

Robert Kruk

List of Publications by Year in descending order

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77
papers

2,776
citations

147726
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182361
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docs citations

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times ranked

3853
citing authors

#	ARTICLE	IF	CITATIONS
1	Gold Mesostructures with Tailored Surface Topography and Their Self-Assembly Arrays for Surface-Enhanced Raman Spectroscopy. <i>Nano Letters</i> , 2010, 10, 5006-5013.	4.5	295
2	Printed Electronics Based on Inorganic Semiconductors: From Processes and Materials to Devices. <i>Advanced Materials</i> , 2018, 30, e1707600.	11.1	148
3	Inkjet Printed, High Mobility Inorganic-Oxide Field Effect Transistors Processed at Room Temperature. <i>ACS Nano</i> , 2011, 5, 9628-9638.	7.3	118
4	High-entropy oxides: An emerging prospect for magnetic rare-earth transition metal perovskites. <i>Physical Review Materials</i> , 2019, 3, .	0.9	107
5	High-Speed, Low-Voltage, and Environmentally Stable Operation of Electrochemically Gated Zinc Oxide Nanowire Field-Effect Transistors. <i>Advanced Functional Materials</i> , 2013, 23, 1750-1758.	7.8	86
6	Intercalation-Driven Reversible Control of Magnetism in Bulk Ferromagnets. <i>Advanced Materials</i> , 2014, 26, 4639-4644.	11.1	85
7	Voltage-Control of Magnetism in All-Solid-State and Solid/Liquid Magnetoelectric Composites. <i>Advanced Materials</i> , 2019, 31, e1806662.	11.1	82
8	Above room temperature spin transition in a metallo-supramolecular coordination oligomer/polymer. <i>Chemical Communications</i> , 2007, , 2636.	2.2	81
9	A General Route toward Complete Room Temperature Processing of Printed and High Performance Oxide Electronics. <i>ACS Nano</i> , 2015, 9, 3075-3083.	7.3	78
10	Printed and Electrochemically Gated, High-Mobility, Inorganic Oxide Nanoparticle FETs and Their Suitability for High-Frequency Applications. <i>Advanced Functional Materials</i> , 2012, 22, 4909-4919.	7.8	75
11	Spin Transition in a Chainlike Supramolecular Iron(II) Complex. <i>Inorganic Chemistry</i> , 2006, 45, 10019-10021.	1.9	71
12	Ink-Jet Printed CMOS Electronics from Oxide Semiconductors. <i>Small</i> , 2015, 11, 3591-3596.	5.2	70
13	Toward On-and-Off Magnetism: Reversible Electrochemistry to Control Magnetic Phase Transitions in Spinel Ferrites. <i>Advanced Functional Materials</i> , 2016, 26, 7507-7515.	7.8	69
14	Electrolyte-Gated, High Mobility Inorganic Oxide Transistors from Printed Metal Halides. <i>ACS Applied Materials & Interfaces</i> , 2013, 5, 11498-11502.	4.0	67
15	<i>In situ</i> magnetometry studies of magnetoelectric LSMO/PZT heterostructures. <i>Physical Review B</i> , 2013, 87, .	1.1	63
16	External electric field driven 3D ordering architecture of silver (I) oxide meso-superstructures. <i>Nano Today</i> , 2010, 5, 175-182.	6.2	61
17	Magnetic properties of high entropy oxides. <i>Dalton Transactions</i> , 2021, 50, 1973-1982.	1.6	56
18	Hybrid supercapacitors for reversible control of magnetism. <i>Nature Communications</i> , 2017, 8, 15339.	5.8	51

