Anton O Oliynyk

List of Publications by Year
in descending order

51 papers	2,220 citations	430874 18 h-index	223800 46 g-index
53 all docs	53 docs citations	53 times ranked	2827 citing authors

#	ARTICLE	IF	CITATIONS
1	High-Throughput Machine-Learning-Driven Synthesis of Full-Heusler Compounds. Chemistry of Materials, 2016, 28, 7324-7331.	6.7	256
2	Identifying an efficient, thermally robust inorganic phosphor host via machine learning. Nature Communications, 2018, 9, 4377.	12.8	228
3	Machine Learning for Materials Scientists: An Introductory Guide toward Best Practices. Chemistry of Materials, 2020, 32, 4954-4965.	6.7	224
4	How To Optimize Materials and Devices <i>via</i> Design of Experiments and Machine Learning: Demonstration Using Organic Photovoltaics. ACS Nano, 2018, 12, 7434-7444.	14.6	219
5	Machine Learning Directed Search for Ultraincompressible, Superhard Materials. Journal of the American Chemical Society, 2018, 140, 9844-9853.	13.7	215
6	Perspective: Web-based machine learning models for real-time screening of thermoelectric materials properties. APL Materials, 2016, 4, .	5.1	150
7	Data mining our way to the next generation of thermoelectrics. Scripta Materialia, 2016, 111, 10-15.	5.2	106
8	Discovery of Intermetallic Compounds from Traditional to Machine-Learning Approaches. Accounts of Chemical Research, 2018, 51, 59-68.	15.6	94
9	Classifying Crystal Structures of Binary Compounds AB through Cluster Resolution Feature Selection and Support Vector Machine Analysis. Chemistry of Materials, 2016, 28, 6672-6681.	6.7	76
10	Machine Learning in Materials Discovery: Confirmed Predictions and Their Underlying Approaches. Annual Review of Materials Research, 2020, 50, 49-69.	9.3	75
11	Disentangling Structural Confusion through Machine Learning: Structure Prediction and Polymorphism of Equiatomic Ternary Phases <i>ABC</i>. Journal of the American Chemical Society, 2017, 139, 17870-17881.	13.7	73
12	Tailorable Indirect to Direct Band-Gap Double Perovskites with Bright White-Light Emission: Decoding Chemical Structure Using Solid-State NMR. Journal of the American Chemical Society, 2020, 142, 10780-10793.	13.7	58
13	Silicon Nanoparticles: Are They Crystalline from the Core to the Surface?. Chemistry of Materials, 2019, 31, 678-688.	6.7	49
14	Finding the Next Superhard Material through Ensemble Learning. Advanced Materials, 2021, 33, e2005112.	21.0	33
15	Alkaline Earth Metalâ€"Organic Frameworks with Tailorable Ion Release: A Path for Supporting Biomineralization. ACS Applied Materials & Interfaces, 2019, 11, 32739-32745.	8.0	30
16	Rare-earth transition-metal gallium chalcogenides RE3MGaCh7 (M=Fe, Co, Ni; Ch=S, Se). Journal of Solid State Chemistry, 2014, 210, 79-88.	2.9	24
17	Virtual Issue on Machine-Learning Discoveries in Materials Science. Chemistry of Materials, 2019, 31, 8243-8247.	6.7	23
18	A Tale of Seemingly â€œIdenticalâ€•Silicon Quantum Dot Families: Structural Insight into Silicon Quantum Dot Photoluminescence. Chemistry of Materials, 2020, 32, 6838-6846.	6.7	22

