15
10	Quantitative magnetic force microscopy using calibration on superconducting flux quanta. Nanotechnology, 2019, 30, 314004.	2.6	6
11	Vortex-core properties and vortex-lattice transformation in FeSe. Physical Review B, 2019, 99, .	3.2	15
12	Reconfigurable lateral anionic heterostructures in oxide thin films via lithographically defined topochemistry. Physical Review Materials, 2019, 3, .	2.4	7
13	Ultra-high Photoresponsivity in Suspended Metal-Semiconductor-Metal Mesoscopic Multilayer MoS <sub>2</sub> Broadband Detector from UV-to-IR with Low Schottky Barrier Contacts. Scientific Reports, 2018, 8, 1276.	3.3	44
14	Evolution of Metastable Defects and Its Effect on the Electronic Properties of MoS <sub>2</sub> Films. Scientific Reports, 2018, 8, 6724.	3.3	40
15	Observation of Anisotropic Charge Density Wave in Layered 1T-TiSe <sub>2</sub> . Microscopy and Microanalysis, 2018, 24, 230-231.	0.4	0
16	Room temperature deposition of superconducting niobium nitride films by ion beam assisted sputtering. APL Materials, 2018, 6, 076107.	5.1	26
17	Tuning the activity/stability balance of anion doped CoS <sub>2</sub> dichalcogenides. Journal of Catalysis, 2018, 366, 50-60.	6.2	17
18	Metastable defects in monolayer and few-layer films of MoS <sub>2</sub> . AIP Conference Proceedings, 2018, , .	0.4	1

#	ARTICLE	IF	CITATIONS
19	Observation of a Charge Density Wave Incommensuration Near the Superconducting Dome in $\text{CuTiSe}_2$ . <i>Physical Review Letters</i> , 2017, 118, 027002.	7.8	78
20	Photon-induced selenium migration in $\text{TiSe}_2$ . <i>Applied Physics Letters</i> , 2017, 110, .	3.3	12
21	Modeling Iridium-Based Trilayer and Bilayer Transition-Edge Sensors. <i>IEEE Transactions on Applied Superconductivity</i> , 2017, 27, 1-5.	1.7	7
22	Magnetic and thermodynamic properties of $\text{Cu}_2\text{Te}$ single crystals. <i>Physical Review B</i> , 2017, 95, .	3.2	16
23	Anisotropic Superconducting Gaps and Boson Mode in $\text{FeSe } 1\hat{a}^{\wedge}x \text{ S x}$ Single Crystals. <i>Journal of Superconductivity and Novel Magnetism</i> , 2017, 30, 763-768.	1.8	2
24	Anisotropic charge density wave in layered $\text{TeCu}$ . <i>Physical Review Materials</i> , 2017, 1, .	2.4	11
25	Doppler-scanning tunneling microscopy current imaging in superconductor-ferromagnet hybrids. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	5
26	Superconductivity and hybrid soft modes in $\text{TiSe}_2$ . <i>Physical Review B</i> , 2016, 94, .	3.2	16
27	$\text{MoS}_2$ synthesis and high-performance broadband photodetector. , 2016, , .		0
28	Observation of superconducting vortex clusters in S/F hybrids. <i>Scientific Reports</i> , 2016, 6, 38557.	3.3	19
29	Observation of a transverse Meissner effect in $\text{CuTiSe}_2$ single crystals. <i>Physical Review B</i> , 2016, 93, .	3.2	4
30	Superconducting properties of sulfur-doped iron selenide. <i>Physical Review B</i> , 2015, 91, .	3.2	90
31	Evolution of the superconducting properties in $\text{FeSe}_{1-x}\text{S}_x$ . <i>Physical Review B</i> , 2015, 92, .	3.2	35
32	Asymmetry in Time Evolution of Magnetization in Magnetic Nanostructures. <i>Scientific Reports</i> , 2015, 5, 12301.	3.3	8
33	Emergence of coherence in the charge-density wave state of $2\text{H-NbSe}_2$ . <i>Nature Communications</i> , 2015, 6, 6313.	12.8	123
34	Influence of Domain Width on Vortex Nucleation in Superconductor/Ferromagnet Hybrid Structures. <i>Journal of Superconductivity and Novel Magnetism</i> , 2015, 28, 1107-1110.	1.8	6
35	Specific Heat Study of Superconductivity in $\text{Cu}_{0.061}\text{TiSe}_2$ . <i>Acta Physica Polonica A</i> , 2014, 126, 322-323.	0.5	1
