Woon Bae Park

List of Publications by Year
in descending order

54 papers	1,978 citations	257450 24 h-index	254184 43 g-index
56 all docs	56 docs citations	56 times ranked	2002 citing authors

#	Article	IF	Citations
1	Discovery of a Phosphor for Light Emitting Diode Applications and Its Structural Determination, Ba(Si,Al)₅(O,N)₈:Eu²⁺. Journal of the American Chemical Society, 2014, 136, 2363-2373.	13.7	167
2	KVP₂O₇ as a Robust Highâ€Energy Cathode for Potassiumâ€Ion Batteries: Pinpointed by a Full Screening of the Inorganic Registry under Specific Search Conditions. Advanced Energy Materials, 2018, 8, 1703099.	19.5	154
3	Classification of crystal structure using a convolutional neural network. IUCrJ, 2017, 4, 486-494.	2.2	141
4	A New Paradigm for Materials Discovery: Heuristicsâ€Assisted Combinatorial Chemistry Involving Parameterization of Material Novelty. Advanced Functional Materials, 2012, 22, 2258-2266.	14.9	89
5	Radiative and non-radiative decay rate of K₂SiF₆:Mn⁴⁺ phosphors. Journal of Materials Chemistry C, 2015, 3, 5484-5489.	5.5	89
6	Ca-doped Na x CoO 2 for improved cyclability in sodium ion batteries. Journal of Power Sources, 2015, 277, 9-16.	7.8	85
7	Eu2+ luminescence from 5 different crystallographic sites in a novel red phosphor, Ca15Si20O10N30:Eu2+. Journal of Materials Chemistry, 2012, 22, 14068.	6.7	84
8	Rb₃SiF₇:Mn⁴⁺ and Rb₂CsSiF₇:Mn⁴⁺ Red-Emitting Phosphors with a Faster Decay Rate. Chemistry of Materials, 2018, 30, 6936-6944.	6.7	81
9	A deep-learning technique for phase identification in multiphase inorganic compounds using synthetic XRD powder patterns. Nature Communications, 2020, 11, 86.	12.8	78
10	Discovery of a Red-Emitting Li₃RbGe₈O₁₈:Mn⁴⁺ Phosphor in the Alkali-Germanate System: Structural Determination and Electronic Calculations. Inorganic Chemistry, 2016, 55, 10310-10319.	4.0	77
11	Reversible K⁺-Insertion/Deinsertion and Concomitant Na⁺-Redistribution in Pâ€²3-Na_{0.52}CrO₂ for High-Performance Potassium-Ion Battery Cathodes. Chemistry of Materials, 2018, 30, 2049-2057.	6.7	76
12	Combinatorial chemistry of oxynitride phosphors and discovery of a novel phosphor for use in light emitting diodes, Ca1.5Ba0.5Si5N6O3:Eu2+. Journal of Materials Chemistry C, 2013, 1, 1832.	5.5	73
13	A novel Mn⁴⁺â€activated red phosphor for use in light emitting diodes, K₃SiF₇:Mn⁴⁺. Journal of the American Ceramic Society, 2017, 100, 1044-1050.	3.8	45
14	An extremely simple macroscale electronic skin realized by deep machine learning. Scientific Reports, 2017, 7, 11061.	3.3	38
15	KCrS₂ Cathode with Considerable Cyclability and High Rate Performance: The First K⁺ Stoichiometric Layered Compound for Potassiumâ€Ion Batteries. Small, 2018, 14, e1803495.	10.0	33
16	Fast chargeable P2â€“K~2/3[Ni1/3Mn2/3]O2 for potassium ion battery cathodes. Journal of Power Sources, 2019, 438, 226992.	7.8	31
17	A Yellow-Emitting Oxynitride Phosphor: Ce_{4-x}Ca_xSi₁₂O_{3+x}N_{18-x}:Eu²⁺. ECS Journal of Solid State Science and Technology, 2013, 2, R3100-R3106.	1.8	30
18	Effect of Mn in Li₃V_{2â€“x}Mn_x(PO₄)₃ as High Capacity Cathodes for Lithium Batteries. ACS Applied Materials & Interfaces, 2017, 9, 40307-40316.	8.0	30

