David O Scanlon

List of Publications by Year in Descending Order

Source: https://exaly.com/author-pdf/2000173/david-o-scanlon-publications-by-year.pdf

Version: 2024-04-22

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

 246
 13,882
 63
 110

 papers
 citations
 h-index
 g-index

 269
 16,119
 7.8
 7

 ext. papers
 ext. citations
 avg, IF
 L-index

#	Paper	IF	Citations
246	Predicting Lithium Iron Oxysulfides for Battery Cathodes. ACS Applied Energy Materials, 2022, 5, 575-58	46.1	O
245	Modulation of the Bi 6s Lone Pair State in Perovskites for High-Mobility p-Type Oxide Semiconductors <i>Advanced Science</i> , 2022 , e2104141	13.6	3
244	Understanding the Photocatalytic Activity of LaTiAgSO and LaTiCuSO for Green Hydrogen Production: Computational Insights <i>ACS Applied Energy Materials</i> , 2022 , 5, 1992-2001	6.1	1
243	Cation disorder engineering yields AgBiS2 nanocrystals with enhanced optical absorption for efficient ultrathin solar cells. <i>Nature Photonics</i> , 2022 , 16, 235-241	33.9	19
242	Deep UV transparent conductive oxide thin films realized through degenerately doped wide-bandgap gallium oxide. <i>Cell Reports Physical Science</i> , 2022 , 3, 100801	6.1	3
241	Machine learned calibrations to high-throughput molecular excited state calculations <i>Journal of Chemical Physics</i> , 2022 , 156, 134116	3.9	2
240	Ligand Field-Induced Exotic Dopant for Infrared Transparent Electrode: W in Rutile SnO 2. <i>Advanced Functional Materials</i> , 2022 , 32, 2110832	15.6	O
239	Enabling 100C Fast-Charging Bulk Bi Anodes for Na-Ion Batteries Advanced Materials, 2022 , e2201446	24	6
238	Extending the Performance Limit of Anodes: Insights from Diffusion Kinetics of Alloying Anodes. <i>Advanced Energy Materials</i> , 2021 , 11, 2003078	21.8	8
237	Enhanced visible light absorption in layered CsBiBr through mixed-valence Sn(ii)/Sn(iv) doping. <i>Chemical Science</i> , 2021 , 12, 14686-14699	9.4	8
236	Perspectives for next generation lithium-ion battery cathode materials. <i>APL Materials</i> , 2021 , 9, 109201	5.7	8
235	Experimental and Theoretical Study of the Electronic Structures of Lanthanide Indium Perovskites LnInO. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 6387-6400	3.8	3
234	Rapid Recombination by Cadmium Vacancies in CdTe. ACS Energy Letters, 2021, 6, 1392-1398	20.1	12
233	Surfaxe: Systematic surface calculations. <i>Journal of Open Source Software</i> , 2021 , 6, 3171	5.2	2
232	Ab initio random structure searching for battery cathode materials. <i>Journal of Chemical Physics</i> , 2021 , 154, 174111	3.9	8
231	Electrochemical Oxidative Fluorination of an Oxide Perovskite. <i>Chemistry of Materials</i> , 2021 , 33, 5757-5	76.8	2
230	2021 roadmap for sodium-ion batteries. <i>JPhys Energy</i> , 2021 , 3, 031503	4.9	24

Crystal Structure of Colloidally Prepared Metastable AgSe Nanocrystals. Nano Letters, 2021, 21, 5881-5887.5 229 Surface Engineering Strategy Using Urea To Improve the Rate Performance of Na Ti O in Na-Ion 228 4.8 6 Batteries. Chemistry - A European Journal, 2021, 27, 3875-3886 Latest directions in p-type transparent conductor design. Journal of Materials Chemistry C, 2021, 9, 11995:12009 227 Perovskite-inspired materials for photovoltaics and beyond-from design to devices. 226 3.4 47 Nanotechnology, **2021**, 32, 132004 CaSbO and CaBiO: two promising mixed-anion thermoelectrics. Journal of Materials Chemistry A, 225 13 3 2021. 9. 20417-20435 Accelerating the development of new solar absorbers by photoemission characterization coupled 224 1 4.9 with density functional theory. JPhys Energy, 2021, 3, 032001 Solvent engineered synthesis of layered SnO for high-performance anodes. Npj 2D Materials and 8.8 223 4 Applications, 2021, 5, BaBi2O6: A Promising n-Type Thermoelectric Oxide with the PbSb2O6 Crystal Structure. Chemistry 222 9.6 of Materials, 2021, 33, 7441-7456 Hidden spontaneous polarisation in the chalcohalide photovoltaic absorber SnSbSI. Materials 8 221 14.4 Horizons, 2021, 8, 2709-2716 Accelerating cathode material discovery through ab initio random structure searching. APL 220 5.7 Materials, **2021**, 9, 121111 Experimental and First-Principles Spectroscopy of CuSrSnS and CuBaSnS Photoabsorbers. ACS 219 9.5 5 Applied Materials & Interfaces, 2020, 12, 50446-50454 Geometric Analysis and Formability of the Cubic A2BX6 Vacancy-Ordered Double Perovskite 218 9.6 15 Structure. *Chemistry of Materials*, **2020**, 32, 9573-9583 Controlling the Thermoelectric Properties of Organometallic Coordination Polymers via Ligand 15.6 6 217 Design. Advanced Functional Materials, 2020, 30, 2003106 GeSe: Optical Spectroscopy and Theoretical Study of a van der Waals Solar Absorber. Chemistry of 216 9.6 19 Materials, **2020**, 32, 3245-3253 Computational prediction of the thermoelectric performance of LaZnOPn (Pn = P, As). Journal of 6 215 13 Materials Chemistry A, 2020, 8, 7914-7924 Polymorph exploration of bismuth stannate using first-principles phonon mode mapping.. Chemical 214 9.4 Science, 2020, 11, 7904-7909 Resonant Ta Doping for Enhanced Mobility in Transparent Conducting SnO. Chemistry of Materials, 28 213 9.6 2020, 32, 1964-1973 Enhanced Photocatalytic and Antibacterial Ability of Cu-Doped Anatase TiO Thin Films: Theory and 212 9.5 49 Experiment. ACS Applied Materials & Interfaces, 2020, 12, 15348-15361

