

Efrain E Rodriguez

List of Publications by Year in descending order

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Version: 2024-02-01

90
papers

2,633
citations

186209

28
h-index

206029

48
g-index

102
all docs

102
docs citations

102
times ranked

3981
citing authors

#	ARTICLE	IF	CITATIONS
1	New frontiers for the materials genome initiative. Npj Computational Materials, 2019, 5, .	3.5	312
2	Machine learning modeling of superconducting critical temperature. Npj Computational Materials, 2018, 4, .	3.5	274
3	Magnetic-crystallographic phase diagram of the superconducting parent compound Fe_{1-x}Te . High Temperature Magnetic Ordering in the	1.1	111
4	Perovskite SrTcO_3 . Physical Review Letters, 2011, 106, 067201.	2.9	99
5	Strong anisotropy in nearly ideal tetrahedral superconducting FeS single crystals. Physical Review B, 2016, 93, .	1.1	67
6	Phase Separation and Suppression of the Structural and Magnetic Transitions in Superconducting Doped Iron Tellurides, $\text{Fe}_{1-x}\text{Te}_{1-y}\text{S}_y$. Journal of the American Chemical Society, 2010, 132, 13000-13007.	6.6	62
7	Metastable Layered Cobalt Chalcogenides from Topochemical Deintercalation. Journal of the American Chemical Society, 2016, 138, 16432-16442.	6.6	61
8	Structural Studies of TcO_2 by Neutron Powder Diffraction and First-Principles Calculations. Journal of the American Chemical Society, 2007, 129, 10244-10248.	6.6	57
9	Noncollinear spin-density-wave antiferromagnetism in FeAs. Physical Review B, 2011, 83, .	1.1	57
10	Interstitial iron tuning of the spin fluctuations in the nonsuperconducting parent phase $\text{Fe}_{1-x}\text{Te}_{1-y}\text{S}_y$. Physical Review B, 2011, 84, .	1.1	57
11	Oxygen Storage Properties of LaSrFeO_3 for Chemical-Looping Reactions: An In Situ Neutron and Synchrotron X-ray Study. Chemistry of Materials, 2016, 28, 3951-3960.	3.2	57
12	The intercalation chemistry of layered iron chalcogenide superconductors. Journal of Solid State Chemistry, 2016, 242, 3-21.	1.4	55
13	Chemical control of interstitial iron leading to superconductivity in $\text{Fe}_{1+x}\text{Te}_{0.7}\text{Se}_{0.3}$. Chemical Science, 2011, 2, 1782.	3.7	53
14	Neutron diffraction study of average and local structure in $\text{La}_{0.5}\text{Ca}_{0.5}\text{MnO}_3$. Physical Review B, 2005, 71, .	1.1	52
15	The role of static disorder in negative thermal expansion in ReO_3 . Journal of Applied Physics, 2009, 105, .	1.1	49
16	Iodine as an Oxidant in the Topotactic Deintercalation of Interstitial Iron in Fe_{1-x}Te . Journal of the American Chemical Society, 2010, 132, 10006-10008.	6.6	48
17	Magnetic and structural properties near the Lifshitz point in Fe_{1-x}Te . Physical Review B, 2013, 88, .	1.1	48
18	Superconductivity and magnetism in iron sulfides intercalated by metal hydroxides. Chemical Science, 2017, 8, 3781-3788.	3.7	41

