

# Ilia Radulov

## List of Publications by Year in descending order

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63  
papers

1,607  
citations

430874

18  
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302126

39  
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64  
all docs

64  
docs citations

64  
times ranked

1455  
citing authors

#	ARTICLE	IF	CITATIONS
1	Simultaneous Multi-Property Probing During Magneto-Structural Phase Transitions: An Element-Specific and Macroscopic Hysteresis Characterization at ID12 of the ESRF. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-9.	4.7	1
2	Formation of pure $\text{Au}$ -phase in $\text{Mn-Al-C}$ by fast annealing using spark plasma sintering. Journal of Materials Science, 2022, 57, 6056-6065.	3.7	10
3	A Three-Dimensional Analysis of Magnetic Nanopattern Formation in FeRh Thin Films on MgO Substrates: Implications for Spintronic Devices. ACS Applied Nano Materials, 2022, 5, 5516-5526.	5.0	4
4	Microstructure and magnetic properties of Mn-Al-C permanent magnets produced by various techniques. Manufacturing Review, 2021, 8, 10.	1.5	9
5	Combined kinetic and Bean-Rodbell approach for describing field-induced transitions in $\text{La}_{11.6}\text{Si}_{1.4}$ alloys. Journal Physics D: Applied Physics, 2021, 54, 135003.	2.8	8
6	The impact of Pr and Nd substitution on structure, hysteresis and magnetocaloric properties of $\text{La}_{11.6}(\text{Pr,Nd})_x\text{Fe}_{11.6}\text{Si}_{1.4}$ . Journal Physics D: Applied Physics, 2021, 54, 225001.	2.8	2
7	Epitaxy Induced Highly Ordered $\text{Sm}_2\text{Co}_{17}$ $\text{SmCo}_5$ Nanoscale Thin-Film Magnets. ACS Applied Materials & Interfaces, 2021, 13, 32415-32423.	8.0	6
8	Twins – A weak link in the magnetic hardening of $\text{ThMn}_{12}$ -type permanent magnets. Acta Materialia, 2021, 214, 116968.	7.9	31
9	Investigations of the Alignment Process of PBPMLG: $^2\text{H}$ NMR Analysis Reveals a Thermoresponsive $90^\circ$ Flip of the Polymer. Angewandte Chemie - International Edition, 2021, 60, 21040-21046.	13.8	9
10	Investigations of the Alignment Process of PBPMLG: $^2\text{H}$ NMR Analysis Reveals a Thermoresponsive $90^\circ$ Flip of the Polymer. Angewandte Chemie, 2021, 133, 21208-21214.	2.0	0
11	Charge-transfer driven ferromagnetism in a disordered three-dimensional 3d-5d spin system. Journal of Magnetism and Magnetic Materials, 2021, 539, 168330.	2.3	0
12	Direct observation of paramagnetic spin fluctuations in $\text{La}_{13}\text{Si}_x$ . Journal of Physics Condensed Matter, 2020, 32, 115802.	1.8	5
13	Induction of uniaxial anisotropy by controlled phase separation in Y-Co thin films. Physical Review B, 2020, 102, .	3.2	2
14	Determination of the crystal field parameters in $\text{SmFe}_2$ . Physical Review B, 2020, 102, .	3.2	10
15	Accelerated crystallization and phase formation in $\text{Fe}_{40}\text{Ni}_{40}\text{B}_{20}$ by electric current assisted annealing technique. Journal of Alloys and Compounds, 2020, 836, 155338.	5.5	12
16	Pressure Dependence of Magnetic Properties in $\text{La}_2\text{Fe}_{14}\text{Si}_{12}$ : Multistimulus Responsiveness of Caloric Effects by Modeling and Experiment. Physical Review Applied, 2020, 13, .	3.8	22
17	Exchange stiffness of ferromagnets. European Physical Journal Plus, 2020, 135, 1.	2.6	13
18	Dynamic unidirectional anisotropy in cubic FeGe with antisymmetric spin-spin-coupling. Scientific Reports, 2020, 10, 2861.	3.3	1

