

Tyrel M Mcqueen

List of Publications by Year in descending order

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134
papers

7,247
citations

87723

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136
all docs

136
docs citations

136
times ranked

6940
citing authors

#	ARTICLE	IF	CITATIONS
1	Electronic and magnetic phase diagram of \hat{I}^2 -Fe _{1.01} Se with superconductivity at 36.7%K under pressure. Nature Materials, 2009, 8, 630-633.	13.3	943
2	Extreme sensitivity of superconductivity to stoichiometry in Fe_{1-x}Te . Physical Review B, 2009, 79, .	1.1	582
3	Tetragonal-to-Orthorhombic Structural Phase Transition at 90ÅK in the Superconductor Fe_{1-x}Te . Physical Review Letters, 2009, 103, 057002.	2.9	441
4	New kagome prototype materials: discovery of KV_3Sb_5 and CsV_3Sb_5 . Physical Review Materials, 2019, 3, .	0.9	398
5	Why Does Undoped FeSe Become a High- T_c Superconductor under Pressure?. Physical Review Letters, 2009, 102, 177005.	0.9	369
6	Giant, unconventional anomalous Hall effect in the metallic frustrated magnet candidate, KV_3Sb_5 . Science Advances, 2020, 6, eabb6003.	4.7	295
7	Designing indirect direct bandgap transitions in double perovskites. Materials Horizons, 2017, 4, 688-693.	6.4	290
8	Site Specific X-ray Anomalous Dispersion of the Geometrically Frustrated Kagomè Magnet, Herbertsmithite, $\text{ZnCu}_3(\text{OH})_6\text{Cl}_2$. Journal of the American Chemical Society, 2010, 132, 16185-16190.	6.6	166
9	Tuning the charge density wave and superconductivity in Cu_xTe . Physical Review B, 2008, 78, .	1.1	136
10	The field-free Josephson diode in a van der Waals heterostructure. Nature, 2022, 604, 653-656.	13.7	131
11	Iron displacements and magnetoelastic coupling in the antiferromagnetic spin-ladder compound BaFe_2Se_3 . Physical Review B, 2011, 84, .	1.1	118
12	Possible valence-bond condensation in the frustrated cluster magnet $\text{LiZn}_2\text{Mo}_3\text{O}_8$. Nature Materials, 2012, 11, 493-496.	13.3	116
13	Intrinsic properties of stoichiometric LaFePO. Physical Review B, 2008, 78, .	1.1	102
14	Orbital-selective magnetism in the spin-ladder iron selenides $\text{BaKFe}_2\text{Se}_3$. Physical Review Letters, 2015, 114, 036401.	1.1	91
15	Scaling and data collapse from local moments in frustrated disordered quantum spin systems. Nature Communications, 2018, 9, 4367.	5.8	89
16	Chemistry of Quantum Spin Liquids. Chemical Reviews, 2021, 121, 2898-2934.	23.0	89
17	Interaction Driven Subgap Spin Exciton in the Kondo Insulator SmB_6 . Physical Review Letters, 2015, 114, 036401.	2.9	83
18	Disordered Route to the Coulomb Quantum Spin Liquid: Random Transverse Fields on Spin Ice in Pr_2O_7 . Physical Review Letters, 2017, 118, 107206.	0.9	83

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19	Hierarchy of Bound States in the One-Dimensional Ferromagnetic Ising Chain CoNb_2O_6 by High-Resolution Time-Domain Terahertz Spectroscopy. <i>Physical Review Letters</i> , 2014, 112, 107403.	2.9	62
20	Stacking Variants and Superconductivity in the Bi ₂ O ₃ System. <i>Journal of the American Chemical Society</i> , 2013, 135, 5372-5374.	6.6	80
21	Insulator to correlated metal transition in $V_2\text{O}_7$ <i>Physical Review B</i> , 2009, 79, .	1.1	79
22	The metal-insulator transition in Fe _{1.01} Cu _{1-x} Se. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 305701.	0.7	73
23	Mixed-valence-driven heavy-fermion behavior and superconductivity in KNi ₂ Se KNi_2Se	1.1	71
24	Origin and tuning of the magnetocaloric effect in the magnetic refrigerant		