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19	Cyan-Light-Emitting Chalcogenometallate Phosphor, KGaS₂:Eu²⁺, for Phosphor-Converted White Light-Emitting Diodes. Inorganic Chemistry, 2021, 60, 6047-6056.	4.0	28
20	Y6+x/3Si11â^'yAlyN20+xâ^'yO1â^'x+y:Re3+ (Re = Ce3+, Tb3+, Sm3+) phosphors identified by solid-state combinatorial chemistry. Journal of Materials Chemistry, 2011, 21, 5780.	6.7	27
21	A multi-element doping design for a high-performance LiMnPO4 cathode via metaheuristic computation. Journal of Materials Chemistry A, 2017, 5, 8939-8945.	10.3	27
22	Discovery of a Quaternary Sulfide, Ba_{2â€“x}LiAlS₄:Eu²⁺, and Its Potential as a Fast-Decaying LED Phosphor. Chemistry of Materials, 2020, 32, 6697-6705.	6.7	27
23	3Mg/Mg₂Sn anodes with unprecedented electrochemical performance towards viable magnesium-ion batteries. Journal of Materials Chemistry A, 2020, 8, 14277-14286.	10.3	25
24	Combinatorial Screening of Luminescent and Structural Properties in a Ce³⁺-Doped Ln-Al-Si-O-N (Ln = Y, La, Gd, Lu) System: The Discovery of a Novel Gd₃Al_{3+x}Si_{3â€“x}O_{12+x}N_{2â€“x}:Ce³ Phosphor. Inorganic Chemistry, 2015, 54, 1829-1840.	4.0	24
25	The Composite Structure and Two-Peak Emission Behavior of a Ca_{1.5}Ba_{0.5}Si₅O₃N₆:Eu²⁺ Phosphor. Inorganic Chemistry, 2016, 55, 2534-2543.	4.0	24
26	Metaheuristics-Assisted Combinatorial Screening of Eu²⁺-Doped Caâ€“Srâ€“Baâ€“Liâ€“Mgâ€“Alâ€“Siâ€“Geâ€“N Compositional Space in Search of a Narrow-Band Green Emitting Phosphor and Density Functional Theory Calculations. Inorganic Chemistry, 2017, 56, 9814-9824.	4.0	23
27	Discovery of Lead-Free Hybrid Organic/Inorganic Perovskites Using Metaheuristic-Driven DFT Calculations. Chemistry of Materials, 2021, 33, 782-798.	6.7	23
28	A data-driven XRD analysis protocol for phase identification and phase-fraction prediction of multiphase inorganic compounds. Inorganic Chemistry Frontiers, 2021, 8, 2492-2504.	6.0	22
29	Unravelling the Nature of the Intrinsic Complex Structure of Binaryâ€Phase Naâ€Layered Oxides. Advanced Materials, 2022, 34, e2202137.	21.0	21
30	Solid-State Combinatorial Screening of ARSi4N7:Eu2+ (A = Sr, Ba, Ca; R = Y, La, Lu) Phosphors. ACS Combinatorial Science, 2012, 14, 537-544.	3.8	20
31	Determination of possible configurations for Li_{0.5}CoO₂delithiated Li-ion battery cathodesviaDFT calculations coupled with a multi-objective non-dominated sorting genetic algorithm (NSGA-III). Physical Chemistry Chemical Physics, 2018, 20, 26405-26413.	2.8	20
32	KFeO2 with corner-shared FeO4 frameworks as a new type of cathode material in potassium-ion batteries. Journal of Solid State Electrochemistry, 2019, 23, 3135-3143.	2.5	19
33	Nonradiative energy transfer between two different activator sites in La_4â^'xCa_xSi_12O_3+xN_18â^'x:Eu^2+. Optics Letters, 2013, 38, 1739.	3.3	18
34	Density functional theory calculations for the band gap and formation energy of Pr_{4â^'x}Ca_xSi₁₂O_{3+x}N_{18â^'x}; a highly disordered compound with low symmetry and a large cell size. Physical Chemistry Chemical Physics, 2017, 19, 16702-16712.	2.8	17
35	Decay Behavior in Ce3+ -doped La3 Si6 N11 and Lu3 Al5 O12 Phosphors. Journal of the American Ceramic Society, 2015, 98, 490-494.	3.8	16
36	Phosphor Informatics Based on Confirmatory Factor Analysis. ACS Combinatorial Science, 2015, 17, 317-325.	3.8	16