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19	Lattice-solvent controlled spin transitions in iron(ii) complexes. Dalton Transactions, 2007, , 3531.	1.6	49
20	Magnetic properties of rare-earth and transition metal based perovskite type high entropy oxides. Journal of Applied Physics, 2020, 127, .	1.1	48
21	Lithium containing layered high entropy oxide structures. Scientific Reports, 2020, 10, 18430.	1.6	47
22	Role of intermediate $4f$ states in tuning the band structure of high entropy oxides. APL Materials, 2020, 8, .	2.2	47
23	Mechanochemical synthesis of novel rutile-type high entropy fluorides for electrocatalysis. Journal of Materials Chemistry A, 2021, 9, 8998-9009.	5.2	45
24	Crystallographic and Magnetic Structure of the Perovskite-Type Compound $\text{BaFeO}_{2.5}$: Unraveled Complexity in Oxygen Vacancy Ordering. Inorganic Chemistry, 2014, 53, 5911-5921.	1.9	44
25	The interplay of iron(ii) spin transition and polymorphism. Dalton Transactions, 2012, 41, 5163.	1.6	43
26	Voltage-Controlled On/Off Switching of Ferromagnetism in Manganite Supercapacitors. Advanced Materials, 2018, 30, 1703908.	11.1	43
27	Local Structural Disorder and Relaxation in SnO_2 Nanostructures Studied by ^{119}Sn MAS NMR and ^{119}Sn Mössbauer Spectroscopy. Journal of Physical Chemistry C, 2011, 115, 6433-6437.	1.5	40
28	High-Performance All-Printed Amorphous Oxide FETs and Logics with Electronically Compatible Electrode/Channel Interface. ACS Applied Materials & Interfaces, 2018, 10, 22408-22418.	4.0	39
29	Comprehensive investigation of crystallographic, spin-electronic and magnetic structure of		

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37	Thermal and Photoinduced Spin Crossover in a Mononuclear Iron(II) Complex with a Bis(pyrazolyl)pyridine Type of Ligand. <i>European Journal of Inorganic Chemistry</i> , 2013, 2013, 1049-1057.	1.0	24
38	Electrochemical Tuning of Magnetism in Ordered Mesoporous Transition-Metal Ferrite Films for Micromagnetic Actuation. <i>ACS Applied Nano Materials</i> , 2018, 1, 65-72.	2.4	24
39	Tailoring magnetic frustration in strained epitaxial FeRh films. <i>Physical Review B</i> , 2016, 93, .	1.1	22
40	The power of <i>in situ</i> pulsed laser deposition synchrotron characterization for the detection of domain formation during growth of Ba _{0.5} Sr _{0.5} TiO ₃ on MgO. <i>Journal of Synchrotron Radiation</i> , 2014, 21, 386-394.	1.0	19
41	Development of Fully Printed Electrolyte-Gated Oxide Transistors Using Graphene Passive Structures. <i>ACS Applied Electronic Materials</i> , 2019, 1, 1538-1544.	2.0	19
42	Combination of pulsed laser ablation and inert gas condensation for the synthesis of nanostructured nanocrystalline, amorphous and composite materials. <i>Nanoscale Advances</i> , 2019, 1, 4513-4521.	2.2	18
43	Proton Conduction in Grain-Boundary-Free Oxygen-Deficient BaFeO _{2.5} Thin Films. <i>Materials</i> , 2018, 11, 52.	1.3	17
44	Temperature tolerance study of high performance electrochemically gated SnO ₂ nanowire field-effect transistors. <i>Journal of Materials Chemistry C</i> , 2013, 1, 2534.	2.7	16
45	Room temperature reversible tuning of magnetism of electrolyte-gated La _{0.75} Sr _{0.25} MnO ₃ nanoparticles. <i>Journal of Applied Physics</i> , 2013, 113, .	1.1	16
46	Cluster-Assembled Nanocomposites: Functional Properties by Design. <i>Advanced Materials</i> , 2019, 31, e1806634.	11.1	16
47	Giant voltage-induced modification of magnetism in micron-scale ferromagnetic metals by hydrogen charging. <i>Nature Communications</i> , 2020, 11, 4849.	5.8	16
48	Ferroelectric vs. structural properties of large-distance sputtered epitaxial LSMO/PZT heterostructures. <i>AIP Advances</i> , 2012, 2, .	0.6	15
49	Anion Doping of Ferromagnetic Thin Films of La _{0.74} Sr _{0.26} MnO ₃ via Topochemical Fluorination. <i>Materials</i> , 2018, 11, 1204.	1.3	15
50	Determining role of individual cations in high entropy oxides: Structure and reversible tuning of optical properties. <i>Scripta Materialia</i> , 2022, 207, 114273.	2.6	15
51	Magnetolectric Tuning of Pinning-Type Permanent Magnets through Atomic-Scale Engineering of Grain Boundaries. <i>Advanced Materials</i> , 2021, 33, 2006853.	11.1	13
52	Anion ordering, magnetic structure and properties of the vacancy ordered perovskite Ba ₃ Fe ₃ O ₇ F. <i>Journal of Solid State Chemistry</i> , 2016, 243, 31-37.	1.4	11
53	Observation of electrochemically active Fe ³⁺ /Fe ⁴⁺ in LiCo _{0.8} Fe _{0.2} MnO ₄ by <i>in situ</i> Mössbauer spectroscopy and X-ray absorption spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 89-95.	1.3	11
54	Ni ₆₀ Nb ₄₀ Nanoglass for Tunable Magnetism and Methanol Oxidation. <i>ACS Applied Nano Materials</i> , 2020, 3, 7252-7259.	2.4	11