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37	Anomalous three-dimensional bulk ac conduction within the Kondo gap of SmB_6 single crystals. Physical Review B, 2016, 94, .	1.1	42
38	Charge density wave fluctuations, heavy electrons, and superconductivity in $\text{KNi}_2\text{S}_2\text{O}_7$. Physical Review B, 2013, 87, .	1.1	42
39	SmB_6 Cluster Anion: Covalency Involving f Orbitals. Journal of Physical Chemistry A, 2017, 121, 1849-1854.	1.1	40
40	Autoreduction of $\text{Pd}^{\sim}\text{Co}$ and $\text{Pt}^{\sim}\text{Co}$ Cyanogels: Exploration of Cyanometalate Coordination Chemistry at Elevated Temperatures. Journal of the American Chemical Society, 2008, 130, 5563-5572.	6.6	38
41	Magnetic Structures of LiMBO_3 (M = Mn, Fe, Co) Lithiated Transition Metal Borates. Inorganic Chemistry, 2013, 52, 11966-11974.	1.9	38
42	On the Chemistry and Physical Properties of Flux and Floating Zone Grown SmB_6 Single Crystals. Scientific Reports, 2016, 6, 20860.	1.6	38
43	A $\text{Cu}_2(\text{S} = 1/2)$ Kagomé Antiferromagnet: $\text{Mg}_x\text{Cu}_4\text{x}(\text{OH})_6\text{Cl}_2$. Journal of the American Chemical Society, 2010, 132, 5570-5571.	6.6	36
44	Density of phonon states in superconducting FeSe as a function of temperature and pressure. Physical Review B, 2010, 81, .	1.1	34
45	Breakdown of the Kondo insulating state in SmB_6 introducing Sm vacancies. Physical Review B, 2016, 94, .	1.1	34
46	Frustrated spin one on a diamond lattice in NiRh_2O_4 . Physical Review Materials, 2018, 2, .	0.9	34
47	New honeycomb iridium (Ir^{IV}) oxides: NaIrO_3 and $\text{Sr}_3\text{CaIr}_2\text{O}_9$. Dalton Transactions, 2015, 44, 20344-20351.	1.6	32
48	Screened moments and extrinsic in-gap states in samarium hexaboride. Nature Communications, 2018, 9, 1539.	5.8	31
49	Tunable Magnetic Transition to a Singlet Ground State in a 2D van der Waals Layered Trimerized Kagomé Magnet. ACS Nano, 2019, 13, 9457-9463.	7.3	31
50	Single-crystal growth of Cu_4U and universal behavior in quantum spin liquid candidates synthetic barlowite and herbertsmithite. Physical Review Materials, 2018, 2, .	0.9	31
51	$\text{Ni}_2\text{M}_3\text{O}_{10}$ Evidence for Topologically Protected Surface States and a Superconducting Phase in $\text{Ni}_2\text{M}_3\text{O}_{10}$. Physical Review Materials, 2018, 2, .	0.9	31
52	Ti_4O_{10}		