211 Isotype Heterojunction Solar Cells Using n-Type Sb2Se3 Thin Films. *Chemistry of Materials*, **2020**, 32, 2625.863034

210	Assessing the limitations of transparent conducting oxides as thermoelectrics. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 11948-11957	13	9
209	Transition Metal Migration Can Facilitate Ionic Diffusion in Defect Garnet-Based Intercalation Electrodes. <i>ACS Energy Letters</i> , 2020 , 5, 1448-1455	20.1	3
208	Low-cost descriptors of electrostatic and electronic contributions to anion redox activity in batteries. <i>IOP SciNotes</i> , 2020 , 1, 024805	1.2	3
207	Native Defects and Their Doping Response in the Lithium Solid Electrolyte Li7La3Zr2O12. <i>Chemistry of Materials</i> , 2020 , 32, 1876-1886	9.6	15
206	Descriptors for Electron and Hole Charge Carriers in Metal Oxides. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 438-444	6.4	15
205	Bandgap lowering in mixed alloys of Cs2Ag(SbxBi1\(\textbf{B}\))Br6 double perovskite thin films. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 21780-21788	13	26
204	Bi2Sn2O7: a potential room temperature n-type oxide thermoelectric. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 16405-16420	13	10
203	Structure and Optical Properties of Layered Perovskite (MA)PbIBr(SCN) (0 [Inorganic Chemistry, 2020 , 59, 17379-17384	5.1	2
202	Colloidal Synthesis and Optical Properties of Perovskite-Inspired Cesium Zirconium Halide Nanocrystals 2020 , 2, 1644-1652		23
201	Chemical Trends in the Lattice Thermal Conductivity of Li(Ni, Mn, Co)O2 (NMC) Battery Cathodes. <i>Chemistry of Materials</i> , 2020 , 32, 7542-7550	9.6	14
200	Computationally Driven Discovery of Layered Quinary Oxychalcogenides: Potential -Type Transparent Conductors?. <i>Matter</i> , 2020 , 3, 759-781	12.7	5
199	Interaction of hydrogen with actinide dioxide (011) surfaces. <i>Journal of Chemical Physics</i> , 2020 , 153, 014	17305	1
198	Photocatalytic, structural and optical properties of mixed anion solid solutions Ba3Sc2IInxO5Cu2S2 and Ba3In2O5Cu2S2IJSey. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 19887-19897	13	5
197	Sb 5s2 lone pairs and band alignment of Sb2Se3: a photoemission and density functional theory study. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 12615-12622	7.1	6
196	Resonant doping for high mobility transparent conductors: the case of Mo-doped In2O3. <i>Materials Horizons</i> , 2020 , 7, 236-243	14.4	30
195	Identifying Raman modes of Sb2Se3 and their symmetries using angle-resolved polarised Raman spectra. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 8337-8344	13	25
194	Band edge evolution of transparent ZnM2IIIO4 (MIII=Co, Rh, Ir) spinels. <i>Physical Review B</i> , 2019 , 100,	3.3	10

