

James Neilson

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2051457/publications.pdf>

Version: 2024-02-01

92
papers

3,667
citations

136950

32
h-index

138484

58
g-index

98
all docs

98
docs citations

98
times ranked

4999
citing authors

#	ARTICLE	IF	CITATIONS
1	Metathesis routes to materials. , 2023, , 24-39.		2
2	Correlating Broadband Photoluminescence with Structural Dynamics in Layered Hybrid Halide Perovskites. Journal of the American Chemical Society, 2022, 144, 1313-1322.	13.7	37
3	<i>nmfMapping</i>: a cloud-based web application for non-negative matrix factorization of powder diffraction and pair distribution function datasets. Acta Crystallographica Section A: Foundations and Advances, 2022, 78, 242-248.	0.1	6
4	Reaction Selectivity in Cometathesis: Yttrium Manganese Oxides. Chemistry of Materials, 2022, 34, 4694-4702.	6.7	4
5	Temperature-induced structural transition in an organicâ€“inorganic hybrid layered perovskite (MA) ₂ PbI ₂ Br _x (SCN) ₂ . CrystEngComm, 2022, 24, 5428-5434.	2.6	1
6	Thin-Film Paradigm to Probe Interfacial Diffusion during Solid-State Metathesis Reactions. Chemistry of Materials, 2022, 34, 6279-6287.	6.7	3
7	Organic cation dynamics in hybrid halide perovskite semiconductors. Neutron News, 2021, 32, 11-12.	0.2	1
8	Validation of non-negative matrix factorization for rapid assessment of large sets of atomic pair distribution function data. Journal of Applied Crystallography, 2021, 54, 768-775.	4.5	20
9	Lowering Ternary Oxide Synthesis Temperatures by Solid-State Cometathesis Reactions. Chemistry of Materials, 2021, 33, 3692-3701.	6.7	14
10	Bulk Synthesis, Structure, and Electronic Properties of Magnesium Zirconium Nitride Solid Solutions. Chemistry of Materials, 2021, 33, 5345-5354.	6.7	11
11	Cation Dynamics in Hybrid Halide Perovskites. Annual Review of Materials Research, 2021, 51, 269-291.	9.3	21
12	Ternary Nitride Materials: Fundamentals and Emerging Device Applications. Annual Review of Materials Research, 2021, 51, 591-618.	9.3	34
13	Selectivity in Yttrium Manganese Oxide Synthesis via Local Chemical Potentials in Hyperdimensional Phase Space. Journal of the American Chemical Society, 2021, 143, 15185-15194.	13.7	25
14	Two-Step Solid-State Synthesis of Ternary Nitride Materials. , 2021, 3, 1677-1683.		7
15	Catalytic behavior of hexaphenyldisiloxane in the synthesis of pyrite FeS ₂ . Chemical Communications, 2020, 56, 9186-9189.	4.1	2
16	Structure and Optical Properties of Layered Perovskite (MA) ₂ PbI ₂ xBr _x (SCN) ₂ (0 ≤ x < 1.6). Inorganic Chemistry, 2020, 59, 17379-17384.	4.0	6
17	Defect-Accommodating Intermediates Yield Selective Low-Temperature Synthesis of YMnO ₃ Polymorphs. Inorganic Chemistry, 2020, 59, 13639-13650.	4.0	22
18	Ferroelastic Phase Transition in Formamidinium Tin(IV) Iodide Driven by Organicâ€“Inorganic Coupling. Inorganic Chemistry, 2020, 59, 14399-14406.	4.0	3