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37	Virtual microstructure design for steels using generative adversarial networks. Engineering Reports, 2021, 3, e12274.	1.7	16
38	Systematic Approach To Calculate the Band Gap Energy of a Disordered Compound with a Low Symmetry and Large Cell Size via Density Functional Theory. ACS Omega, 2016, 1, 483-490.	3.5	14
39	Zinc Anodes Modified by Oneâ€Molecularâ€Thick Selfâ€Assembled Monolayers for Simultaneous Suppression of Sideâ€Reactions and Dendriteâ€Formation in Aqueous Zincâ€Ion Batteries. Small, 2022, 18, e2201284.	10.0	14
40	Identification of a narrow band red light-emitting phosphor using computational screening of ICSD: Its synthesis and optical characterization. Journal of Alloys and Compounds, 2019, 774, 338-346.	5.5	13
41	Powder Xâ€Ray Diffraction Pattern Is All You Need for Machineâ€Learningâ€Based Symmetry Identification and Property Prediction. Advanced Intelligent Systems, 2022, 4, .	6.1	13
42	Combinatorial Screening of Eu²⁺and Ce³⁺-doped AE-Sc-Si-O-N (AE = Mg, Ca, Sr,) Tj ETQq0 0 0 rgBT /Overlock Science and Technology, 2016, 5, R3032-R3039.	1.8	10
43	A data-driven approach to predicting band gap, excitation, and emission energies for Eu²⁺-activated phosphors. Inorganic Chemistry Frontiers, 2021, 8, 4610-4624.	6.0	10
44	A rate equation model for the energy transfer mechanism of a novel multi-color-emissive phosphor, Ca_{1.624}Sr_{0.376}Si₅O₃N₆:Eu²⁺. Inorganic Chemistry Frontiers, 2019, 6, 3493-3500.	6.0	9
45	Dirty engineering data-driven inverse prediction machine learning model. Scientific Reports, 2020, 10, 20443.	3.3	9
46	Aliovalent-doped sodium chromium oxide (Na0.9Cr0.9Sn0.1O2 and Na0.8Cr0.9Sb0.1O2) for sodium-ion battery cathodes with high-voltage characteristics. RSC Advances, 2020, 10, 43273-43281.	3.6	9
47	Multi-variable Bayesian optimization for a new composition with high Na⁺ conductivity in the Na₃PS₄ family. Journal of Materials Chemistry A, 2022, 10, 1831-1839.	10.3	9
48	Discovery of Pb-free hybrid organicâ€“inorganic 2D perovskites using a stepwise optimization strategy. Npj Computational Materials, 2022, 8, .	8.7	9
49	Mixed anion/cation redox in K_{0.78}Fe_{1.60}S₂ for a high-performance cathode in potassium ion batteries. Inorganic Chemistry Frontiers, 2020, 7, 2023-2030.	6.0	8
50	Nominally stoichiometric Na₃(W_xSi_xSb_{1â^'2x})S₄ as a superionic solid electrolyte. Inorganic Chemistry Frontiers, 2022, 9, 1233-1243.	6.0	8
51	A novel sulfide phosphor, BaNaAlS3:Eu2+, discovered via particle swarm optimization. Journal of Alloys and Compounds, 2022, 922, 166187.	5.5	8
52	Thermodynamically and Physically Stable Dendrite-Free Li Interface with Layered Boron Nitride Separators. ACS Sustainable Chemistry and Engineering, 2021, 9, 4185-4193.	6.7	7
53	Dendrite-free reversible Li plating/stripping in adiponitrile-based electrolytes for high-voltage Li metal batteries. Journal of Materials Chemistry A, 2021, 9, 4962-4970.	10.3	7
54	Electrochemically active binary anion compounds with tailored oxygen vacancy for energy storage system. Journal of Power Sources, 2019, 444, 227301.	7.8	2