

# 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	Laser floating zone growth of SrVO <sub>3</sub> single crystals. Journal of Crystal Growth, 2022, 583, 126518.	0.7	5
2	The Role of Phonons and Oxygen Vacancies in Non-Cubic SrVO <sub>3</sub> . Inorganic Chemistry, 2022, , .	1.9	1
3	Structural, Thermodynamic, and Transport Properties of the Small-Gap Two-Dimensional Metal-Organic Kagomé Materials Cu <sub>3</sub> (hexaiminobenzene) <sub>2</sub> and Ni <sub>3</sub> (hexaiminobenzene) <sub>2</sub> . Inorganic Chemistry, 2022, 61, 6480-6487.	1.9	4
4	The field-free Josephson diode in a van der Waals heterostructure. Nature, 2022, 604, 653-656.	13.7	131
5	Identifying New Classes of High Temperature Superconductors With Convolutional Neural Networks. Frontiers in Electronic Materials, 2022, 2, .	1.6	4
6	ScSi: A New Exfoliatable Semiconductor. Chemistry of Materials, 2022, 34, 5443-5451.	3.2	7
7	Highly Electron-Doped TaON Single-Crystal Growth by a High-Pressure Flux Method. Inorganic Chemistry, 2022, 61, 11118-11123.	1.9	4
8	Chemistry of Quantum Spin Liquids. Chemical Reviews, 2021, 121, 2898-2934.	23.0	89
9	Future Directions in Quantum Materials Synthesis. , 2021, , 239-259.		1
10	Topological nature of the Kondo insulator SmB <sub>6</sub> and its sensitiveness to Sm vacancy. Physical Review B, 2021, 103, .	1.1	4
11	Duality and domain wall dynamics in a twisted Kitaev chain. Nature Physics, 2021, 17, 832-836.	6.5	28
12	Bulk transport paths through defects in floating zone and Al flux grown $\text{SmB}_6$ . Physical Review Materials, 2021, 5, .		
13	Nanotesla Magnetometry with the Silicon Vacancy in Silicon Carbide. Physical Review Applied, 2021, 15, .	1.5	18
14	Twisting of 2D Kagomé Sheets in Layered Intermetallics. ACS Central Science, 2021, 7, 1381-1390.	5.3	14
15	Enhanced hybridization in the electronic ground state of the intercalated honeycomb iridate Ag <sub>3</sub> LiIr <sub>2</sub> O <sub>6</sub> . Physical Review B, 2021, 104, .	1.1	11
16	Integer versus half-integer spin on an approximate honeycomb lattice. Physical Review Materials, 2021, 5, .	0.9	1
17	A Gold(I) Oxide Double Perovskite: Ba <sub>2</sub> AuO <sub>6</sub> . Journal of the American Chemical Society, 2021, 143, 19033-19042.	6.6	10
18	Antiferro- and metamagnetism in the S=7/2 hollandite analog EuGa <sub>2</sub> Sb <sub>2</sub> . Physical Review Materials, 2021, 5, .	0.9	7

#	ARTICLE	IF	CITATIONS
19	Spin and Charge Interconversion in Dirac-Semimetal Thin Films. <i>Physical Review Applied</i> , 2021, 16, .	1.5	20
20	Discovery and Single Crystal Growth of High Entropy Pyrochlores. <i>Inorganic Chemistry</i> , 2020, 59, 17251-17258.	1.9	11
21	Giant, unconventional anomalous Hall effect in the metallic frustrated magnet candidate, $KV_3Sb_5$ . <i>Science Advances</i> , 2020, 6, eabb6003.	4.7	295
22	Stable Continuously Variable Temperature Cryo-STEM to Understand the Structurally Driven Phase Transition in the 2D Layered Magnet $Nb_3Br_8$ . <i>Microscopy and Microanalysis</i> , 2020, 26, 1090-1092.	0.2	1
23	Spin Seebeck effect in the quasi-one-dimensional chain compound $CsCuS_4$ . <i>Physical Review B</i> , 2020, 101, .	1.1	14
24	Dynamical Bonding Driving Mixed Valency in a Metal Boride. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 10996-11002.	7.2	5