193	Highly Anisotropic Thermal Transport in LiCoO. Journal of Physical Chemistry Letters, 2019, 10, 5552-555	5 6 .4	12
192	. IEEE Journal of Photovoltaics, 2019 , 9, 544-551	3.7	36
191	Magnetic structure of UO and NpO by first-principle methods. <i>Physical Chemistry Chemical Physics</i> , 2019 , 21, 760-771	3.6	20
190	An experimental and theoretical study into NaSbS2 as an emerging solar absorber. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 2059-2067	7.1	13
189	Perspectives and Design Principles of Vacancy-Ordered Double Perovskite Halide Semiconductors. <i>Chemistry of Materials</i> , 2019 , 31, 1184-1195	9.6	89
188	Enhanced Li-ion dynamics in trivalently doped lithium phosphidosilicate Li2SiP2: a candidate material as a solid Li electrolyte. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 3953-3961	13	7
187	Origin of High-Efficiency Photoelectrochemical Water Splitting on Hematite/Functional Nanohybrid Metal Oxide Overlayer Photoanode after a Low Temperature Inert Gas Annealing Treatment. <i>ACS Omega</i> , 2019 , 4, 1449-1459	3.9	16
186	Donor and acceptor characteristics of native point defects in GaN. <i>Journal Physics D: Applied Physics</i> , 2019 , 52, 335104	3	28
185	Dispelling the Myth of Passivated Codoping in TiO. Chemistry of Materials, 2019, 31, 2577-2589	9.6	12
184	Sensing and Discrimination of Explosives at Variable Concentrations with a Large-Pore MOF as Part of a Luminescent Array. <i>ACS Applied Materials & Empt. Interfaces</i> , 2019 , 11, 11618-11626	9.5	35
183	Interaction of hydrogen with actinide dioxide (111) surfaces. <i>Journal of Chemical Physics</i> , 2019 , 150, 134	173051	4
182	The complex defect chemistry of antimony selenide. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 10739-10	0744	54
181	Two-dimensional eclipsed arrangement hybrid perovskites for tunable energy level alignments and photovoltaics. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 5139-5147	7.1	14
180	Influence of One Specific Carbontarbon Bond on the Quality, Stability, and Photovoltaic Performance of Hybrid Organichorganic Bismuth Iodide Materials. <i>ACS Applied Energy Materials</i> , 2019 , 2, 1579-1587	6.1	4
179	Exploiting Excited-State Aromaticity To Design Highly Stable Singlet Fission Materials. <i>Journal of the American Chemical Society</i> , 2019 , 141, 13867-13876	16.4	55
178	Intrinsic point defects and the n- and p-type dopability of the narrow gap semiconductors GaSb and InSb. <i>Physical Review B</i> , 2019 , 100,	3.3	8
177	Band Alignments, Band Gap, Core Levels, and Valence Band States in CuBiS for Photovoltaics. <i>ACS Applied Materials & District Materials</i>	9.5	22
176	Anion Distribution, Structural Distortion, and Symmetry-Driven Optical Band Gap Bowing in Mixed Halide CsSnX Vacancy Ordered Double Perovskites. <i>Chemistry of Materials</i> , 2019 , 31, 9430-9444	9.6	32

175	Insights into the electronic structure of OsO2 using soft and hard x-ray photoelectron spectroscopy in combination with density functional theory. <i>Physical Review Materials</i> , 2019 , 3,	3.2	7
174	Electronic band structure and optical properties of boron arsenide. <i>Physical Review Materials</i> , 2019 , 3,	3.2	8
173	Anionic order and band gap engineering in vacancy ordered triple perovskites. <i>Chemical Communications</i> , 2019 , 55, 3164-3167	5.8	28
172	Leading the Charge of Electride Discovery. <i>Matter</i> , 2019 , 1, 1113-1114	12.7	O
171	Noncollinear Relativistic DFT + U Calculations of Actinide Dioxide Surfaces. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 356-366	3.8	11
170	Local corrugation and persistent charge density wave in ZrTe3 with Ni intercalation. <i>Physical Review B</i> , 2018 , 97,	3.3	12
169	Chemical Vapor Deposition of Photocatalytically Active Pure Brookite TiO2 Thin Films. <i>Chemistry of Materials</i> , 2018 , 30, 1353-1361	9.6	43
168	Deeper Understanding of Interstitial Boron-Doped Anatase Thin Films as A Multifunctional Layer Through Theory and Experiment. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 714-726	3.8	5
167	First-principles insights into tin-based two-dimensional hybrid halide perovskites for photovoltaics. Journal of Materials Chemistry A, 2018 , 6, 5652-5660	13	50
166	Hidden magnetic order in plutonium dioxide nuclear fuel. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 20943-20951	3.6	20
165	Band gap temperature-dependence and exciton-like state in copper antimony sulphide, CuSbS2. <i>APL Materials</i> , 2018 , 6, 084904	5.7	12
164	A novel laboratory-based hard X-ray photoelectron spectroscopy system. <i>Review of Scientific Instruments</i> , 2018 , 89, 073105	1.7	42
163	Phosphorus doped SnO thin films for transparent conducting oxide applications: synthesis, optoelectronic properties and computational models. <i>Chemical Science</i> , 2018 , 9, 7968-7980	9.4	27
162	Deep vs shallow nature of oxygen vacancies and consequent n-type carrier concentrations in transparent conducting oxides. <i>Physical Review Materials</i> , 2018 , 2,	3.2	46
161	Role of spin-orbit coupling in the electronic structure of IrO2. <i>Physical Review Materials</i> , 2018 , 2,	3.2	9
160	sumo: Command-line tools for plotting and analysis of periodic ab initio calculations. <i>Journal of Open Source Software</i> , 2018 , 3, 717	5.2	127
159	Galore: Broadening and weighting for simulation of photoelectron spectroscopy. <i>Journal of Open Source Software</i> , 2018 , 3, 773	5.2	25
158	Anharmonicity and Octahedral Tilting in Hybrid Vacancy-Ordered Double Perovskites. <i>Chemistry of Materials</i> , 2018 , 30, 472-483	9.6	70