#	Article	IF	Citations
19	Half-Heusler Structures with Full-Heusler Counterparts: Machine-Learning Predictions and Experimental Validation. Crystal Growth and Design, 2020, 20, 6469-6477.	3.0	20
20	Gd₁₂Co_{5.3}Bi and Gd₁₂Co₅Bi, Crystalline DoppelgÃnger with Low Thermal Conductivities. Inorganic Chemistry, 2016, 55, 6625-6633.	4.0	18
21	Phase Equilibria in the Moâ€“Feâ€“P System at 800 Â°C and Structure of Ternary Phosphide (Mo_{1â€“<i>x</i>}Fe_{<i>x</i>})₃P (0.10 â‰ <i>x</i> â‰ 0.15). Inorganic Chemistry, 2013, 52, 983-991.	4.0	17
22	Enhancement in surface mobility and quantum transport of Bi2â˜'xSbxTe3â˜'ySey topological insulator by controlling the crystal growth conditions. Scientific Reports, 2018, 8, 17290.	3.3	17
23	Solving the Coloring Problem in Half-Heusler Structures: Machine-Learning Predictions and Experimental Validation. Inorganic Chemistry, 2019, 58, 9280-9289.	4.0	17
24	Significant Variability in the Photocatalytic Activity of Natural Titanium-Containing Minerals: Implications for Understanding and Predicting Atmospheric Mineral Dust Photochemistry. Environmental Science & Technology, 2020, 54, 13509-13516.	10.0	17
25	Hexagonal Double Perovskite Cs₂AgCrCl₆. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2019, 645, 323-328.	1.2	16
26	Quaternary Germanides RE4Mn2InGe4(RE = Laâ€“Nd, Sm, Gdâ€“Tm, Lu). Inorganic Chemistry, 2013, 52, 8264-8271.	4.0	13
27	Atomic Substitution to Balance Hardness, Ductility, and Sustainability in Molybdenum Tungsten Borocarbide. Chemistry of Materials, 2019, 31, 7696-7703.	6.7	11
28	Ternary rare-earth ruthenium and iridium germanides RE3M2Ge3 (RE=Y, Gdâ€“Tm, Lu; M=Ru, Ir). Journal of Solid State Chemistry, 2013, 202, 241-249.	2.9	10
29	Production of Atmospheric Organosulfates via Mineral-Mediated Photochemistry. ACS Earth and Space Chemistry, 2019, 3, 424-431.	2.7	10
30	The Ti-Fe-P system: phase equilibria and crystal structure of phases. Open Chemistry, 2013, 11, 1518-1526.	1.9	9
31	Not Just Par for the Course: 73 Quaternary Germanides RE4M2XGe4 (RE = Laâ€“Nd, Sm, Gdâ€“Tm, Lu; M =) Tj ETQq1 1 0.784314 rgB Chemistry, 2018, 57, 14249-14259.	4.0	9
32	Single-Crystal Automated Refinement (SCAR): A Data-Driven Method for Determining Inorganic Structures. Inorganic Chemistry, 2019, 58, 9004-9015.	4.0	9
33	Many Metals Make the Cut: Quaternary Rare-Earth Germanides RE4M2InGe4(M = Fe, Co, Ni, Ru, Rh, Ir) and RE4RhInGe4Derived from Excision of Slabs in RE2InGe2. Inorganic Chemistry, 2015, 54, 2780-2792.	4.0	8
34	Quaternary rare-earth sulfides RE3M0.5Mâ€²S7 (M = Zn, Cd; Mâ€² = Si, Ge). Journal of Solid State Chemistry, 2019, 278, 120914.	2.9	8
35	Rare-earth manganese germanides RE2+MnGe2+ (RE=La, Ce) built from four-membered rings and stellae quadrangulae of Mn-centred tetrahedra. Journal of Solid State Chemistry, 2013, 206, 60-65.	2.9	7
36	Searching for Missing Binary Equiatomic Phases: Complex Crystal Chemistry in the Hfâ˜'In System. Inorganic Chemistry, 2018, 57, 7966-7974.	4.0	7

#	Article	IF	Citations
37	Investigation of phase equilibria in the quaternary Ceâ€“Mnâ€“Inâ€“Ge system and isothermal sections of the boundary ternary systems at 800 Â°C. Journal of Alloys and Compounds, 2015, 622, 837-841.	5.5	6
38	Complex Crystal Chemistry of Yb₆(CuGa)₅₀ and Yb₆(CuGa)₅₁ Grown at Different Synthetic Conditions. Crystal Growth and Design, 2018, 18, 6091-6099.	3.0	5
39	Ternary rare-earth manganese germanides RE3Mn2Ge3 (RE=Ceâ€“Nd) and a possible oxygen-interstitial derivative Nd4Mn2Ge5O0.6. Journal of Alloys and Compounds, 2014, 602, 130-134.	5.5	4
40	Polyanionic Goldâ€“Tin Bonding and Crystal Structure Preference in REAu_{1.5}Sn_{0.5} (RE = La, Ce, Pr, Nd). Inorganic Chemistry, 2018, 57, 10736-10743.	4.0	4
41	Coloured intermetallic compounds LiCu2Al and LiCu2Ga. Journal of Solid State Chemistry, 2020, 292, 121703.	2.9	4
42	Tie-Dyeing with Foraged Acorns and Rust: A Workshop Connecting Green Chemistry and Environmental Science. Journal of Chemical Education, 2022, 99, 2431-2437.	2.3	4
43	Lattice strain and texture analysis of superhard Mo_{0.9}W_{1.1}BC and ReWC_{0.8}<i>via</i> diamond anvil cell deformation. Journal of Materials Chemistry A, 2019, 7, 24012-24018.	10.3	2
44	Synthesis, structure, and properties of rare-earth germanium sulfide iodides RE3Ge2S8I (RE = La, Ce,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	2.9	2
45	Dehydrocoupling â€“ an alternative approach to functionalizing germanium nanoparticle surfaces. Nanoscale, 2020, 12, 6271-6278.	5.6	2
46	Machine Learning: Finding the Next Superhard Material through Ensemble Learning (Adv. Mater.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 3	21.0	2
47	Three Rh-rich ternary germanides in the Ceâ€“Rhâ^'Ge system. Journal of Solid State Chemistry, 2021, 304, 122585.	2.9	2
48	Ternary Rare-Earth-Metal Nickel Indides RE₂₃Ni₇In₄ (RE = Gd, Tb,) Tj ETQq0 0 0 rgBT /Overlock 1 60, 17900-17910.	4.0	2
49	Green Chemistry Applied to Transition Metal Chalcogenides through Synthesis, Design of Experiments, Life Cycle Assessment, and Machine Learning. , 0, , .		2
50	The phase equilibria and crystal structure of the phases in the Hfâ€“Tiâ€“P system. Journal of Alloys and Compounds, 2015, 633, 75-82.	5.5	1
51	Trends in Bulk Compressibility of Mo_{2â€“<i>x</i>}W_{<i>x</i>}BC Solid Solutions. Chemistry of Materials, 2022, 34, 2569-2575.	6.7	0