36	Magnetization Studies of $\text{Cu}_{0.058}\text{TiSe}_2$ Near a Quantum Critical Point. <i>Acta Physica Polonica A</i> , 2014, 126, 336-337.	0.5	0

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37	Local Magnetometry of $\text{Cu}_{0.064}\text{TiSe}_2$ . Acta Physica Polonica A, 2014, 126, 370-371.	0.5	2
38	Vortex-antivortex coexistence in Nb-based superconductor/ferromagnet heterostructures. Physical Review B, 2014, 89, .	3.2	23
39	Magnetic pinning in a superconducting film by a ferromagnetic layer with stripe domains. Superconductor Science and Technology, 2014, 27, 125002.	3.5	4
40	Visualizing domain wall and reverse domain superconductivity. Nature Communications, 2014, 5, 4766.	12.8	28
41	Heat capacity of single-crystal $\text{Cu}_{0.064}\text{TiSe}_2$ . Physical Review B, 2013, 88, .	3.2	20
42	Magnetization properties and vortex phase diagram of $\text{Cu}_{0.064}\text{TiSe}_2$ single crystals. Physical Review B, 2013, 88, .	3.2	11
43	The influence of shape anisotropy on vortex nucleation in Pacman-like nanomagnets. Journal of Magnetism and Magnetic Materials, 2013, 336, 29-36.	2.3	7
44	High resolution switching magnetization magnetic force microscopy. Applied Physics Letters, 2013, 102, .	3.3	15
45	Chiral Phase Transition in Charge Ordered $\text{Cu}_{0.064}\text{TiSe}_2$ . Physical Review Letters, 2013, 110, 196404.	7.8	49
46	Vortex Confinement in Planar Superconductor/Ferromagnet Hybrid Structures. IEEE Transactions on Magnetism, 2012, 48, 3275-3279.	2.1	7
47	Evolution of the charge density wave state in $\text{Cu}_{0.064}\text{TiSe}_2$ . Physical Review B, 2012, 85, .	3.2	34
48	Dynamics of vortex nucleation in nanomagnets with broken symmetry. Physical Review B, 2012, 86, .	3.2	26
49	Micromagnetic Simulations of Pac-Man-Like Nanomagnets for Memory Applications. Journal of Nanoscience and Nanotechnology, 2012, 12, 7422-7425.	0.9	1
50	Visualizing Vortex Dynamics in Py/Nb Thin Film Hybrids by Low Temperature Magnetic Force Microscopy. Journal of Superconductivity and Novel Magnetism, 2012, 25, 2167-2171.	1.8	5
51	Evidence of vortex jamming in Abrikosov vortex flux flow regime. Physical Review B, 2012, 86, .	3.2	18
52	Multimetallic $\text{Au/FePt}_3$ Nanoparticles as Highly Durable Electrocatalyst. Nano Letters, 2011, 11, 919-926.	9.1	435
53	The spectroscopic signature of the Co magnetic state in $\text{CoNbSe}_2$ superconducting single crystals. Superconductor Science and Technology, 2011, 24, 024010.	3.5	2
54	Control of vortex chirality and polarity in magnetic nanodots with broken rotational symmetry. Physical Review B, 2011, 84, .	3.2	57

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55	Electron-Phonon Coupling and the Soft Phonon Mode in $\text{TiSe}_2$ . Physical Review Letters, 2011, 107, 266401.	7.8	104
56	Anisotropic Superconductivity and Vortex Dynamics in Magnetically Coupled F/S and F/S/F Hybrids. Journal of Superconductivity and Novel Magnetism, 2011, 24, 905-910.	1.8	2
57	Superconducting and normal state parameters of single crystal. Solid State Communications, 2011, 151, 227-228.	1.9	6
58	Imaging the spontaneous formation of vortex-antivortex pairs in planar superconductor/ferromagnet hybrid structures. Physical Review B, 2011, 84, .	3.2	49
59	Dimensionality crossover in vortex dynamics of magnetically coupled F/F hybrids. Superconductor Science and Technology, 2011, 24, 024012.	3.5	0
60	Novel Magnetic Tips Developed for the Switching Magnetization Magnetic Force Microscopy. Journal of Nanoscience and Nanotechnology, 2010, 10, 4477-4481.	0.9	7