25	Spin Seebeck effect in $CuMn_2S_4$ : Test of bulk magnon spin current theory. <i>Physical Review B</i> , 2020, 101, .		
26	Laser-Enhanced Single Crystal Growth of Non-Symmorphic Materials: Applications to an Eight-Fold Fermion Candidate. <i>Chemistry of Materials</i> , 2020, 32, 5827-5834.	3.2	17
27	Low-energy magnons in the chiral ferrimagnet $Cu_2OSeO_3$ : A coarse grained approach. <i>Physical Review B</i> , 2020, 101, .	1.1	6
28	$RuAl_6$ "An Endohedral Aluminide Superconductor. <i>Chemistry of Materials</i> , 2020, 32, 3805-3812.	3.2	10
29	Dynamical Bonding Driving Mixed Valency in a Metal Boride. <i>Angewandte Chemie</i> , 2020, 132, 11089-11095.	1.6	4
30	Anomalous thickness-dependent electrical conductivity in van der Waals layered transition metal halide, $Nb_3Cl_8$ . <i>Journal of Physics Condensed Matter</i> , 2020, 32, 304004.	0.7	15
31	Competing antiferromagnetic-ferromagnetic states in a Kitaev honeycomb magnet. <i>Physical Review B</i> , 2020, 102, .		
32	Nonpolar-to-Polar Trimerization Transitions in the $S = 1$ Kagomé Magnet $Na_2Ti_3Cl_8$ . <i>Inorganic Chemistry</i> , 2019, 58, 11941-11948.	1.9	14
33	Stabilization of the pyrochlore phase of $Mn_2Sb_2O_7$ by double substitution. <i>Journal of Solid State Chemistry</i> , 2019, 278, 120898.	1.4	8
34	Tunable Magnetic Transition to a Singlet Ground State in a 2D van der Waals Layered Trimerized Kagomé Magnet. <i>ACS Nano</i> , 2019, 13, 9457-9463.	7.3	31
35	Unraveling the Relationship Between Layer Stacking and Magnetic Order in $Nb_3X_8$ Systems via Controlled-Temperature Cryo-STEM. <i>Microscopy and Microanalysis</i> , 2019, 25, 1852-1853.	0.2	0
36	Spin phases of the helimagnetic insulator $CuMn_2S_4$ probed by magnon heat conduction. <i>Physical Review B</i> , 2019, 99, .		

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37	Magnetic dichroism in the Kondo insulator $\text{SmB}_6$ . Physical Review B, 2019, 99, .	2.1	1
38	Incommensurate Magnetism Near Quantum Criticality in CeNiAsO. Physical Review Letters, 2019, 122, 197203.	2.9	3
39	$(\text{CsX})_2\text{Cu}_5\text{O}_2(\text{PO}_4)_2$ ( $X = \text{Cl, Br, I}$ ): A Family of $\text{Cu}_2\text{S} = \text{Cu}_1\text{S}_2$ Compounds with Capped-Kagomé Networks Composed of $\text{OCu}_4$ Units. Inorganic Chemistry, 2019, 58, 4328-4336.	1.9	25
40	Dirac fermions and possible weak antilocalization in $\text{LaCuSb}_2$ . APL Materials, 2019, 7, .	2.2	16
41	Pushing boundaries: High pressure, supercritical optical floating zone materials discovery. Journal of Solid State Chemistry, 2019, 270, 705-709.	1.4	18
42	Introduction of spin centers in single crystals of $\text{Ni}_2\text{M}_3\text{O}_{10}$ (M = $\text{Co, Ni}$ ). Nature Communications, 2019, 10, 2100.	0.9	31
43	Kagome prototype materials discovery for $\text{NiMn}_2\text{O}_7$ and $\text{NiMn}_2\text{O}_8$ . Nature Communications, 2019, 10, 2100.	0.9	398
44	Introduction of spin centers in single crystals of $\text{NiMn}_2\text{O}_7$ and $\text{NiMn}_2\text{O}_8$ . Nature Communications, 2019, 10, 2100.	0.9	12
45	Screened moments and extrinsic in-gap states in samarium hexaboride. Nature Communications, 2018, 9, 1539.	5.8	31
46	Nonuniform carrier density in $\text{CdMn}_2\text{O}_7$ evidenced by optical spectroscopy. Physical Review B, 2018, 97, .	2.2	3
