

# Dmitry Batuk

## List of Publications by Year in descending order

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50  
papers

2,063  
citations

346980

22  
h-index

263392

45  
g-index

60  
all docs

60  
docs citations

60  
times ranked

4183  
citing authors

#	ARTICLE	IF	CITATIONS
1	New bending mode in SAQP Si fins and its mitigation. <i>Materials Science in Semiconductor Processing</i> , 2022, 141, 106437.	1.9	0
2	Experimental determination of the magnetic interactions of frustrated Cairo pentagon lattice materials. <i>Physical Review B</i> , 2021, 103, .	1.1	1
3	Electrochemical behavior of $\text{Bi}_4\text{B}_2\text{O}_9$ towards lithium-reversible conversion reactions without nanosizing. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 2330-2338.	1.3	9
4	The Role of the Electrode Surface in Na-Air Batteries: Insights in Electrochemical Product Formation and Chemical Growth of $\text{Na}_2\text{O}$ . <i>Advanced Energy Materials</i> , 2018, 8, 1701581.	10.2	28
5	Chemical Activity of the Peroxide/Oxide Redox Couple: Case Study of $\text{Ba}_5\text{Ru}_2\text{O}_{11}$ in Aqueous and Organic Solvents. <i>Chemistry of Materials</i> , 2018, 30, 3882-3893.	3.2	8
6	Recent Advances in Transmission Electron Microscopy for Materials Science at the EMAT Lab of the University of Antwerp. <i>Materials</i> , 2018, 11, 1304.	1.3	19
7	Origin of the High Capacity Manganese-Based Oxyfluoride Electrodes for Rechargeable Batteries. <i>Chemistry of Materials</i> , 2018, 30, 5362-5372.	3.2	16
8	Synthesis, Structure, and Electrochemical Properties of K-Based Sulfates $\text{K}_2\text{M}_2(\text{SO}_4)_3$ with M = Fe and Cu. <i>Inorganic Chemistry</i> , 2017, 56, 2013-2021.	1.9	31
9	Effect of cation vacancies on the crystal structure and luminescent properties of $\text{Ca}_{0.85-1.5x}\text{Gd}_x\text{Eu}_{0.1-x-0.05+0.5x}\text{WO}_4$ (0 ≤ x ≤ 0.567) scheelite-based red phosphors. <i>Journal of Alloys and Compounds</i> , 2017, 706, 358-369.	2.8	5
10	Electrochemically activated $\text{MnO}$ as a cathode material for sodium-ion batteries. <i>Electrochemistry Communications</i> , 2017, 77, 81-84.	2.3	12
11	Evidence for anionic redox activity in a tridimensional-ordered Li-rich positive electrode $\text{Li}_2\text{-Li}_2\text{IrO}_3$ . <i>Nature Materials</i> , 2017, 16, 580-586.	13.3	290
12	The $\text{Li}_3\text{Ru}_x\text{Nb}_x\text{O}_4$ (0 ≤ x ≤ 1) System: Structural Diversity and Li Insertion and Extraction Capabilities. <i>Chemistry of Materials</i> , 2017, 29, 5331-5343.	3.2	42
13	Crystal Structure, Defects, Magnetic and Dielectric Properties of the Layered $\text{Bi}_{3n+1}\text{Ti}_7\text{Fe}_3\text{n-3O}_{9n+11}$ Perovskite-Anatase Intergrowths. <i>Inorganic Chemistry</i> , 2017, 56, 931-942.	1.9	5
14	Room Temperature Magnetically Ordered Polar Corundum $\text{GaFeO}_3$ Displaying Magnetoelectric Coupling. <i>Journal of the American Chemical Society</i> , 2017, 139, 1520-1531.	6.6	34
15	Laser Synthesis of Hard Carbon for Anodes in Na-Ion Battery. <i>Advanced Materials Technologies</i> , 2017, 2, 1600227.	3.0	21
16	Luminescence Property Upgrading via the Structure and Cation Changing in $\text{Ag}_x\text{Eu}_{(2-x)/3}\text{WO}_4$ and $\text{Ag}_x\text{Gd}_{(2-x)/3}\text{Eu}_{0.3}\text{WO}_4$ . <i>Chemistry of Materials</i> , 2017, 29, 8811-8823.	3.2	17
17	Spin-reorientation transitions in the Cairo pentagonal magnet $\text{Bi}_4\text{Fe}_5\text{O}_{13}\text{F}$ . <i>Physical Review B</i> , 2017, 96, .	1.1	15
18	Approaching the limits of cationic and anionic electrochemical activity with the Li-rich layered rocksalt $\text{Li}_3\text{IrO}_4$ . <i>Nature Energy</i> , 2017, 2, 954-962.	19.8	138