157	Oxidation states and ionicity. <i>Nature Materials</i> , 2018 , 17, 958-964	27	91
156	Correlated Polyhedral Rotations in the Absence of Polarons during Electrochemical Insertion of Lithium in ReO3. <i>ACS Energy Letters</i> , 2018 , 3, 2513-2519	20.1	23
155	Preface for Special Topic: Earth abundant materials in solar cells. APL Materials, 2018, 6, 084401	5.7	2
154	Tolerance Factor and Cooperative Tilting Effects in Vacancy-Ordered Double Perovskite Halides. <i>Chemistry of Materials</i> , 2018 , 30, 3909-3919	9.6	63
153	Defect Engineering of Earth-Abundant Solar Absorbers BiSI and BiSeI. <i>Chemistry of Materials</i> , 2018 , 30, 3827-3835	9.6	39
152	Enhanced electrical properties of antimony doped tin oxide thin films deposited via aerosol assisted chemical vapour deposition. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 7257-7266	7.1	59
151	Self-Compensation in Transparent Conducting F-Doped SnO2. <i>Advanced Functional Materials</i> , 2018 , 28, 1701900	15.6	56
150	Perovskite-Inspired Photovoltaic Materials: Toward Best Practices in Materials Characterization and Calculations. <i>Chemistry of Materials</i> , 2017 , 29, 1964-1988	9.6	87
149	Heterostructures of GaN with SiC and ZnO enhance carrier stability and separation in framework semiconductors. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2017 , 214, 1600440	1.6	6
148	Atypically small temperature-dependence of the direct band gap in the metastable semiconductor copper nitride Cu3N. <i>Physical Review B</i> , 2017 , 95,	3.3	27
147	Chemical Vapor Deposition Synthesis and Optical Properties of NbO Thin Films with Hybrid Functional Theoretical Insight into the Band Structure and Band Gaps. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 18031-18038	9.5	36
146	Photocatalysis: Evidence and Effect of Photogenerated Charge Transfer for Enhanced Photocatalysis in WO3/TiO2 Heterojunction Films: A Computational and Experimental Study (Adv. Funct. Mater. 18/2017). <i>Advanced Functional Materials</i> , 2017 , 27,	15.6	1
145	Electron Counting in Solids: Oxidation States, Partial Charges, and Ionicity. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 2074-2075	6.4	50
144	Demonstration of the donor characteristics of Si and O defects in GaN using hybrid QM/MM. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2017 , 214, 1600445	1.6	9
143	Exploring the PbS B i2S3 Series for Next Generation Energy Conversion Materials. <i>Chemistry of Materials</i> , 2017 , 29, 5156-5167	9.6	24
142	Evidence and Effect of Photogenerated Charge Transfer for Enhanced Photocatalysis in WO3/TiO2 Heterojunction Films: A Computational and Experimental Study. <i>Advanced Functional Materials</i> , 2017 , 27, 1605413	15.6	76
141	Electroactive Nanoporous Metal Oxides and Chalcogenides by Chemical Design. <i>Chemistry of Materials</i> , 2017 , 29, 3663-3670	9.6	6
140	Electronic and defect properties of (CH3NH3)2Pb(SCN)2I2 analogues for photovoltaic applications. Journal of Materials Chemistry A, 2017 , 5, 7845-7853	13	37

139	Computational and Experimental Study of Ta2O5 Thin Films. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 202-210	3.8	17
138	The adsorption of Cu on the CeO(110) surface. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 27191-27	720,36	14
137	Transparent conducting n-type ZnO:Sc Isynthesis, optoelectronic properties and theoretical insight. <i>Journal of Materials Chemistry C</i> , 2017 , 5, 7585-7597	7.1	38
136	Ising-like antiferromagnetism on the octahedral sublattice of a cobalt-containing garnet and the potential for quantum criticality. <i>Physical Review B</i> , 2017 , 95,	3.3	7
135	Narrow-band anisotropic electronic structure of ReS2. <i>Physical Review B</i> , 2017 , 96,	3.3	33
134	Valence band modification of Cr2O3 by Ni-doping: creating a high figure of merit p-type TCO. Journal of Materials Chemistry C, 2017 , 5, 12610-12618	7.1	24
133	Core Levels, Band Alignments, and Valence-Band States in CuSbS for Solar Cell Applications. <i>ACS Applied Materials & Applications</i> , 2017, 9, 41916-41926	9.5	40
132	Engineering Valence Band Dispersion for High Mobility p-Type Semiconductors. <i>Chemistry of Materials</i> , 2017 , 29, 2402-2413	9.6	47
131	Vibronic Structure in Room Temperature Photoluminescence of the Halide Perovskite CsBiBr. <i>Inorganic Chemistry</i> , 2017 , 56, 42-45	5.1	95
130	Stability of the M2 phase of vanadium dioxide induced by coherent epitaxial strain. <i>Physical Review B</i> , 2016 , 94,	3.3	51
129	Enhanced Photoresponse of FeS Films: The Role of Marcasite-Pyrite Phase Junctions. <i>Advanced Materials</i> , 2016 , 28, 9602-9607	24	53
128	A single-source precursor approach to solution processed indium arsenide thin films. <i>Journal of Materials Chemistry C</i> , 2016 , 4, 6761-6768	7.1	12
127	An assessment of silver copper sulfides for photovoltaic applications: theoretical and experimental insights. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 12648-12657	13	32
126	Direct Observation of Electrostatically Driven Band Gap Renormalization in a Degenerate Perovskite Transparent Conducting Oxide. <i>Physical Review Letters</i> , 2016 , 116, 027602	7.4	83
125	Can Pb-Free Halide Double Perovskites Support High-Efficiency Solar Cells?. <i>ACS Energy Letters</i> , 2016 , 1, 949-955	20.1	301
124	Photoelectrochemistry: Enhanced Photoresponse of FeS2 Films: The Role of Marcasite Pyrite Phase Junctions (Adv. Mater. 43/2016). <i>Advanced Materials</i> , 2016 , 28, 9656-9656	24	
123	Spatial Electron-hole Separation in a One Dimensional Hybrid Organic-Inorganic Lead Iodide. <i>Scientific Reports</i> , 2016 , 6, 20626	4.9	23
122	Modelling potential photovoltaic absorbers Cu3MCh4(M = V, Nb, Ta; Ch = S, Se, Te) using density functional theory. <i>Journal of Physics Condensed Matter</i> , 2016 , 28, 175801	1.8	10