47	An effect of Sm vacancies on the hybridization gap in topological Kondo insulator candidate $\text{SmB}_6$ . Physica B: Condensed Matter, 2018, 536, 60-63.	1.3	6
48	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
49	Progress toward Solid State Synthesis by Design. Accounts of Chemical Research, 2018, 51, 2918-2925.	7.6	56
50	Universal Single-Ion Physics in Spin-Orbit-Coupled $d^5$ and $d^4$ Ions. Inorganic Chemistry, 2018, 57, 14443-14449.	1.9	24
51	Scaling and data collapse from local moments in frustrated disordered quantum spin systems. Nature Communications, 2018, 9, 4367.	5.8	89
52	Electron Doping of Proposed Kagome Quantum Spin Liquid Produces Localized States in the Band Gap. Physical Review Letters, 2018, 121, 186402.	2.9	21
53	Charge density wave behavior and order-disorder in the antiferromagnetic metallic series $\text{EuTjETQq}_1$ . Physical Review B, 2018, 97, .	1.1	16
54	Universal geometric frustration in pyrochlores. Nature Communications, 2018, 9, 2619.	5.8	64

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55	Field-dependent heat transport in the Kondo insulator $\text{SmB}_6$ : Phonons scattered by magnetic impurities. <i>Physical Review B</i> , 2018, 97, .	2.0	20
56	Image registration of low signal-to-noise cryo-STEM data. <i>Ultramicroscopy</i> , 2018, 191, 56-65.	0.8	59
57	Chemically controlled crystal growth of $(\text{CH}_3\text{NH}_3)_2\text{AgInBr}_6$ . <i>CrystEngComm</i> , 2018, 20, 5929-5934.	1.3	20
58	Frustrated spin one on a diamond lattice in $\text{NiRh}_2\text{O}_4$ . <i>Physical Review Materials</i> , 2018, 2, .	0.9	34
59	Universal behavior in quantum spin liquid candidates synthetic barlowite and herbertsmithite. <i>Physical Review Materials</i> , 2018, 2, .	0.9	31
60	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
61	Disordered Route to the Coulomb Quantum Spin Liquid: Random Transverse Fields on Spin Ice in $\text{Pr}_2\text{Zr}_2\text{O}_7$ . <i>Physical Review Letters</i> , 2017, 118, 107206.	3.9	13
62	$\text{SmB}_6$ Cluster Anion: Covalency Involving f Orbitals. <i>Journal of Physical Chemistry A</i> , 2017, 121, 1849-1854.	1.1	40
63	Designing indirect-direct bandgap transitions in double perovskites. <i>Materials Horizons</i> , 2017, 4, 688-693.	6.4	290
64	Impact of stoichiometry of $\text{Yb}_2\text{O}_7$ on its physical properties. <i>Physical Review B</i> , 2017, 95, .	1.1	64
65	$\text{NaSrMn}_2\text{F}_7$ , $\text{NaCaFe}_2\text{F}_7$ , and $\text{NaSrFe}_2\text{F}_7$ : novel single crystal pyrochlore antiferromagnets. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 045801.	0.7	25
66	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
67	Seeded Chemical Vapor Transport Growth of $\text{Cu}_2\text{OSeO}_3$ . <i>Crystal Growth and Design</i> , 2017, 17, 4944-4948.	1.4	10
68	Mystery of Three Borides: Differential Metal-Boron Bonding Governing Superhard Structures. <i>Chemistry of Materials</i> , 2017, 29, 9892-9896.	3.2	45
69	Ballistic magnon heat conduction and possible Poiseuille flow in the helimagnetic insulator $\text{Cu}_2\text{OSeO}_3$ . <i>Physical Review B</i> , 2017, 95, .	1.1	25
70	Low-energy magnon dynamics and magneto-optics of the skyrmionic Mott insulator $\text{Cu}_2\text{OSeO}_3$ . <i>Physical Review B</i> , 2017, 95, .	1.1	9