61	The local effect of magnetic impurities on superconductivity in $\text{CoNb}_2\text{Se}_6$ and $\text{MnNb}_2\text{Se}_6$ single crystals. Journal of Physics Condensed Matter, 2010, 22, 015501.	1.8	14
62	Field polarity dependent nucleation of superconductivity in quasi-one-dimensional magnetic templates. Physica C: Superconductivity and Its Applications, 2010, 470, 860-862.	1.2	0
63	Magnetic elements for switching magnetization magnetic force microscopy tips. Journal of Magnetism and Magnetic Materials, 2010, 322, 2715-2721.	2.3	15
64	Fabrication and characterization of platinum nanoparticle arrays of controlled size, shape and orientation. Electrochimica Acta, 2010, 55, 7934-7938.	5.2	14
65	Selective catalysts for the hydrogen oxidation and oxygen reduction reactions by patterning of platinum with calix[4]arene molecules. Nature Materials, 2010, 9, 998-1003.	27.5	151
66	Giant conductance anisotropy in magnetically coupled Ferromagnet-Superconductor-Ferromagnet structures. Applied Physics Letters, 2010, 96, 092513.	3.3	7
67	Muon spin rotation study of the magnetic penetration depth in the intercalated graphite superconductor $\text{CaC}_6$ . Physical Review B, 2010, 82, .		
68	Adjustable Superconducting Anisotropy in Superconductor-Ferromagnet Bilayers. IEEE Transactions on Applied Superconductivity, 2009, 19, 3471-3474.	1.7	5
69	Transverse instabilities of multiple vortex chains in magnetically coupled $\text{NbSe}_2$ bilayers. Physical Review B, 2009, 80, .		
70	Shape-Dependent Activity of Platinum Array Catalyst. Journal of the American Chemical Society, 2009, 131, 5732-5733.	18.7	134
71	Adjustable superconducting anisotropy in MoGe-Permalloy hybrids. Journal of Physics: Conference Series, 2009, 150, 052095.	0.4	3
72	STM studies of $\text{CoNb}_2\text{Se}_6$ and $\text{MnNb}_2\text{Se}_6$ . Journal of Physics: Conference Series, 2009, 150, 052073.	0.4	5

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73	Unique Activity of Platinum Adislands in the CO Electrooxidation Reaction. Journal of the American Chemical Society, 2008, 130, 15332-15339.	13.7	142
74	Superconductor/ferromagnet bilayers: Influence of magnetic domain structure on vortex dynamics. Physical Review B, 2008, 77, .	3.2	37
75	Guiding superconducting vortices with magnetic domain walls. Physical Review B, 2008, 77, .	3.2	81
76	Tunable transport in magnetically coupled MoGe/Permalloy hybrids. Applied Physics Letters, 2008, 93, .	3.3	33
77	Effect of magnetic impurities on the vortex lattice properties in $\text{NbSe}_2$ single crystals. Physical Review B, 2008, 78, .	3.2	40
78	Fine Tuning of Activity for Nanoscale Catalysts. ECS Transactions, 2008, 16, 1151-1160.	0.5	0
79	Vortex lattice transitions in artificially engineered $\text{NbSe}_2$ single crystals observed by STM. Physica C: Superconductivity and Its Applications, 2007, 460-462, 952-953.	1.2	1
80	Novel Hall sensors developed for magnetic field imaging systems. Journal of Magnetism and Magnetic Materials, 2007, 316, 232-235.	2.3	3
81	STM Observation of Vortex Lattice Transitions in Superconducting Single Crystals with Periodic Pinning Arrays. AIP Conference Proceedings, 2006, , .	0.4	0
82	Fabrication of platinum nano-array model catalysts. , 2006, 6340, 274.		1
83	STM Imaging of Vortices in FIB-Sculptured Mesoscopic Superconductors. Microscopy and Microanalysis, 2006, 12, 990-991.	0.4	0
84	Optically activated high $T_c$ superconducting microbolometer. Journal of Physics: Conference Series, 2006, 43, 1342-1345.	0.4	1
85	In-plane anisotropy of coercive field in permalloy square ring arrays. Journal of Applied Physics, 2006, 99, 08Q508.	2.5	3