#	ARTICLE	IF	CITATIONS
19	Spin interactions in Mott insulating LaMnO_2 . <i>Physical Review Letters</i> , 2006, 96, 067201.	1.1	40
20	Displacive disorder in three high-k bismuth oxide pyrochlores. <i>Materials Research Bulletin</i> , 2006, 41, 961-966.	2.7	39
21	Frustrated magnetism in the tetragonal CoSe analog of superconducting FeSe. <i>Physical Review B</i> , 2018, 97, .	1.1	35
22	The fourth ferroic order: Current status on ferrotoroidic materials. <i>Journal of Solid State Chemistry</i> , 2019, 271, 175-190.	1.4	34
23	Preparation of the Binary Technetium Bromides: TcBr_3 and TcBr_4 . <i>Journal of the American Chemical Society</i> , 2009, 131, 910-911.	6.6	32
24	Phase diagram of the relaxor ferroelectric $(1-x)\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$ and a neutron powder diffraction study of the relaxor skin effect. <i>Phase Transitions</i> , 2015, 88, 283-305.	0.6	31
25	The preparation and phase diagrams of $(\text{Li}_{1-x}\text{Fe}_x\text{O})\text{FeSe}$ and $(\text{Li}_{1-x}\text{Fe}_x\text{OH})\text{FeSe}$ superconductors. <i>Journal of Materials Chemistry C</i> , 2016, 4, 3934-3941.	2.7	31
26	Intrinsic exchange bias in ZnFe_2O_4 . <i>Physical Review B</i> , 2009, 80, .	1.1	30
27	Structural disorder, magnetism, and electrical and thermoelectric properties of pyrochlore $\text{Nd}_2\text{Ru}_2\text{O}_7$. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 186004.	0.7	30
28	The Impact of Aluminum and Iron Substitution on the Structure and Electrochemistry of $\text{Li}(\text{Ni}_{1-x}\text{Al}_x)\text{O}$. <i>Chemistry of Materials</i> , 2009, 21, A1011.	1.3	29
29	Soft striped magnetic fluctuations competing with superconductivity in FeAsO . <i>Physical Review B</i> , 2014, 90, .	1.1	29
30	Influence of transition metal electronegativity on the oxygen storage capacity of perovskite oxides. <i>Chemical Communications</i> , 2016, 52, 10369-10372.	2.2	28
31	Technetium(IV) Halides Predicted from First-Principles. <i>Inorganic Chemistry</i> , 2009, 48, 6555-6558.	1.9	27
32	Preparation and Crystal Structures of Bismuth Technetates: A New Metal Oxide System. <i>Inorganic Chemistry</i> , 2008, 47, 6281-6288.	1.9	26
33	Tetrahedral Transition Metal Chalcogenides as Functional Inorganic Materials. <i>Chemistry of Materials</i> , 2017, 29, 5737-5752.	3.2	26
34	Solitary Magnons in the CaFe_2O_4 . <i>Physical Review Letters</i> , 2016, 117, 017201.	2.9	25
35	Spin-orbit excitons in CoO . <i>Physical Review B</i> , 2019, 100, .	1.1	25
36	On-the-fly autonomous control of neutron diffraction via physics-informed Bayesian active learning. <i>Applied Physics Reviews</i> , 2022, 9, 021408.	5.5	25

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37	Spin fluctuations and superconductivity in powders of Fe_{1-x}Te . Physical Review B, 2015, 92, .	1.1	24
38	Neutron investigation of the magnetic scattering in an iron-based ferromagnetic superconductor. Physical Review B, 2015, 92, .	1.1	24
39	Phase separation and superconductivity in $\text{Fe}_{1+x}\text{Te}_{0.5}\text{Se}_{0.5}$. Chemical Communications, 2011, 47, 11297.	2.2	22
40	Inducing Ferrimagnetism in Insulating Hollandite $\text{Ba}_{1.2}\text{Mn}_8\text{O}_{16}$. Chemistry of Materials, 2015, 27, 515-525.	3.2	22
41	Structural studies of the perovskite series $\text{La}_{1-x}\text{Sr}_x\text{CoO}_3$ during chemical looping with methane. Chemical Communications, 2019, 55, 4929-4932.	2.2	19
42	Synthesis and crystal chemistry of microporous titanates $\text{K}(\text{Ti},\text{M})_8\text{O}_{16}$ where $\text{M}=\text{Sc}^{\text{II}}\text{Ni}$. Journal of Solid State Chemistry, 2014, 220, 45-53.	1.4	18
43	Single to Multiquasiparticle Excitations in the Itinerant Helical Magnet CeRhIn_5 . Physical Review Letters, 2015, 114, 247005.	2.9	18
44	Manipulating surface magnetic order in iron telluride. Science Advances, 2019, 5, eaav3478.	4.7	18
45	Topologically driven linear magnetoresistance in helimagnetic FeP . Npj Quantum Materials, 2021, 6, .	1.8	18
46	Disentangling orbital and spin exchange interactions for CoO on a rocksalt lattice. Physical Review B, 2018, 98, .	1.7	17
47	Mössbauer study of the Fe^{57} iron-based superconductors parent compound Fe_{1+x}Te . Journal of Physics Condensed Matter, 2012, 24, 386006.	0.7	16
48	Understanding Dimethyl Methylphosphonate Adsorption and Decomposition on Mesoporous CeO_2 . ACS Applied Materials & Interfaces, 2021, 13, 54597-54609.	4.0	16
49	Isotope Effect between H_2O and D_2O in Hydrothermal Synthesis. Chemistry of Materials, 2020, 32, 769-775.	3.2	15
50	$(\text{C}_4\text{H}_{12}\text{N}_2)[\text{CoCl}_4]$: tetrahedrally coordinated Co^{2+} without the orbital degeneracy. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2015, 71, 20-24.	0.5	14
51	Competing spin density wave, collinear, and helical magnetism in Fe_{1-x}Te . Physical Review B, 2017, 95, .	1.1	14
52	Structural and electronic trends in rare-earth technetate pyrochlores. Dalton Transactions, 2010, 39, 7207.	1.6	13
53	Anharmonic Magnon Excitations in Noncollinear and Charge-Ordered RbFeF_6 . Physical Review Letters, 2018, 121, 087201.	2.9	13
54	Review of technetium chemistry research conducted at the University of Nevada Las Vegas. Journal of Radioanalytical and Nuclear Chemistry, 2009, 282, 605-609.	0.7	12