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19	Influence of hydrogenation on the vibrational density of states of magnetocaloric $\text{LaFe}_{11.4}\text{Si}_{1.6}\text{H}$ compounds. Physical Review B, 2020, 102, 024407.	3.2	15
20	Magnetic Refrigeration with Recycled Permanent Magnets and Free Rare-Earth Magnetocaloric $\text{LaFeSi}$ . Energy Technology, 2020, 8, 1901025.	3.8	17
21	Ferrimagnetism, exchange bias and spin-glass property of disordered $\text{La}_2\text{CrNiO}_6$ . Journal of Magnetism and Magnetic Materials, 2020, 508, 166873.	2.3	12
22	Making a Cool Choice: The Materials Library of Magnetic Refrigeration. Advanced Energy Materials, 2019, 9, 1901322.	19.5	140
23	Rapid solidification of $\text{Nd}_{1-x}\text{Fe}_{11}\text{Ti}$ compounds: Phase formation and magnetic properties. Acta Materialia, 2019, 180, 15-23.	7.9	24
24	Tunable first order transition in $\text{La}(\text{Fe},\text{Cr},\text{Si})_{13}$ compounds: Retaining magnetocaloric response despite a magnetic moment reduction. Acta Materialia, 2019, 175, 406-414.	7.9	45
25	Correlation of Interface Structure with Magnetic Exchange in a Hard/Soft Magnetic Model Nanostructure. Physical Review Applied, 2019, 11, .	3.8	9
26	Anomalous Hall effect in $\text{La}_{1-x}\text{Pr}_x$ compounds. Physical Review B, 2019, 100, .	3.2	6
27	$\text{CeCo}_5$ thin films with perpendicular anisotropy grown by molecular beam epitaxy. Journal of Magnetism and Magnetic Materials, 2018, 452, 80-85.	2.3	6
28	Evolution of anisotropy in bcc Fe distorted by interstitial boron. Physical Review B, 2018, 97, .	3.2	6
29	Plastically deformed Gd-X ( $X = \text{Y}, \text{In}, \text{Zr}, \text{Ga}, \text{B}$ ) solid solutions for magnetocaloric regenerator of parallel plate geometry. Journal of Alloys and Compounds, 2018, 754, 207-214.	5.5	19
30	Prospects of additive manufacturing of rare-earth and non-rare-earth permanent magnets. Procedia Manufacturing, 2018, 21, 100-108.	1.9	37
31	Magnetocaloric effect in cold rolled foils of $\text{Gd}_{100-x}\text{In}_x$ ( $x = 0, 1, 3$ ). Journal of Magnetism and Magnetic Materials, 2018, 459, 46-48.	2.3	13
32	The role of Ni in modifying the order of the phase transition of $\text{La}(\text{Fe},\text{Ni},\text{Si})_{13}$ . Acta Materialia, 2018, 160, 137-146.	7.9	45
33	Evolution of Magnetic Anisotropy With Sm Contents in $\text{SmCo}$ Thin Films. IEEE Transactions on Magnetics, 2018, 54, 1-5.	2.1	4
34	A quantitative criterion for determining the order of magnetic phase transitions using the magnetocaloric effect. Nature Communications, 2018, 9, 2680.	12.8	273
35	$\text{YCo}_5$ thin films with perpendicular anisotropy grown by molecular beam epitaxy. Journal of Magnetism and Magnetic Materials, 2017, 432, 382-386.	2.3	6
36	Low-Temperature Phase $c$ -axis Oriented Manganese Bismuth Thin Films With High Anisotropy Grown From an Alloy $\text{Mn}_{55}\text{Bi}_{45}$ Target. IEEE Transactions on Magnetics, 2017, 53, 1-6.	2.1	9