#	ARTICLE	IF	CITATIONS
19	Partial antiferromagnetic helical order in single-crystal Fe ₃ PO ₄ O ₃ . <i>Physical Review B</i> , 2020, 101, .	3.2	3
20	Cesium Substitution Disrupts Concerted Cation Dynamics in Formamidinium Hybrid Perovskites. <i>Chemistry of Materials</i> , 2020, 32, 6266-6277.	6.7	38
21	Amide-Assisted Synthesis of Iron Germanium Sulfide (Fe ₂ GeS ₄) Nanostars: The Effect of LiN(SiMe ₃) ₂ on Precursor Reactivity for Favoring Nanoparticle Nucleation or Growth. <i>Journal of the American Chemical Society</i> , 2020, 142, 7023-7035.	13.7	10
22	Quantifying Capacitive-Like and Battery-Like Charge Storage Contributions Using Single-Nanoparticle Electro-Optical Imaging. <i>ChemElectroChem</i> , 2020, 7, 753-760.	3.4	10
23	Trigonal polymorph of LiMn_2O_3 . <i>Physical Review Materials</i> , 2020, 4, .	2.4	2
24	A thermal-gradient approach to variable-temperature measurements resolved in space. <i>Journal of Applied Crystallography</i> , 2020, 53, 662-670.	4.5	19
25	Optimized in situ crystal growth and disordered quasi-one-dimensional magnetism in Li ₂ Mn ₂ (MoO ₄) ₃ . <i>Physical Review Materials</i> , 2020, 4, .	2.4	1
26	Dynamical Phase Transitions and Cation Orientation-Dependent Photoconductivity in CH(NH ₂) ₂ PbBr ₃ . , 2019, 1, 260-264.		35
27	Novel Strongly Spin-Orbit Coupled Quantum Dimer Magnet: $\text{Yb}_2\text{Mn}_7\text{O}_{13}$. <i>Physical Review Letters</i> , 2019, 123, 027201.	7.8	13
28	Kinetically Controlled Low-Temperature Solid-State Metathesis of Manganese Nitride Mn ₃ N ₂ . <i>Chemistry of Materials</i> , 2019, 31, 7248-7254.	6.7	26
29	Correction to Dynamical Phase Transitions and Cation Orientation-Dependent Photoconductivity in CH(NH ₂) ₂ PbBr ₃ . , 2019, 1, 481-481.		0
30	Perspectives and Design Principles of Vacancy-Ordered Double Perovskite Halide Semiconductors. <i>Chemistry of Materials</i> , 2019, 31, 1184-1195.	6.7	158
31	Aryl-Perfluoroaryl Interaction in Two-Dimensional Organic-Inorganic Hybrid Perovskites Boosts Stability and Photovoltaic Efficiency. , 2019, 1, 171-176.		63
32	Hydrothermal Crystal Growth of Mixed Valence Cs ₂ SbBr ₆ . <i>Crystal Growth and Design</i> , 2019, 19, 4090-4094.	3.0	8
33	Hybrid Charge-Transfer Semiconductors: (C ₇ H ₇)Sb ₄ , (C ₇ H ₇)Bi ₄ , and Their Halide Congeners. <i>Inorganic Chemistry</i> , 2019, 58, 5818-5826.	4.0	37
34	Synthetic control over orientational degeneracy of spacer cations enhances solar cell efficiency in two-dimensional perovskites. <i>Nature Communications</i> , 2019, 10, 1276.	12.8	222
35	Influence of organic cation planarity on structural templating in hybrid metal-halides. <i>Dalton Transactions</i> , 2019, 48, 16340-16349.	3.3	12
36	Low-temperature synthesis of superconducting iron selenide using a triphenylphosphine flux. <i>Dalton Transactions</i> , 2019, 48, 16298-16303.	3.3	1

#	ARTICLE	IF	CITATIONS
37	Yttrium Manganese Oxide Phase Stability and Selectivity Using Lithium Carbonate Assisted Metathesis Reactions. <i>Inorganic Chemistry</i> , 2019, 58, 15166-15174.	4.0	13
38	Selective Formation of Yttrium Manganese Oxides through Kinetically Competent Assisted Metathesis Reactions. <i>Journal of the American Chemical Society</i> , 2019, 141, 1191-1195.	13.7	38
39	New Kagome prototype materials: discovery of KV_3 , and CsV_3 . <i>Physical Review Materials</i> , 2019, 3, .	2.4	398
40	Modeling pseudo-elastic behavior in small-scale ThCr ₂ Si ₂ -type crystals. <i>Computational Materials Science</i> , 2018, 150, 86-95.	3.0	4
41	Anharmonicity and Octahedral Tilting in Hybrid Vacancy-Ordered Double Perovskites. <i>Chemistry of Materials</i> , 2018, 30, 472-483.	6.7	104
42	Capturing the Details of N ₂ Adsorption in Zeolite X Using Stroboscopic Isotope Contrast Neutron Total Scattering. <i>Chemistry of Materials</i> , 2018, 30, 296-302.	6.7	12
43	Bond valences and anharmonicity in vacancy-ordered double perovskite halides. <i>Journal of Materials Chemistry C</i> , 2018, 6, 12095-12104.	5.5	27
44	Electric field modulated topological magnetoelectric effect in $Bi_2Mn_2O_7$. <i>Physical Review B</i> , 2018, 98, .	2.2	118
45	General Synthesis Principles for Ruddlesden-Popper Hybrid Perovskite Halides from a Dynamic Equilibrium. <i>Chemistry of Materials</i> , 2018, 30, 8606-8614.	6.7	37
46	Effects of point defects on the mechanical response of LaRu ₂ P ₂ . <i>Acta Materialia</i> , 2018, 160, 224-234.	7.9	7
47	Tolerance Factor and Cooperative Tilting Effects in Vacancy-Ordered Double Perovskite Halides. <i>Chemistry of Materials</i> , 2018, 30, 3909-3919.	6.7	105
48	Slow magnetic relaxation in octahedral low-spin Ni(III) complexes. <i>Chemical Science</i> , 2018, 9, 6564-6571.	7.4	53
49	A high precision gas flow cell for performing in situ neutron studies of local atomic structure in catalytic materials. <i>Review of Scientific Instruments</i> , 2017, 88, 034101.	1.3	9
50	Toward Reaction-by-Design: Achieving Kinetic Control of Solid State Chemistry with Metathesis. <i>Chemistry of Materials</i> , 2017, 29, 479-489.	6.7	78
51	Orientalional Glass Formation in Substituted Hybrid Perovskites. <i>Chemistry of Materials</i> , 2017, 29, 10168-10177.	6.7	36
52	Tuning the antiferromagnetic helical pitch length and nanoscale domain size in Fe ₃ PO ₄ O ₃ by magnetic dilution. <i>Physical Review B</i> , 2017, 96, .	3.2	2
53	Combinatorial appraisal of transition states for <i>in situ</i> pair distribution function analysis. <i>Journal of Applied Crystallography</i> , 2017, 50, 1744-1753.	4.5	18
54	Lewis Base Mediated Polymorph Selectivity of Pyrite CuSe ₂ through Atom Transfer in Solid-State Metathesis. <i>Chemistry of Materials</i> , 2016, 28, 1854-1860.	6.7	15