121	Adsorption of formate species on Cu(h,k,l) low index surfaces. Surface Science, 2016, 653, 45-54	1.8	19
120	Defect Tolerance to Intolerance in the Vacancy-Ordered Double Perovskite Semiconductors Cs2SnI6 and Cs2TeI6. <i>Journal of the American Chemical Society</i> , 2016 , 138, 8453-64	16.4	264
119	n-Type doped transparent conducting binary oxides: an overview. <i>Journal of Materials Chemistry C</i> , 2016 , 4, 6946-6961	7.1	214
118	Relativistic electronic structure and band alignment of BiSI and BiSeI: candidate photovoltaic materials. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 2060-2068	13	97
117	Lithium-ion conductivity in Li6Y(BO3)3: a thermally and electrochemically robust solid electrolyte. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 6972-6979	13	9
116	Band gap and work function tailoring of SnO2 for improved transparent conducting ability in photovoltaics. <i>Journal of Materials Chemistry C</i> , 2016 , 4, 1467-1475	7.1	141
115	Interplay of Orbital and Relativistic Effects in Bismuth Oxyhalides: BiOF, BiOCl, BiOBr, and BiOI. <i>Chemistry of Materials</i> , 2016 , 28, 1980-1984	9.6	225
114	Assessing the potential of Mg-doped CrDDs a novel p-type transparent conducting oxide. <i>Journal of Physics Condensed Matter</i> , 2016 , 28, 125501	1.8	16
113	Hybrid Organic-Inorganic Coordination Complexes as Tunable Optical Response Materials. <i>Inorganic Chemistry</i> , 2016 , 55, 3393-400	5.1	23
112	Bismuth oxyhalides: synthesis, structure and photoelectrochemical activity. <i>Chemical Science</i> , 2016 , 7, 4832-4841	9.4	197
111	Pilot-scale continuous synthesis of a vanadium-doped LiFePO4/C nanocomposite high-rate cathodes for lithium-ion batteries. <i>Journal of Power Sources</i> , 2016 , 302, 410-418	8.9	51
110	Beyond methylammonium lead iodide: prospects for the emergent field of ns containing solar absorbers. <i>Chemical Communications</i> , 2016 , 53, 20-44	5.8	2 80
109	Quasi-particle electronic band structure and alignment of the V-VI-VII semiconductors SbSI, SbSBr, and SbSeI for solar cells. <i>Applied Physics Letters</i> , 2016 , 108, 112103	3.4	43
108	Band gap reduction in InNxSb1-x alloys: Optical absorption, k IP modeling, and density functional theory. <i>Applied Physics Letters</i> , 2016 , 109, 132104	3.4	9
107	On the application of the tolerance factor to inorganic and hybrid halide perovskites: a revised system. <i>Chemical Science</i> , 2016 , 7, 4548-4556	9.4	507
106	Single Step Solution Processed GaAs Thin Films from GaMe3 and tBuAsH2 under Ambient Pressure. Journal of Physical Chemistry C, 2016 , 120, 7013-7019	3.8	10
105	Multifunctional P-Doped TiO2 Films: A New Approach to Self-Cleaning, Transparent Conducting Oxide Materials. <i>Chemistry of Materials</i> , 2015 , 27, 3234-3242	9.6	92
104	Electronic and surface properties of Ga-doped In2O3 ceramics. <i>Applied Surface Science</i> , 2015 , 349, 970-	-9 8 2 ₇	25

103	Polymorph Engineering of TiO2: Demonstrating How Absolute Reference Potentials Are Determined by Local Coordination. <i>Chemistry of Materials</i> , 2015 , 27, 3844-3851	9.6	92
102	Origin of High Mobility in Molybdenum-Doped Indium Oxide. <i>Chemistry of Materials</i> , 2015 , 27, 2788-279	96 ,6	61
101	(CH3NH3)2Pb(SCN)2I2: a more stable structural motif for hybrid halide photovoltaics?. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 4594-8	6.4	100
100	Structural, energetic and electronic properties of (100) surfaces for alkaline earth metal oxides as calculated with hybrid density functional theory. <i>Surface Science</i> , 2015 , 642, 58-65	1.8	16
99	Self-regulation mechanism for charged point defects in hybrid halide perovskites. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 1791-4	16.4	394
98	Scalable route to CH3NH3PbI3 perovskite thin films by aerosol assisted chemical vapour deposition. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 9071-9073	13	67
97	Band Gap Dependence on Cation Disorder in ZnSnN2 Solar Absorber. <i>Advanced Energy Materials</i> , 2015 , 5, 1501462	21.8	75
96	Antiferromagnetism at T>500K in the layered hexagonal ruthenate SrRu2O6. <i>Physical Review B</i> , 2015 , 92,	3.3	38
95	Buckeridge etଢl. Reply. <i>Physical Review Letters</i> , 2015 , 115, 029702	7.4	5
94	Band energy control of molybdenum oxide by surface hydration. <i>Applied Physics Letters</i> , 2015 , 107, 231	69.5	23
93	Morphological Features and Band Bending at Nonpolar Surfaces of ZnO. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 11598-11611	3.8	27
92	Interfacial Effects in LixVOPO4 and Evolution of the Electronic Structure. <i>Chemistry of Materials</i> , 2015 , 27, 8211-8219	9.6	33
91	The electronic structure of sulvanite structured semiconductors Cu3MCh4 (M = V, Nb, Ta; Ch = S, Se, Te): prospects for optoelectronic applications. <i>Journal of Materials Chemistry C</i> , 2015 , 3, 12236-12244	7.1	33
90	Adsorption of Water on Yttria-Stabilized Zirconia. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 22526-225	3 3 8	17
89	Polymorph engineering of CuMO2 (M = Al, Ga, Sc, Y) semiconductors for solar energy applications: from delafossite to wurtzite. <i>Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials</i> , 2015 , 71, 702-6	1.8	9
88	The vapour phase detection of explosive markers and derivatives using two fluorescent metal B rganic frameworks. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 6351-6359	13	63
87	Self-Regulation Mechanism for Charged Point Defects in Hybrid Halide Perovskites. <i>Angewandte Chemie</i> , 2015 , 127, 1811-1814	3.6	87
86	Determination of the nitrogen vacancy as a shallow compensating center in GaN doped with divalent metals. <i>Physical Review Letters</i> , 2015 , 114, 016405	7.4	58