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37	Heat Exchangers From Metal-Bonded $\text{La}(\text{Fe}, \text{Mn}, \text{Si})_{13}\text{H}_x$ Powder. IEEE Transactions on Magnetics, 2017, 53, 1-7.	2.1	15
38	Predicting the tricritical point composition of a series of LaFeSi magnetocaloric alloys via universal scaling. Journal Physics D: Applied Physics, 2017, 50, 414004.	2.8	38
39	A Matter of Size and Stress: Understanding the First-Order Transition in Materials for Solid-State Refrigeration. Advanced Functional Materials, 2017, 27, 1606735.	14.9	55
40	Mastering hysteresis in magnetocaloric materials. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150308.	3.4	210
41	Polymer-Bonded $\text{La}(\text{Fe}, \text{Mn}, \text{Si})_{13}\text{H}_x$ Plates for Heat Exchangers. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	28
42	Magnetic anisotropy of $\text{La}_2\text{Co}_7$ . Journal of Applied Physics, 2015, 118, .	2.5	14
43	Polymer-bonded $\text{La}(\text{Fe}, \text{Mn}, \text{Si})_{13}\text{H}_x$ ; heat exchangers with optimized magnetocaloric properties. , 2015, , .		0
44	On the preparation of $\text{La}(\text{Fe}, \text{Mn}, \text{Si})_{13}\text{H}$ polymer-composites with optimized magnetocaloric properties. Journal of Magnetism and Magnetic Materials, 2015, 396, 228-236.	2.3	73
45	Magnetic properties of $\text{La}(\text{Fe}, \text{Mn}, \text{Si})_{13}\text{H}_x$ alloys and the effect of doping by $\text{B}$ . Physical Review B, 2015, 92, .	3.2	62
46	Magnetic Properties of $(\text{Fe}, \text{Co})_{2}\text{B}$ Alloys With Easy-Axis Anisotropy. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	16
47	Towards high-performance permanent magnets without rare earths. Journal of Physics Condensed Matter, 2014, 26, 064205.	1.8	91
48	Heat exchangers made of polymer-bonded $\text{La}(\text{Fe}, \text{Si})_{13}$ . Journal of Applied Physics, 2014, 115, .	2.5	66
49	Bi-Quadratic Magnetoelectric Coupling in Underdoped $\text{La}_2\text{CuO}_{4+x}$ . Journal of Superconductivity and Novel Magnetism, 2013, 26, 1649-1652.	1.8	2
50	Theory of the magnetoelectric effect in a lightly doped high-Tccuprate. Physical Review B, 2012, 85, .	3.2	6
51	Evidence for filamentary superconductivity nucleated at antiphase domain walls in antiferromagnetic $\text{CaFeAsO}$ . Physical Review B, 2012, 85, .	3.2	44
52	Low-temperature ferroelectric phase and magnetoelectric coupling in underdoped $\text{La}_2\text{CuO}_{4+x}$ . Physical Review B, 2012, 85, .	3.2	16
53	Environmetric approaches for lake pollution assessment. Environmental Monitoring and Assessment, 2010, 164, 233-248.	2.7	8
54	A miniature capacitance dilatometer for magnetostriction and thermal expansion measurements. Journal of Physics: Conference Series, 2010, 253, 012072.	0.4	0

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55	Some Medical Applications of Nanomaterials. Solid State Phenomena, 2010, 159, 185-188.	0.3	1
56	Magnetostriction in orthorhombic manganites. Journal of Physics: Conference Series, 2009, 153, 012064.	0.4	3
57	Magneto and ferroelectric phase transitions in monocrystals. Journal of Magnetism and Magnetic Materials, 2008, 320, 43-46.	2.3	6
58	Magnetic properties of La <sub>0.78</sub> Pb <sub>0.22</sub> MnO <sub>3</sub> monocrystal. AIP Conference Proceedings, 2007, , .	0.4	0
59	Magnetic properties of HoMn <sub>2</sub> O <sub>5</sub> . AIP Conference Proceedings, 2007, , .	0.4	0
60	Colossal magnetostriction effect in HoMn <sub>2</sub> O <sub>5</sub> . European Physical Journal B, 2006, 52, 361-364.	1.5	15
61	Neutron-scattering experiment on solid <sup>3</sup> He. Applied Physics A: Materials Science and Processing, 2002, 74, s837-s839.	2.3	0
62	in situ magnetic modification of polar elastomers. Materials Research Bulletin, 2001, 36, 35-45.	5.2	11
63	Electrotransport Properties of the La(Fe <sub>1-x</sub> Ni <sub>x</sub> Co <sub>y</sub> Si <sub>y</sub> ) <sub>0.3</sub> Compounds. Materials Science Forum, 0, 845, 50-55.		0