#	ARTICLE	IF	CITATIONS
55	Circumventing Diffusion in Kinetically Controlled Solid-State Metathesis Reactions. Journal of the American Chemical Society, 2016, 138, 11031-11037.	13.7	42
56	Paracrystalline Disorder from Phosphate Ion Orientation and Substitution in Synthetic Bone Mineral. Inorganic Chemistry, 2016, 55, 12290-12298.	4.0	17
57	Defect Tolerance to Intolerance in the Vacancy-Ordered Double Perovskite Semiconductors Cs ₂ Sn ₆ and Cs ₂ Tel ₆ . Journal of the American Chemical Society, 2016, 138, 8453-8464.	13.7	415
58	Nanosized helical magnetic domains in strongly frustrated Fe ₃ PO ₄ O ₃ . Physical Review B, 2015, 92, .	3.2	10
59	Influence of interstitial Mn on local structure and magnetism in BaFe_2Se_6 . Physical Review B, 2015, 92, .	7.8	56
60	Polymorph Selectivity of Superconducting CuSe ₂ Through Kinetic Control of Solid-State Metathesis. Journal of the American Chemical Society, 2015, 137, 3827-3833.	13.7	38
61	Representational analysis of extended disorder in atomistic ensembles derived from total scattering data. Journal of Applied Crystallography, 2015, 48, 1560-1572.	4.5	14
62	Block Magnetic Excitations in the Orbital Selective Mott Insulator BaFe_2Se_6 . Physical Review Letters, 2015, 115, 047401.	7.8	56
63	Structural Characteristics and Eutaxy in the Photo-Deposited Amorphous Iron Oxide Oxygen Evolution Catalyst. Chemistry of Materials, 2015, 27, 3462-3470.	6.7	28
64	Electronic tunability of the frustrated triangular-lattice cluster magnet $\text{LiZn}_2\text{Mo}_3\text{O}_8$. Materials Horizons, 2015, 2, 76-80.	12.2	14
65	Hybrid Inorganic-Organic Materials with an Optoelectronically Active Aromatic Cation: (C ₇ H ₇) ₂ Sn ₆ and C ₇ H ₇ Pb ₃ . Inorganic Chemistry, 2015, 54, 370-378.	4.0	86
66	Pyrite Formation via Kinetic Intermediates through Low-Temperature Solid-State Metathesis. Journal of the American Chemical Society, 2014, 136, 15654-15659.	13.7	32
67	Dynamic charge disproportionation in the 1D chain material PdTel. Journal of Materials Chemistry C, 2014, 2, 3238-3246.	5.5	8
68	Mesostructure from Hydration Gradients in Demosponge Biosilica. Chemistry - A European Journal, 2014, 20, 4956-4965.	3.3	4
69	Magnetic Structures of LiMBO ₃ (M = Mn, Fe, Co) Lithiated Transition Metal Borates. Inorganic Chemistry, 2013, 52, 11966-11974.	4.0	38
70	Stacking Variants and Superconductivity in the Bi ²⁺ S System. Journal of the American Chemical Society, 2013, 135, 5372-5374.	13.7	80
71	Charge density wave fluctuations, heavy electrons, and superconductivity in $\text{KNi}_2\text{S}_2\text{O}_{10}$. Physical Review B, 2013, 87, 040401.	3.2	42
72	Orbital-selective magnetism in the spin-ladder iron selenides $\text{Ba}_2\text{KFe}_2\text{Se}_6$. Physical Review B, 2013, 87, 040401.	3.2	91