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55	Fully Printed Inverters using Metal-Oxide Semiconductor and Graphene Passives on Flexible Substrates. <i>Physica Status Solidi - Rapid Research Letters</i> , 2020, 14, 2000252.	1.2	11
56	Magnetolectric materials, phenomena, and devices. <i>APL Materials</i> , 2021, 9, .	2.2	11
57	Facile fabrication of electrolyte-gated single-crystalline cuprous oxide nanowire field-effect transistors. <i>Nanotechnology</i> , 2016, 27, 415205.	1.3	9
58	Magnetic Tb ₇₅ Fe ₂₅ Nanoglass for Cryogenic Permanent Magnet Undulator. <i>ACS Applied Nano Materials</i> , 2020, 3, 7281-7290.	2.4	9
59	Magnetic properties of iron cluster/chromium matrix nanocomposites. <i>Beilstein Journal of Nanotechnology</i> , 2015, 6, 1158-1163.	1.5	8
60	Controlling the structure and magnetic properties of cluster-assembled metallic glasses. <i>Materials Horizons</i> , 2019, 6, 727-732.	6.4	8
61	Magnetotransport Properties of Ferromagnetic Nanoparticles in a Semiconductor Matrix Studied by Precise Size-Selective Cluster Ion Beam Deposition. <i>Nanomaterials</i> , 2020, 10, 2192.	1.9	7
62	Ceramic synthesis of disordered lithium rich oxyfluoride materials. <i>Journal of Power Sources</i> , 2020, 467, 228230.	4.0	7
63	Bulk Nanostructured Materials: Non-Mechanical Synthesis. <i>Advanced Engineering Materials</i> , 2010, 12, 666-676.	1.6	6
64	Structure and conductivity of epitaxial thin films of barium ferrite and its hydrated form BaFeO _{2.5} xH ₂ O. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 115302.	1.3	6
65	Epitaxial strain-engineered self-assembly of magnetic nanostructures in FeRh thin films. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 025007.	1.3	6
66	Reversible control of magnetism: on the conversion of hydrated FeF ₃ with Li to Fe and LiF. <i>Journal of Materials Chemistry A</i> , 2019, 7, 24005-24011.	5.2	6
67	Nanowire facilitated transfer of sensitive TEM samples in a FIB. <i>Ultramicroscopy</i> , 2020, 219, 113075.	0.8	6
68	Epitaxial strain adaptation in chemically disordered FeRh thin films. <i>Physical Review B</i> , 2019, 99, .	1.1	5
69	Structural and Magnetic Properties of BaFeO _{2.667} Synthesized by Oxidizing BaFeO _{2.5} Obtained via Nebulized Spray Pyrolysis. <i>Inorganic Chemistry</i> , 2021, 60, 10923-10933.	1.9	4
70	Printing Technologies for Integration of Electronic Devices and Sensors. <i>NATO Science for Peace and Security Series C: Environmental Security</i> , 2020, , 1-34.	0.1	4
71	Robust Macroscopic Polarization of Block Copolymer-Templated Mesoporous Perovskite-Type Thin-Film Ferroelectrics. <i>Advanced Electronic Materials</i> , 2019, 5, 1800287.	2.6	3
72	ALD-Derived, Low-Density Alumina as Solid Electrolyte in Printed Low-Voltage FETs. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 3828-3833.	1.6	3

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73	Creating a Ferromagnetic Ground State with T_c Above Room Temperature in a Paramagnetic Alloy through Non-Equilibrium Nanostructuring. <i>Advanced Materials</i> , 2022, 34, e2108793.	11.1	3
74	In situ Lorentz Transmission Electron Microscopy of FeRh Thin Films. <i>Microscopy and Microanalysis</i> , 2018, 24, 934-935.	0.2	2
75	Electric-Potential-Induced Complete Control of Magnetization in MnZnSb Metallic Ferromagnets. <i>Advanced Electronic Materials</i> , 2021, 7, 2000790.	2.6	2
76	Dealloying-induced phase transformation in Fe-Rh alloys. <i>Applied Physics Letters</i> , 2022, 120, 141904.	1.5	1
77	Structural insights into metal-metalloid glasses from mass spectrometry. <i>Scientific Reports</i> , 2020, 10, 17467.	1.6	0