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55	A new family of metal borohydride guanidinate complexes: Synthesis, structures and hydrogen-storage properties. Journal of Solid State Chemistry, 2016, 242, 186-192.	1.4	12
56	Study of C/Doped Bi_2O_3 Redox Reactions by in Operando Synchrotron X-ray Diffraction: Bond Energy/Oxygen Vacancy and Reaction Kinetics Relationships. Journal of Physical Chemistry C, 2018, 122, 8796-8803.	1.5	12
57	A STEP-NC implementation approach for additive manufacturing. Procedia Manufacturing, 2019, 38, 9-16.	1.9	12
58	Single crystal magnetic structure and susceptibility of CoSe_2O_5 . Journal of Solid State Chemistry, 2016, 236, 39-44.	1.4	11
59	Orphan Spins in the CaFe_2O_7 Antiferromagnet CaFe_2O_7 . Physical Review Letters, 2017, 119, 257204.	2.9	11
60	Distinguishing the Intrinsic Antiferromagnetism in Polycrystalline LiCoPO_4 and LiMnPO_4 Olivines. Inorganic Chemistry, 2020, 59, 5883-5895.	1.9	11
61	PZT-like structural phase transitions in the BiFeO_3 - KNbO_3 solid solution. Dalton Transactions, 2015, 44, 10608-10613.	1.6	10
62	Preparation, magnetism and electronic structures of cadmium technetates. Journal of Materials Chemistry, 2011, 21, 1496-1502.	6.7	9
63	Magnetically stabilized $\text{Fe}_8(\frac{1}{4}\text{-S})_6\text{S}_8$ clusters in $\text{Ba}_6\text{Fe}_{25}\text{S}_{27}$. Dalton Transactions, 2014, 43, 14612-14624.	1.6	9
64	Stabilization of cubic $\text{Sr}_2\text{FeMoO}_6$ through topochemical reduction. Chemical Communications, 2015, 51, 12201-12204.	2.2	9
65	Tuning the electronic band structure of microporous titanates with the hollandite structure. Journal of Materials Chemistry A, 2015, 3, 20330-20337.	5.2	9
66	Evolution of noncollinear magnetism in magnetocaloric MnPtGa . Physical Review Materials, 2020, 4, .	0.9	9
67	In situ diffraction studies on reversible oxygen uptake and release in $\text{AFe}_2\text{O}_4 + \text{I}$ (A= Lu, Yb, Y, and In). Journal of Materials Chemistry A, 2018, 6, 4801-4810.	5.2	8
68	Polar Ferromagnetic Metal by Intercalation of Metal-Amine Complexes. Chemistry of Materials, 2021, 33, 4936-4947.	3.2	8
69	Metastable antiphase boundary ordering in $\text{Ca}_4\text{Fe}_8\text{O}_{14}$. Physical Review B, 2021, 104, .	1.1	8
70	Magnetic ordering and magnetodielectric phenomena in CoSeO_4 . Journal of Physics Condensed Matter, 2010, 22, 506003.	0.7	7
71	Frontiers in hybrid and interfacial materials chemistry research. MRS Bulletin, 2020, 45, 951-964.	1.7	6
72	Magnetic surface reconstruction in the van der Waals antiferromagnet Fe_2O_3 . Physical Review B, 2021, 103, .	1.1	6