#	ARTICLE	IF	CITATIONS
73	Mixed-valence-driven heavy-fermion behavior and superconductivity in KNi_2Se_2 . <i>Physical Review B</i> , 2012, 86, .	3.2	71
74	Possible valence-bond condensation in the frustrated cluster magnet $\text{LiZn}_2\text{Mo}_3\text{O}_8$. <i>Nature Materials</i> , 2012, 11, 493-496.	27.5	116
75	Bonding, Ion Mobility, and Rate-Limiting Steps in Deintercalation Reactions with ThCr_2Si_2 -type KNi_2Se_2 . <i>Journal of the American Chemical Society</i> , 2012, 134, 7750-7757.	13.7	51
76	Evolutionary selection of enzymatically synthesized semiconductors from biomimetic mineralization vesicles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, E1705-14.	7.1	43
77	$\text{Cd}_{1-x}\text{Zn}_x\text{O}$ [0.05 at% 0.26] synthesized by vapor-diffusion induced hydrolysis and co-nucleation from aqueous metal salt solutions. <i>Dalton Transactions</i> , 2011, 40, 1295.	3.3	1
78	Ordering Double Perovskite Hydroxides by Kinetically Controlled Aqueous Hydrolysis. <i>Inorganic Chemistry</i> , 2011, 50, 3003-3009.	4.0	17
79	Iron displacements and magnetoelastic coupling in the antiferromagnetic spin-ladder compound BaFe_2Se_3 . <i>Physical Review B</i> , 2011, 84, .	3.2	118
80	Understanding complex magnetic order in disordered cobalt hydroxides through analysis of the local structure. <i>Physical Review B</i> , 2011, 83, .	3.2	27
81	Cobalt Coordination and Clustering in $\text{Co}(\text{OH})_2$ Revealed by Synchrotron X-ray Total Scattering. <i>Chemistry - A European Journal</i> , 2010, 16, 9998-10006.	3.3	31
82	Vapor-Diffusion-Controlled Sol-Gel Synthesis of Flaky Lithium Vanadium Oxide and Its Electrochemical Behavior. <i>Journal of Physical Chemistry C</i> , 2010, 114, 19550-19555.	3.1	20
83	Unusual Evolution of Ceria Nanocrystal Morphologies Promoted by a Low-Temperature Vapor Diffusion Based Process. <i>Crystal Growth and Design</i> , 2010, 10, 4485-4490.	3.0	8
84	Nanostructured p-type cobalt layered double hydroxide/n-type polymer bulk heterojunction yields an inexpensive photovoltaic cell. <i>Thin Solid Films</i> , 2009, 517, 5722-5727.	1.8	34
85	Nanostructured ZnS and CdS Films Synthesized using Layered Double Hydroxide Films as Precursor and Template. <i>Inorganic Chemistry</i> , 2009, 48, 1542-1550.	4.0	22
86	Kinetic Control of Intralayer Cobalt Coordination in Layered Hydroxides: $\text{Co}_{1-x}\text{Ni}_x(\text{OH})_2$. <i>Inorganic Chemistry</i> , 2009, 48, 11017-11023.	4.0	22
87	Comparative study of electron- and photo-induced structural transformations on the surface of $\text{As}_{35}\text{S}_{65}$ amorphous thin films. <i>Thin Solid Films</i> , 2008, 516, 7511-7518.	1.8	23
88	Fabrication of nano-gratings in arsenic sulphide films. <i>Journal of Non-Crystalline Solids</i> , 2007, 353, 1427-1430.	3.1	30
89	On the mechanism of gray scale patterning of Ag-containing As_2S_3 thin films. <i>Journal of Physics and Chemistry of Solids</i> , 2007, 68, 920-925.	4.0	12
90	Universal Features of Terahertz Absorption in Disordered Materials. <i>Physical Review Letters</i> , 2006, 97, 055504.	7.8	94

#	ARTICLE	IF	CITATIONS
91	Correlating Broadband Photoluminescence with Organic Cation Dynamics. , 0, , .		0
92	Dynamical Bond Formation in KNi_2Se_2 . Zeitschrift Fur Anorganische Und Allgemeine Chemie, 0, , .	1.2	3