85	Solution Processing Route to Multifunctional Titania Thin Films: Highly Conductive and Photcatalytically Active Nb:TiO2. <i>Advanced Functional Materials</i> , 2014 , 24, 5075-5085	15.6	81	
84	N incorporation and associated localized vibrational modes in GaSb. <i>Physical Review B</i> , 2014 , 89,	3.3	12	
83	The Nature of the Molybdenum Surface in Iron Molybdate. The Active Phase in Selective Methanol Oxidation. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 26155-26161	3.8	49	
82	Low Temperature Preparation and Electrochemical Properties of LiFeSi2O6. <i>Journal of the Electrochemical Society</i> , 2014 , 161, A1642-A1647	3.9	8	
81	Interface stoichiometry control to improve device voltage and modify band alignment in ZnO/Cu2O heterojunction solar cells. <i>Energy and Environmental Science</i> , 2014 , 7, 3606-3610	35.4	82	
80	Understanding the defect chemistry of alkali metal strontium silicate solid solutions: insights from experiment and theory. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 17919-17924	13	27	
79	Double bubbles: a new structural motif for enhanced electron-hole separation in solids. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 21098-105	3.6	10	
78	Understanding doping anomalies in degenerate p-type semiconductor LaCuOSe. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 3429-3438	7.1	45	
77	Electronic structure and band alignment of zinc nitride, Zn3N2. RSC Advances, 2014, 4, 3306-3311	3.7	37	
76	The electronic structure of silver orthophosphate: experiment and theory. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 6092-6099	13	18	
75	Bulk ionization potentials and band alignments from three-dimensional periodic calculations as demonstrated on rocksalt oxides. <i>Physical Review B</i> , 2014 , 90,	3.3	28	
74	Understanding the stability of MnPO4. Journal of Materials Chemistry A, 2014, 2, 12827	13	19	
73	Chemical and structural indicators for large redox potentials in Fe-based positive electrode materials. <i>ACS Applied Materials & amp; Interfaces</i> , 2014 , 6, 10832-9	9.5	40	
72	Interlayer cation exchange stabilizes polar perovskite surfaces. Advanced Materials, 2014, 26, 7252-6	24	34	
71	The electronic structure of the antimony chalcogenide series: Prospects for optoelectronic applications. <i>Journal of Solid State Chemistry</i> , 2014 , 213, 116-125	3.3	68	
70	Understanding the electronic structure of IrO2 using hard-X-ray photoelectron spectroscopy and density-functional theory. <i>Physical Review Letters</i> , 2014 , 112, 117601	7.4	80	
69	The nature of oxygen states on the surfaces of CeO2 and La-doped CeO2. <i>Chemical Physics Letters</i> , 2014 , 608, 239-243	2.5	25	
68	From Stable ZnO and GaN Clusters to Novel Double Bubbles and Frameworks. <i>Inorganics</i> , 2014 , 2, 248-2	2 63 9	10	