#	ARTICLE	IF	CITATIONS
73	Development of potential organic-molecule-based hydrogen storage materials: Converting C N bond-breaking thermolysis of guanidine to N H bond-breaking dehydrogenation. International Journal of Hydrogen Energy, 2016, 41, 18542-18549.	3.8	5
74	Proton and ammonia intercalation into layered iron chalcogenides. Chemical Communications, 2018, 54, 6895-6898.	2.2	5
75	Orbital Contribution to Paramagnetism and Noninnocent Thiophosphate Anions in Layered Li_2MPS_6 Where M = Fe and Co. Inorganic Chemistry, 2021, 60, 10090-10098.	1.9	5
76	Magnetic order effects on the electronic structure of K_2MnS_2 . Physical Review Materials, 2020, 4, 041101.	0.9	5
77	Synthetic and Coordination Chemistry of the Heavier Trivalent Technetium Binary Halides: Uncovering Technetium Triiodide. Inorganic Chemistry, 2013, 52, 14309-14316.	1.9	4
78	Magnetic ordering in a frustrated bow-tie lattice. Journal of Materials Chemistry C, 2018, 6, 4541-4548.	2.7	4
79	Small-angle neutron polarimetry apparatus (SANPA): Development at the NIST Center for Neutron Research. Review of Scientific Instruments, 2019, 90, 063303.	0.6	3
80	Long-range magnetic order in hydroxide-layer-doped $(\text{Li}_{1-x}\text{Fe}_x\text{MnyOD})\text{FeSe}$. Physical Review Materials, 2020, 4, .	0.9	3
81	Spectroscopic studies of methyl paraoxon decomposition over mesoporous Ce-doped titanias for toxic chemical filtration. Journal of Hazardous Materials, 2022, 438, 129536.	6.5	3
82	Metal-insulator transition tuned by magnetic field in $\text{Bi}_{1.7}\text{VO}_{16}$ hollandite. Journal of Materials Chemistry C, 2017, 5, 4967-4976.	2.7	2
83	On the Electrochemical Phase Evolution of Anti-PbO-Type CoSe in Alkali Ion Batteries. Inorganic Chemistry, 2021, 60, 7150-7160.	1.9	2
84	AVANCES EN EL DESARROLLO DE UN SISTEMA DE MANUFACTURA ADITIVA BASADO EN STEP-NC. Revista Producción y Desarrollo, 2018, 4, 39-53.	0.2	2
85	Crystal field-induced lattice expansion upon reversible oxygen uptake/release in $\text{YbMnFe}_2\text{O}_4$. Materials Advances, 2022, 3, 1087-1100.	2.6	2
86	Physical properties and electronic structure of single-crystal $\text{KCo}_2\text{Mn}_2\text{PO}_8$. Physical Review Materials, 2022, 6, .	0.2	2
87	Titania Nanomaterials for Sarin Decomposition: Understanding Fundamentals. ACS Applied Nano Materials, 2022, 5, 6659-6670.	2.4	2
88	Tuning Magnetic Symmetry and Properties in the Olivine Series LiFeMnPO_4 through Selective Delithiation. Chemistry of Materials, 2022, 34, 5039-5053.	3.2	2
89	Hydrothermal Synthesis and Crystal Growth. , 2021, , 99-136.		0
90	Mesoporous perovskite titanates via hydrothermal conversion. Chemical Communications, 2022, 58, 783-786.	2.2	0