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55	Rearrangement of van der Waals stacking and formation of a singlet state at T = 90 K in a cluster magnet. <i>Inorganic Chemistry Frontiers</i> , 2017, 4, 481-490.	3.0	28
56	Duality and domain wall dynamics in a twisted Kitaev chain. <i>Nature Physics</i> , 2021, 17, 832-836.	6.5	28
57	Fluorescence Delineation of the Surfactant Microstructures in the CTAB~SOS~H2O Catanionic System. <i>Langmuir</i> , 2004, 20, 64-72.	1.6	27
58	Superconductivity at 2.2 K in the layered oxyprictide La ₃ Ni ₄ P ₄ O ₂ . <i>Physical Review B</i> , 2009, 79, .	1.1	25
59	Photoinitiated Reactivity of a Thiolate-Ligated, Spin-Crossover Nonheme {FeNO} ⁷ Complex with Dioxygen. <i>Journal of the American Chemical Society</i> , 2016, 138, 3107-3117.	6.6	25
60	NaSrMn ₂ F ₇ , NaCaFe ₂ F ₇ , and NaSrFe ₂ F ₇ : novel single crystal pyrochlore antiferromagnets. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 045801.	0.7	25
61	Ballistic magnon heat conduction and possible Poiseuille flow in the helimagnetic insulator $\text{Cu}_2\text{Mn}_2\text{S}_5$ <i>Physical Review B</i> , 2017, 95, .	1.1	25
62	(Cs _X)Cu ₅ O ₂ (PO ₄) ₂ (X = Cl, Br, I): A Family of Cu ₂ S = ¹ / ₂ Compounds with Capped-Kagom� Networks Composed of OCu ₄ Units. <i>Inorganic Chemistry</i> , 2019, 58, 4328-4336.	1.9	25
63	Universal Single-Ion Physics in Spin�Orbit-Coupled d ⁵ and d ⁴ Ions. <i>Inorganic Chemistry</i> , 2018, 57, 14443-14449.	1.9	24
64	Competing antiferromagnetic-ferromagnetic states in a d_{xy} Kitaev honeycomb magnet. <i>Physical Review B</i> , 2020, 102, .	1.1	24
65	Magnetic properties of the garnet and glass forms of $\text{Mn}_3\text{M}_2\text{O}_{12}$ $\text{Mn}_3\text{M}_2\text{O}_{12}$ <i>Physical Review B</i> , 2009, 80, .	1.1	22
66	CdCu ₃ (OH) ₆ Cl ₂ : A new layered hydroxide chloride. <i>Journal of Solid State Chemistry</i> , 2011, 184, 3319-3323.	1.4	22
67	Nonuniform carrier density in $\text{Cd}_2\text{Mn}_3\text{O}_{10}$ evidenced by optical spectroscopy. <i>Physical Review B</i> , 2018, 97, .	1.1	22
68	Species Distribution Diagrams in the Copper-Ammonia System: An Updated and Expanded Demonstration Illustrating Complex Equilibria. <i>Journal of Chemical Education</i> , 2005, 82, 408.	1.1	21
69	Control of the Iridium Oxidation State in the Hollandite Iridate Solid Solution K _{1-x} Ir ₄ O ₈ . <i>Inorganic Chemistry</i> , 2014, 53, 4500-4507.	1.9	21
70	Electron Doping of Proposed Kagome Quantum Spin Liquid Produces Localized States in the Band Gap. <i>Physical Review Letters</i> , 2018, 121, 186402.	2.9	21
71	The new misfit compound (BiSe) _{1.15} (TiSe ₂) ₂ and the role of dimensionality in the Cux(BiSe) _{1+�} (TiSe ₂) _n series. <i>Journal of Solid State Chemistry</i> , 2014, 209, 6-12.	1.4	20
72	Field-dependent heat transport in the Kondo insulator SmB_6 : Phonons scattered by magnetic impurities. <i>Physical Review B</i> , 2018, 97, .	1.1	20

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73	Chemically controlled crystal growth of (CH ₃ NH ₃) ₂ AgInBr ₆ . CrystEngComm, 2018, 20, 5929-5934.	1.3	20
74	Spin and Charge Interconversion in Dirac-Semimetal Thin Films. Physical Review Applied, 2021, 16, .	1.5	20
75	Synthesis and Structure of Three New Oxychalcogenides: A ₂ O ₂ Bi ₂ Se ₃ (A = Sr, Ba) and Sr ₂ O ₂ Sb ₂ Se ₃ . Chemistry of Materials, 2016, 28, 890-895.	3.2	19
76	Improved instrumentation for intensity-, wavelength-, temperature-, and magnetic field-resolved photoconductivity spectroscopy. Journal of Solid State Chemistry, 2016, 242, 199-207.	1.4	18
77	Pushing boundaries: High pressure, supercritical optical floating zone materials discovery. Journal of Solid State Chemistry, 2019, 270, 705-709.	1.4	18
78	Nanotesla Magnetometry with the Silicon Vacancy in Silicon Carbide. Physical Review Applied, 2021, 15, .	1.5	18
79	Laser-Enhanced Single Crystal Growth of Non-Symmorphic Materials: Applications to an Eight-Fold Fermion Candidate. Chemistry of Materials, 2020, 32, 5827-5834.	3.2	17
80	Charge density wave behavior and order-disorder in the antiferromagnetic metallic series $\text{EuTl}_2\text{Pt}_2\text{Sb}_2$ (math xmlns:mml="http://www.w3.org/1998/Math/MathML" > $\text{EuTl}_2\text{Pt}_2\text{Sb}_2$ (math	1.1	16
81	Physical Review B, 2018, 97, . Dirac fermions and possible weak antilocalization in LaCuSb ₂ . APL Materials, 2019, 7, .	2.2	16
82	Unique edge-sharing sulfate-transition metal coordination in Na ₂ M(SO ₄) ₂ (M=Ni and Co). Journal of Solid State Chemistry, 2015, 222, 129-135.	1.4	15
83	Anomalous thickness-dependent electrical conductivity in van der Waals layered transition metal halide, Nb ₃ Cl ₈ . Journal of Physics Condensed Matter, 2020, 32, 304004.	0.7	15
84	Stoichiometry, spin fluctuations, and superconductivity in LaNiPO. Physical Review B, 2009, 79, .	1.1	14
85	Representational analysis of extended disorder in atomistic ensembles derived from total scattering data. Journal of Applied Crystallography, 2015, 48, 1560-1572.	1.9	14
86	Electronic tunability of the frustrated triangular-lattice cluster magnet LiZn ₂ Mo ₃ O ₈ . Materials Horizons, 2015, 2, 76-80.	6.4	14
87	Nonpolar-to-Polar Trimerization Transitions in the $S = 1$ Kagomé Magnet Na ₂ Ti ₃ Cl ₈ . Inorganic Chemistry, 2019, 58, 11941-11948.	1.9	14
88	Spinon excitations in the quasi-one-dimensional chain compound CsCuS_4 (math xmlns:mml="http://www.w3.org/1998/Math/MathML" > CsCuS_4 (math	1.1	14
89	Twisting of 2D Kagomé Sheets in Layered Intermetallics. ACS Central Science, 2021, 7, 1381-1390.	5.3	14
90	Evolution of magnetism in the $\text{Li}_2\text{Zr}_2\text{O}_7$ (math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0033.gif"		