67	Valence-band density of states and surface electron accumulation in epitaxial SnO2 films. <i>Physical Review B</i> , 2014 , 90,	3.3	50
66	Combinatorial Atmospheric Pressure Chemical Vapor Deposition of F:TiO2; the Relationship between Photocatalysis and Transparent Conducting Oxide Properties. <i>Advanced Functional Materials</i> , 2014 , 24, 1758-1771	15.6	33
65	Automated procedure to determine the thermodynamic stability of a material and the range of chemical potentials necessary for its formation relative to competing phases and compounds. <i>Computer Physics Communications</i> , 2014 , 185, 330-338	4.2	58
64	Electronic Structures of Antimony Oxides. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 14759-14769	3.8	62
63	Band alignment of rutile and anatase TiO[] <i>Nature Materials</i> , 2013 , 12, 798-801	27	1656
62	Dynamical response and instability in ceria under lattice expansion. <i>Physical Review B</i> , 2013 , 87,	3.3	38
61	Computational testing of trivalent dopants in CeO2 for improved high-ldielectric behaviour. Journal of Materials Chemistry C, 2013 , 1, 1093-1098	7.1	30
60	Growth, disorder, and physical properties of ZnSnN2. Applied Physics Letters, 2013, 103, 042109	3.4	98
59	Growth and properties of GaSbBi alloys. Applied Physics Letters, 2013, 103, 142106	3.4	78
58	Understanding the defect chemistry of tin monoxide. <i>Journal of Materials Chemistry C</i> , 2013 , 1, 8194	7.1	59
57	La-doped BaSnO3Degenerate perovskite transparent conducting oxide: Evidence from synchrotron x-ray spectroscopy. <i>Applied Physics Letters</i> , 2013 , 103, 042105	3.4	74
56	Origin of the Bipolar Doping Behavior of SnO from X-ray Spectroscopy and Density Functional Theory. <i>Chemistry of Materials</i> , 2013 , 25, 3114-3123	9.6	107
55	Electron excess in alkaline earth sub-nitrides: 2D electron gas or 3D electride?. <i>Journal of Materials Chemistry C</i> , 2013 , 1, 3525	7.1	58
54	Cu3MCh3 (M = Sb, Bi; Ch = S, Se) as candidate solar cell absorbers: insights from theory. <i>Physical Chemistry Chemical Physics</i> , 2013 , 15, 15477-84	3.6	58
53	Convergence of density and hybrid functional defect calculations for compound semiconductors. <i>Physical Review B</i> , 2013 , 88,	3.3	77
52	Band gap engineering of In2O3 by alloying with Tl2O3. <i>Applied Physics Letters</i> , 2013 , 103, 262108	3.4	18
51	Polymorphism of indium oxide: Materials physics of orthorhombic In2O3. <i>Physical Review B</i> , 2013 , 88,	3.3	17
50	PbO2: from semi-metal to transparent conducting oxide by defect chemistry control. <i>Chemical Communications</i> , 2013 , 49, 448-50	5.8	23

(2011-2013)

49	The band structure of WO3 and non-rigid-band behaviour in Na0.67WO3 derived from soft x-ray spectroscopy and density functional theory. <i>Journal of Physics Condensed Matter</i> , 2013 , 25, 165501	1.8	7
48	Defect engineering of BaSnO3 for high-performance transparent conducting oxide applications. <i>Physical Review B</i> , 2013 , 87,	3.3	151
47	Elucidating the Nature of Pseudo Jahn Teller Distortions in LixMnPO4: Combining Density Functional Theory with Soft and Hard X-ray Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 10383-10396	3.8	61
46	Energy-band alignment of II-VI/Zn3P2 heterojunctions from x-ray photoemission spectroscopy. Journal of Applied Physics, 2013 , 113, 203705	2.5	23
45	Scanlon and Watson Reply:. Physical Review Letters, 2012, 108,	7.4	1
44	Analysis of Intrinsic Defects in CeO2 Using a Koopmans-Like GGA+U Approach. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 2443-2452	3.8	125
43	On the possibility of p-type SnO2. Journal of Materials Chemistry, 2012, 22, 25236		134
42	Geometry, Electronic Structure, and Bonding in CuMCh2(M = Sb, Bi; Ch = S, Se): Alternative Solar Cell Absorber Materials?. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 7334-7340	3.8	87
41	Prediction on the existence and chemical stability of cuprous fluoride. <i>Chemical Science</i> , 2012 , 3, 2565	9.4	21
40	Controlling bulk conductivity in topological insulators: key role of anti-site defects. <i>Advanced Materials</i> , 2012 , 24, 2154-8	24	227
39	ZnSnN2: A new earth-abundant element semiconductor for solar cells 2012 ,		11
38	Bandgap engineering of ZnSnP2 for high-efficiency solar cells. <i>Applied Physics Letters</i> , 2012 , 100, 25191	13.4	99
37	Electronic structures of silver oxides. <i>Physical Review B</i> , 2011 , 84,	3.3	51
36	Understanding the p-type defect chemistry of CuCrO2. <i>Journal of Materials Chemistry</i> , 2011 , 21, 3655		163
35	Sources of conductivity and doping limits in CdO from hybrid density functional theory. <i>Journal of the American Chemical Society</i> , 2011 , 133, 15065-72	16.4	149
34	Band gap anomalies of the ZnM2(III)O4 (M(III)=Co, Rh, Ir) spinels. <i>Physical Chemistry Chemical Physics</i> , 2011 , 13, 9667-75	3.6	60
33	Uncovering the complex behavior of hydrogen in Cu2O. <i>Physical Review Letters</i> , 2011 , 106, 186403	7.4	46
32	Tin Monoxide: Structural Prediction from First Principles Calculations with van der Waals Corrections. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 19916-19924	3.8	79