71	Breakdown of the Kondo insulating state in $\text{SmB}_6$ introducing Sm vacancies. <i>Physical Review B</i> , 2016, 94, .	1.1	34
72	Structure, properties, and disorder in the new distorted-Hollandite $\text{PbIr}_4\text{Se}_8$ . <i>Journal of Solid State Chemistry</i> , 2016, 242, 112-119.	1.4	7

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73	Growth and characterization of iron scandium sulfide (FeSc <sub>2</sub> S <sub>4</sub> ). Journal of Crystal Growth, 2016, 454, 128-133.	0.7	9
74	On the Chemistry and Physical Properties of Flux and Floating Zone Grown SmB <sub>6</sub> Single Crystals. Scientific Reports, 2016, 6, 20860.	1.6	38
75	Anomalous three-dimensional bulk ac conduction within the Kondo gap of $\text{SmB}_6$ single crystals. Physical Review B, 2016, 94, .	1.4	14
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	Synthesis and Structure of Three New Oxychalcogenides: A <sub>2</sub> O <sub>2</sub> Bi <sub>2</sub> Se <sub>3</sub> (A = Sr, Ba) and Sr <sub>2</sub> O <sub>2</sub> Sb <sub>2</sub> Se <sub>3</sub> . Chemistry of Materials, 2016, 28, 890-895.	3.2	19
78	Photoinitiated Reactivity of a Thiolate-Ligated, Spin-Crossover Nonheme {FeNO} <sup>7+</sup> Complex with Dioxygen. Journal of the American Chemical Society, 2016, 138, 3107-3117.	6.6	25
79	Anion-Driven Anion Bonding and Topology in Ternary Iridium Seleno-Stannides. Inorganic Chemistry, 2015, 54, 11993-12001.	1.9	5
80	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
81	Representational analysis of extended disorder in atomistic ensembles derived from total scattering data. Journal of Applied Crystallography, 2015, 48, 1560-1572.	1.9	14
82	Interaction Driven Subgap Spin Exciton in the Kondo Insulator $\text{SmB}_6$ . Physical Review Letters, 2015, 114, 036401.	2.9	83
83	Block Magnetic Excitations in the Orbital Selective Mott Insulator $\text{BaFe}_2\text{Se}_3$ . Physical Review Letters, 2015, 115, 047401.	2.9	56
84	Thermally-activated recombination in one component of $(\text{CH}_3\text{NH}_3)_3\text{PbI}_3/\text{TiO}_2$ observed by photocurrent spectroscopy. Chemical Communications, 2015, 51, 7309-7312.	2.2	5
85	Disorder from order among anisotropic next-nearest-neighbor Ising spin chains in $\text{SrHo}_4\text{O}_{14}$ . Physical Review B, 2015, 91, .	1.1	28
86	Superconducting dome and crossover to an insulating state in $[\text{Ti}_4\text{Ti}^{1-x}\text{Sn}_x\text{Te}_3]$ . APL Materials, 2015, 3, .	2.2	10
87	New honeycomb iridium ( $\text{scp}$ ) oxides: $\text{NaIrO}_3$ and $\text{Sr}_3\text{CaIr}_2\text{O}_9$ . Dalton Transactions, 2015, 44, 20344-20351.	1.6	32
88	Electronic tunability of the frustrated triangular-lattice cluster magnet $\text{LiZn}_2\text{Mo}_3\text{O}_8$ . Materials Horizons, 2015, 2, 76-80.	6.4	14
89	Heat capacity peak at the quantum critical point of the transverse Ising magnet $\text{CoNb}_2\text{O}_6$ . Nature Communications, 2015, 6, 7611.	5.8	53
90	Unique edge-sharing sulfate-transition metal coordination in $\text{Na}_2\text{M}(\text{SO}_4)_2$ (M=Ni and Co). Journal of Solid State Chemistry, 2015, 222, 129-135.	1.4	15

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91	Evolution of magnetism in the $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0033.gif"} \rangle$		