86	Direct observation of vortex lattice transitions in mesoscopic superconducting single crystals using STM. Physica C: Superconductivity and Its Applications, 2006, 437-438, 127-131.	1.2	1
87	Anisotropic superconducting phase diagram of $\text{C}_6\text{Ca}$ . Physica C: Superconductivity and Its Applications, 2006, 439, 43-46.	1.2	9
88	New transition in the vortex liquid state of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ . Physica C: Superconductivity and Its Applications, 2006, 437-438, 176-179.	1.2	2
89	Anisotropy of Magnetization Reversal and Magnetoresistance in Square Arrays of Permalloy Nano-Rings. IEEE Transactions on Magnetics, 2006, 42, 2948-2950.	2.1	3
90	Switching of magnetic domains in Permalloy microstructures using two-dimensional electron gas. Applied Physics Letters, 2006, 89, 182513.	3.3	1

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91	Oscillatory thickness dependence of the coercive field in magnetic three-dimensional antidot arrays. Applied Physics Letters, 2006, 88, 062511.	3.3	21
92	Anisotropy of Magnetization Reversal and Magnetoresistance in Square Arrays of Permalloy Nano-Rings. , 2006, , .		0
93	Anisotropic pinning in the vortex liquid phase of YBCO. Physica C: Superconductivity and Its Applications, 2005, 426-431, 14-17.	1.2	1
94	Shape-induced anisotropy in antidot arrays from self-assembled templates. IEEE Transactions on Magnetism, 2005, 41, 3598-3600.	2.1	4
95	Self-assembly routes towards creating superconducting and magnetic arrays. Journal of Low Temperature Physics, 2005, 139, 339-349.	1.4	4
96	Self-assembly Routes towards Creating Superconducting and Magnetic Arrays. Journal of Low Temperature Physics, 2005, 139, 339-349.	1.4	3
97	Characterization of off-axis MgB2 epitaxial thin films for planar junctions. Applied Physics Letters, 2005, 87, 242506.	3.3	14
98	Direct Observation of Geometrical Phase Transitions in Mesoscopic Superconductors by Scanning Tunneling Microscopy. Physical Review Letters, 2005, 95, 167002.	7.8	92
99	Imaging of vortex states in mesoscopic superconductors. Applied Physics Letters, 2005, 87, 162515.	3.3	11
100	Oscillatory thickness dependence of the coercive field in three-dimensional anti-dot arrays from self-assembly. Journal of Applied Physics, 2005, 97, 10J701.	2.5	6
101	STM tunnelling spectroscopy in MgB2 thin films: the role of band structure in tunnelling spectra. Superconductor Science and Technology, 2004, 17, S106-S111.	3.5	7
102	Phase Diagram of Single Crystal MgB2. Journal of Low Temperature Physics, 2003, 131, 1237-1244.	1.4	1
103	Directional scanning tunneling spectroscopy in MgB2. Physica C: Superconductivity and Its Applications, 2003, 385, 215-220.	1.2	15
104	Superconducting phase diagram of single-crystal MgB2. Physica C: Superconductivity and Its Applications, 2003, 385, 154-161.	1.2	34
105	Momentum-dependent scanning tunneling spectroscopy in MgB2. Physica C: Superconductivity and Its Applications, 2003, 388-389, 141-142.	1.2	3
106	Superconducting phase diagram of single crystal MgB2. Physica C: Superconductivity and Its Applications, 2003, 387, 137-142.	1.2	4
107	Superconducting transition and phase diagram of single-crystal MgB2. Physical Review B, 2003, 67, .	3.2	86
108	Upper critical magnetic fields in single crystal MgB2. Superconductor Science and Technology, 2003, 16, 193-198.	3.5	14

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109	MgB2: directional tunnelling and two-band superconductivity. Superconductor Science and Technology, 2003, 16, 156-161.	3.5	14