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91	Magnetic dichroism in the Kondo insulator SmB_6 . Physical Review B, 2019, 99, 040407. Introduction of spin centers in single crystals of SmB_6 . Physical Review B, 2019, 99, 040407.	1.1	12
92	Enhanced hybridization in the electronic ground state of the intercalated honeycomb iridate $\text{Ag}_3\text{LiIr}_2\text{O}_6$. Physical Review B, 2021, 104, .	1.1	11
93	Superconducting dome and crossover to an insulating state in $[\text{Ti}_4]\text{Ti}_8\text{S}_8\text{Te}_3$. APL Materials, 2015, 3, .	2.2	10
96	Seeded Chemical Vapor Transport Growth of Cu_2OSeO_3 . Crystal Growth and Design, 2017, 17, 4944-4948.	1.4	10
97	RuAl_6 An Endohedral Aluminide Superconductor. Chemistry of Materials, 2020, 32, 3805-3812.	3.2	10
98	A Gold(I) Oxide Double Perovskite: Ba_2AuO_6 . Journal of the American Chemical Society, 2021, 143, 19033-19042.	6.6	10
99	Cluster-glass behavior of a highly oxygen deficient perovskite, $\text{BaBi}_{0.28}\text{Co}_{0.72}\text{O}_{2.2}$. Journal of Physics Condensed Matter, 2009, 21, 105801.	0.7	9
100	Direct assignment of molecular vibrations via normal mode analysis of the neutron dynamic pair distribution function technique. Journal of Chemical Physics, 2015, 143, 124201.	1.2	9
101	Growth and characterization of iron scandium sulfide (FeSc_2S_4). Journal of Crystal Growth, 2016, 454, 128-133.	0.7	9
102	Low-energy magnon dynamics and magneto-optics of the skyrmionic Mott insulator Cu_2OSeO_3 . Physical Review B, 2017, 95, .	1.1	9
103	Bulk transport paths through defects in floating zone and Al flux grown SmB_6 . Physical Review Materials, 2021, 5, .	1.1	9
104	Dynamic charge disproportionation in the 1D chain material PdTe . Journal of Materials Chemistry C, 2014, 2, 3238-3246.	2.7	8
105	Stabilization of the pyrochlore phase of $\text{Mn}_2\text{Sb}_2\text{O}_7$ by double substitution. Journal of Solid State Chemistry, 2019, 278, 120898.	1.4	8
106	Geometric magnetic frustration in the R -type ferrite SrSn_2 . Physical Review B, 2010, 81, .	1.1	7
107	Structure, properties, and disorder in the new distorted-Hollandite PbIr_4Se_8 . Journal of Solid State Chemistry, 2016, 242, 112-119.	1.4	7
108	Spin Seebeck effect in Cu_2OSeO_3 : Test of bulk magnon spin current theory. Physical Review B, 2020, 101, .	1.1	7