31	Comparison of the defective pyrochlore and ilmenite polymorphs of AgSbO3 using GGA and hybrid DFT. <i>Physical Review B</i> , 2011 , 83,	3.3	23
30	The origin of the enhanced oxygen storage capacity of Ce(1-x)(Pd/Pt)(x)O2. <i>Physical Chemistry Chemical Physics</i> , 2011 , 13, 4279-84	3.6	74
29	Role of Lattice Distortions in the Oxygen Storage Capacity of Divalently Doped CeO2. <i>Chemistry of Materials</i> , 2011 , 23, 4464-4468	9.6	158
28	Nature of the band gap and origin of the conductivity of PbO2 revealed by theory and experiment. <i>Physical Review Letters</i> , 2011 , 107, 246402	7.4	76
27	Chemical bonding in copper-based transparent conducting oxides: CuMO2 (M = In, Ga, Sc). <i>Journal of Physics Condensed Matter</i> , 2011 , 23, 334201	1.8	22
26	Comment on Generalized Gradient Approximation +UStudy for Metallization Mechanism of Niobium-Doped Anatase Titanium Dioxide <i>Japanese Journal of Applied Physics</i> , 2011 , 50, 069101	1.4	1
25	Nature of the band gap of Tl2O3. <i>Physical Review B</i> , 2011 , 83,	3.3	37
24	Comment on Generalized Gradient Approximation +UStudy for Metallization Mechanism of Niobium-Doped Anatase Titanium Dioxide <i>Japanese Journal of Applied Physics</i> , 2011 , 50, 069101	1.4	
23	Understanding conductivity anomalies in Cu(I)-based delafossite transparent conducting oxides: Theoretical insights. <i>Journal of Chemical Physics</i> , 2010 , 132, 024707	3.9	93
22	Conductivity Limits in CuAlO2 from Screened-Hybrid Density Functional Theory. <i>Journal of Physical Chemistry Letters</i> , 2010 , 1, 3195-3199	6.4	102
21	Stability, geometry, and electronic structure of an alternative I-III-VI2 material, CuScS2: A hybrid density functional theory analysis. <i>Applied Physics Letters</i> , 2010 , 97, 131904	3.4	13
20	Undoped n-Type Cu2O: Fact or Fiction?. <i>Journal of Physical Chemistry Letters</i> , 2010 , 1, 2582-2585	6.4	111
19	Electronic structure of mixed-valence silver oxide AgO from hybrid density-functional theory. <i>Physical Review B</i> , 2010 , 81,	3.3	64
18	Theoretical and Experimental Study of the Electronic Structures of MoO3 and MoO2. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 4636-4645	3.8	435
17	Understanding conductivity in SrCu2O2: stability, geometry and electronic structure of intrinsic defects from first principles. <i>Journal of Materials Chemistry</i> , 2010 , 20, 1086-1096		39
16	Testing Interatomic Potentials for QM/MM Embedded-Cluster Calculations on Ceria Surfaces. <i>E-Journal of Surface Science and Nanotechnology</i> , 2009 , 7, 413-420	0.7	8
15	A GGA+U study of the reduction of ceria surfaces and their partial reoxidation through NO2 adsorption. <i>Molecular Simulation</i> , 2009 , 35, 577-583	2	30
14	Comparative study of bandwidths in copper delafossites from x-ray emission spectroscopy. <i>Physical Review B</i> , 2009 , 80,	3.3	33

LIST OF PUBLICATIONS

13	Intrinsic ferromagnetism in CeO(2): dispelling the myth of vacancy site localization mediated superexchange. <i>Journal of Physics Condensed Matter</i> , 2009 , 21, 405502	1.8	34	
12	(Cu2S2)(Sr3Sc2O5)A Layered, Direct Band Gap, p-Type Transparent Conducting Oxychalcogenide: A Theoretical Analysis <i>Chemistry of Materials</i> , 2009 , 21, 5435-5442	9.6	66	
11	Reactivity on the (110) Surface of Ceria: A GGA+U Study of Surface Reduction and the Adsorption of CO and NO2. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 11095-11103	3.8	63	
10	Acceptor levels in p-type Cu(2)O: rationalizing theory and experiment. <i>Physical Review Letters</i> , 2009 , 103, 096405	7.4	237	
9	Small polarons in Nb- and Ta-doped rutile and anatase TiO2. <i>Journal of Materials Chemistry</i> , 2009 , 19, 5175		143	
8	Understanding the p-Type Conduction Properties of the Transparent Conducting Oxide CuBO2: A Density Functional Theory Analysis. <i>Chemistry of Materials</i> , 2009 , 21, 4568-4576	9.6	89	
7	Modeling the polaronic nature of p-type defects in Cu2O: the failure of GGA and GGA + U. <i>Journal of Chemical Physics</i> , 2009 , 131, 124703	3.9	113	
6	X-ray spectroscopic study of the electronic structure of CuCrO2. <i>Physical Review B</i> , 2009 , 79,	3.3	82	
5	Effect of Cr substitution on the electronic structure of CuAl1\(\mathbb{U}\)CrxO2. Physical Review B, 2009 , 79,	3.3	102	
4	The Use of the “+U” Correction in Describing Defect States at Metal Oxide Surfaces: Oxygen Vacancies on CeO2 and TiO2, and Li-doping of MgO. <i>E-Journal of Surface Science and Nanotechnology</i> , 2009 , 7, 389-394	0.7	24	
3	Competing Defect Mechanisms and Hydrogen Adsorption on Li-Doped MgO Low Index Surfaces: A DFT+U Study. <i>E-Journal of Surface Science and Nanotechnology</i> , 2009 , 7, 395-404	0.7	9	
2	An ab initio Study of Reduction of V2O5 through the Formation of Oxygen Vacancies and Li Intercalation. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 9903-9911	3.8	181	
1	Surface Sensitivity in Lithium-Doping of MgO: A Density Functional Theory Study with Correction for on-Site Coulomb Interactions. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 7971-7979	3.8	91	•