110	STM tunneling spectroscopic studies of $\text{YNdxBa}_2\text{xCu}_3\text{O}_7$ thin films. Physical Review B, 2002, 65, .	3.2	9
111	Two-Band Superconductivity in MgB2. Physical Review Letters, 2002, 89, 187002.	7.8	306
112	Anisotropy of the upper critical field and critical current in single crystal MgB2. Physical Review B, 2002, 66, .	3.2	176
113	Modification of vortex behavior through heavy ion lithography. Physica C: Superconductivity and Its Applications, 2002, 382, 137-141.	1.2	56
114	Scanning Tunneling Spectroscopy in MgB2. Physical Review Letters, 2001, 86, 4374-4377.	7.8	185
115	Contactless characterization of melt-textured superconducting junctions using micro-Hall sensor arrays. Physica B: Condensed Matter, 2000, 284-288, 2065-2066.	2.7	3
116	Effect of defects on the critical points in $\text{YBa}_2\text{Cu}_3\text{O}_7$ . Physica C: Superconductivity and Its Applications, 2000, 341-348, 953-956.	1.2	2
117	The effect of disorder on the critical points in the vortex phase diagram of YBCO. Physica C: Superconductivity and Its Applications, 2000, 332, 71-79.	1.2	15
118	Approaching the pT range with a 2DEG InGaAs/InP Hall sensor at 77 K. Microelectronic Engineering, 2000, 51-52, 333-342.	2.4	10
119	Disordered Vortex Phases in $\text{YBa}_2\text{Cu}_3\text{O}_7$ . Journal of Superconductivity and Novel Magnetism, 2000, 13, 741-748.	0.5	0
120	Critical Points in Heavy Ion Irradiated Untwinned $\text{YBa}_2\text{Cu}_3\text{O}_7$ Crystals. Physical Review Letters, 2000, 84, 3706-3709.	7.8	56
121	Controlled Dynamics of Interfaces in a Vibrated Granular Layer. Physical Review Letters, 1999, 82, 731-734.	7.8	36
122	Contactless characterization of melt-textured superconducting junctions using micro-Hall sensor arrays. Journal of Applied Physics, 1999, 86, 6282-6286.	2.5	15
123	Evidence for three-dimensional flux creep in thin-film $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_8$ . Physical Review B, 1995, 52, 3776-3783.	3.2	3
124	Field dependence of the current-voltage characteristics of thin-film $\text{YBaCuO}$ at low magnetic fields. Physica B: Condensed Matter, 1994, 194-196, 1889-1890.	2.7	0
125	Critical currents of granular $\text{YBa}_2\text{Cu}_3\text{O}_7$ -delta superconductors. Superconductor Science and Technology, 1992, 5, 338-345.	3.5	18
126	The anomalous magnetization of $\text{TmBa}_2\text{Cu}_3\text{O}_x$ superconducting single crystals. Physica B: Condensed Matter, 1991, 169, 653-654.	2.7	1



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127	Magnetic field and temperature dependence of critical current and magnetization in YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7-<math>\delta</math></sub> ceramics. Physica B: Condensed Matter, 1991, 169, 661-662.	2.7	4
128	Magnetic properties of YBa <sub>2</sub> Cu <sub>3</sub> O <sub>x</sub> monocristalline epitaxial superconducting films. Physica C: Superconductivity and Its Applications, 1991, 185-189, 1927-1928.	1.2	0
129	The peak-effect in untwinned TmBa <sub>2</sub> Cu <sub>3</sub> O <sub>x</sub> single crystals. Physica C: Superconductivity and Its Applications, 1991, 185-189, 2431-2432.	1.2	3
130	First critical fields, critical currents and flux creep of TmBa <sub>2</sub> Cu <sub>3</sub> O <sub>x</sub> and YBa <sub>2</sub> Cu <sub>3</sub> O <sub>x</sub> superconducting single crystals. Journal of Magnetism and Magnetic Materials, 1990, 90-91, 611-614.	2.3	8
131	Magnetic field dependence of ceramics critical current and magnetization in YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7-<math>\delta</math></sub> . Journal of Magnetism and Magnetic Materials, 1990, 90-91, 644-646.	2.3	2