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109	Antiferro- and metamagnetism in the $S=7/2$ hollandite analog EuGa_2Sb_2 . <i>Physical Review Materials</i> , 2021, 5, .	0.9	7
110	ScSi: A New Exfoliatable Semiconductor. <i>Chemistry of Materials</i> , 2022, 34, 5443-5451.	3.2	7
111	The Geometries of Triangular Magnetic Lattices. <i>Springer Series in Solid-state Sciences</i> , 2011, , 131-154.	0.3	6
112	Effects of Pulsing and Interfacial Potentials on Tellurium-Organic Heterostructured Films. <i>ACS Applied Materials & Interfaces</i> , 2013, 5, 1604-1611.	4.0	6
113	An effect of Sm vacancies on the hybridization gap in topological Kondo insulator candidate SmB_6 . <i>Physica B: Condensed Matter</i> , 2018, 536, 60-63.	1.3	6
114	Low-energy magnons in the chiral ferrimagnet Cu_2OSeO_3 : A coarse-grained approach. <i>Physical Review B</i> , 2020, 101, .	1.1	6
115	Anion-Anion Bonding and Topology in Ternary Iridium Seleno-Stannides. <i>Inorganic Chemistry</i> , 2015, 54, 11993-12001.	1.9	5
116	Thermally-activated recombination in one component of $(\text{CH}_3\text{NH}_3)_3\text{PbI}_3/\text{TiO}_2$ observed by photocurrent spectroscopy. <i>Chemical Communications</i> , 2015, 51, 7309-7312.	2.2	5
117	Dynamical Bonding Driving Mixed Valency in a Metal Boride. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 10996-11002.	7.2	5
118	Laser floating zone growth of SrVO_3 single crystals. <i>Journal of Crystal Growth</i> , 2022, 583, 126518.	0.7	5
119	Observation of Vacancies, Faults, and Superstructures in $\text{Ln}_5\text{Mo}_2\text{O}_{12}$ ($\text{Ln} = \text{La}, \text{Y}, \text{and Lu}$) Compounds with Direct Mo-Mo Bonding. <i>Inorganic Chemistry</i> , 2017, 56, 12866-12880.	1.9	4
120	Spin phases of the helimagnetic insulator Cu_2OSeO_3 probed by magnon heat conduction. <i>Physical Review B</i> , 2019, 99, .		
121	Dynamical Bonding Driving Mixed Valency in a Metal Boride. <i>Angewandte Chemie</i> , 2020, 132, 11089-11095.	1.6	4
122	Topological nature of the Kondo insulator SmB_6 and its sensitiveness to Sm vacancy. <i>Physical Review B</i> , 2021, 103, .	1.1	4
123	Structural, Thermodynamic, and Transport Properties of the Small-Gap Two-Dimensional Metal-Organic Kagomé Materials $\text{Cu}_3(\text{hexaminobenzene})_2$ and $\text{Ni}_3(\text{hexaminobenzene})_2$. <i>Inorganic Chemistry</i> , 2022, 61, 6480-6487.	1.9	4
124	Identifying New Classes of High Temperature Superconductors With Convolutional Neural Networks. <i>Frontiers in Electronic Materials</i> , 2022, 2, .	1.6	4
125	Highly Electron-Doped TaON Single-Crystal Growth by a High-Pressure Flux Method. <i>Inorganic Chemistry</i> , 2022, 61, 11118-11123.	1.9	4
126	Fabrication of sub-15-nm aluminum wires by controlled etching. <i>Applied Physics Letters</i> , 2014, 104, 173101.	1.5	3

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127	Incommensurate Magnetism Near Quantum Criticality in CeNiAsO. Physical Review Letters, 2019, 122, 197203.	2.9	3
128	Dynamical Bond Formation in KNi_2Se_2 . Zeitschrift Fur Anorganische Und Allgemeine Chemie, 0, , .	0.6	3
129	Stable Continuously Variable Temperature Cryo-STEM to Understand the Structurally Driven Phase Transition in the 2D Layered Magnet Nb_3Br_8 . Microscopy and Microanalysis, 2020, 26, 1090-1092.	0.2	1
130	Future Directions in Quantum Materials Synthesis. , 2021, , 239-259.		1
131	Integer versus half-integer spin on an approximate honeycomb lattice. Physical Review Materials, 2021, 5, .	0.9	1
132	The Role of Phonons and Oxygen Vacancies in Non-Cubic SrVO_3 . Inorganic Chemistry, 2022, , .	1.9	1
133	Tricky Registration for Unruly Data: Image Registration of Low-Signal-to-Noise Cryo-STEM Data. Microscopy and Microanalysis, 2018, 24, 518-519.	0.2	0
134	Unraveling the Relationship Between Layer Stacking and Magnetic Order in Nb_3X_8 Systems via Controlled-Temperature Cryo-STEM. Microscopy and Microanalysis, 2019, 25, 1852-1853.	0.2	0