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109	The Geometries of Triangular Magnetic Lattices. Springer Series in Solid-state Sciences, 2011, , 131-154.	0.3	6
110	CdCu <sub>3</sub> (OH) <sub>6</sub> Cl <sub>2</sub> : A new layered hydroxide chloride. Journal of Solid State Chemistry, 2011, 184, 3319-3323.	1.4	22
111	Iron displacements and magnetoelastic coupling in the antiferromagnetic spin-ladder compound BaFe <sub>2</sub> Se <sub>3</sub> . Physical Review B, 2011, 84, .	1.1	118
112	Density of phonon states in superconducting FeSe as a function of temperature and pressure. Physical Review B, 2010, 81, .	1.1	34
113	Geometric magnetic frustration in the R-type ferrite SrSn <sub>2</sub> . Physical Review B, 2010, 81, .	1.1	7
114	Site Specific X-ray Anomalous Dispersion of the Geometrically Frustrated Kagomé Magnet, Herbertsmithite, ZnCu <sub>3</sub> (OH) <sub>6</sub> Cl <sub>2</sub> . Journal of the American Chemical Society, 2010, 132, 16185-16190.	6.6	166
115	A Cu <sub>2</sub> (S = 1/2) Kagomé Antiferromagnet: Mg <sub>x</sub> Cu <sub>4-x</sub> (OH) <sub>6</sub> Cl <sub>2</sub> . Journal of the American Chemical Society, 2010, 132, 5570-5571.	6.6	36
116	Magnetic properties of the garnet and glass forms of Mn <sub>3</sub> . Physical Review B, 2009, 80, .	1.1	22
117	Stoichiometry, spin fluctuations, and superconductivity in LaNiPO. Physical Review B, 2009, 79, .	1.1	14
118	Insulator to correlated metal transition in V. Physical Review B, 2009, 79, .	1.1	79
119	Superconductivity at 2.2 K in the layered oxypnictide La <sub>3</sub> Ni <sub>4</sub> P <sub>4</sub> O <sub>2</sub> . Physical Review B, 2009, 79, .	1.1	25
120	The metal-insulator transition in Fe <sub>1.01</sub> Cu <sub>x</sub> Se. Journal of Physics Condensed Matter, 2009, 21, 305701.	0.7	73
121	Cluster-glass behavior of a highly oxygen deficient perovskite, BaBi <sub>0.28</sub> Co <sub>0.72</sub> O <sub>2.2</sub> . Journal of Physics Condensed Matter, 2009, 21, 105801.	0.7	9
122	Extreme sensitivity of superconductivity to stoichiometry in Fe <sub>1</sub> . Physical Review B, 2009, 79, .	1.1	582
123	Origin and tuning of the magnetocaloric effect in the magnetic refrigerant.		



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127	Tuning the charge density wave and superconductivity in $Cu_xNi_{1-x}S_2$ . Physical Review B, 2008, 78, .	1.1	136
128	Frustrated ferroelectricity in niobate pyrochlores. Journal of Physics Condensed Matter, 2008, 20, 235210.	0.7	29
129	Intrinsic properties of stoichiometric LaFePO. Physical Review B, 2008, 78, .	1.1	102
130	Successive Orbital Ordering Transitions in $NaVO_2$ . Physical Review Letters, 2008, 101, 166402.	2.9	65
131	Autoreduction of Pd <sup>2+</sup> /Co and Pt <sup>2+</sup> /Co Cyanogels: Exploration of Cyanometalate Coordination Chemistry at Elevated Temperatures. Journal of the American Chemical Society, 2008, 130, 5563-5572.	6.6	38
132	Species Distribution Diagrams in the Copper-Ammonia System: An Updated and Expanded Demonstration Illustrating Complex Equilibria. Journal of Chemical Education, 2005, 82, 408.	1.1	21
133	Fluorescence Delineation of the Surfactant Microstructures in the CTAB <sup>+</sup> /SOS <sup>-</sup> /H <sub>2</sub> O Catanionic System. Langmuir, 2004, 20, 64-72.	1.6	27
134	Dynamical Bond Formation in $KNi_2Se_2$ . Zeitschrift Fur Anorganische Und Allgemeine Chemie, 0, , .	0.6	3