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19	Synthesis of Li-Rich NMC: A Comprehensive Study. <i>Chemistry of Materials</i> , 2017, 29, 9923-9936.	3.2	111
20	Phosphate Ion Functionalization of Perovskite Surfaces for Enhanced Oxygen Evolution Reaction. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 3466-3472.	2.1	109
21	Dual Stabilization and Sacrificial Effect of Na <sub>2</sub> CO <sub>3</sub> for Increasing Capacities of Na-Ion Cells Based on P2-Na <sub>x</sub> MO <sub>2</sub> Electrodes. <i>Chemistry of Materials</i> , 2017, 29, 5948-5956.	3.2	95
22	Layered-to-Tunnel Structure Transformation and Oxygen Redox Chemistry in LiRhO <sub>2</sub> upon Li Extraction and Insertion. <i>Inorganic Chemistry</i> , 2016, 55, 7079-7089.	1.9	20
23	Complex Microstructure and Magnetism in Polymorphic CaFeSeO. <i>Inorganic Chemistry</i> , 2016, 55, 10714-10726.	1.9	11
24	ZnTaO <sub>2</sub> N: Stabilized High-Temperature LiNbO <sub>3</sub> -type Structure. <i>Journal of the American Chemical Society</i> , 2016, 138, 15950-15955.	6.6	26
25	Direct Observation of Ferroelectric Domain Walls in LiNbO <sub>3</sub> : Wall Meanders, Kinks, and Local Electric Charges. <i>Advanced Functional Materials</i> , 2016, 26, 7599-7604.	7.8	72
26	Strong Oxygen Participation in the Redox Governing the Structural and Electrochemical Properties of Na-Rich Layered Oxide Na <sub>2</sub> IrO <sub>3</sub> . <i>Chemistry of Materials</i> , 2016, 28, 8278-8288.	3.2	132
27	Topochemical Nitridation with Anion Vacancy-Assisted N <sup>3+</sup> /O <sup>2+</sup> Exchange. <i>Journal of the American Chemical Society</i> , 2016, 138, 3211-3217.	6.6	47
28	AVPO <sub>4</sub> F (A = Li, K): A 4 V Cathode Material for High-Power Rechargeable Batteries. <i>Chemistry of Materials</i> , 2016, 28, 411-415.	3.2	117
29	Bi <sub>3+n+1</sub> Ti <sub>7</sub> Fe <sub>3n+3</sub> O <sub>9+n+11</sub> Homologous Series: Slicing Perovskite Structure with Planar Interfaces Containing Anatase-like Chains. <i>Inorganic Chemistry</i> , 2016, 55, 1245-1257.	1.9	7
30	Trapping of Oxygen Vacancies at Crystallographic Shear Planes in Acceptor-Doped Pb-Based Ferroelectrics. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 14787-14790.	7.2	7
31	Synergy between transmission electron microscopy and powder diffraction: application to modulated structures. <i>Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials</i> , 2015, 71, 127-143.	0.5	15
32	Layered Oxychlorides [PbBiO <sub>2</sub> ] <sub>n</sub> +1BnO <sub>3n+1</sub> Cl <sub>2</sub> (A = Pb/Bi, B = Fe/Ti): Intergrowth of the Hematophanite and Sillen Phases. <i>Chemistry of Materials</i> , 2015, 27, 2946-2956.	3.2	15
33	Nanoscale phase separation in perovskites revisited. <i>Nature Materials</i> , 2014, 13, 216-217.	13.3	10
34	Pb <sub>5</sub> Fe <sub>3</sub> TiO <sub>11</sub> Cl: A rare example of Ti(IV) in a square pyramidal oxygen coordination. <i>Journal of Solid State Chemistry</i> , 2014, 215, 245-252.	1.4	6
35	Atomic Structure of Defects in Anion-Deficient Perovskite-Based Ferrites with a Crystallographic Shear Structure. <i>Inorganic Chemistry</i> , 2014, 53, 2171-2180.	1.9	8
36	Two New Arsenides, Eu <sub>7</sub> Cu <sub>44</sub> As <sub>23</sub> and Sr <sub>7</sub> Cu <sub>44</sub> As <sub>23</sub> , With a New Filled Variety of the BaHg <sub>11</sub> Structure. <i>Inorganic Chemistry</i> , 2014, 53, 11173-11184.	1.9	14

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37	Relaxor Ferroelectricity and Magnetoelectric Coupling in ZnO-Co Nanocomposite Thin Films: Beyond Multiferroic Composites. ACS Applied Materials & Interfaces, 2014, 6, 4737-4742.	4.0	33
38	Effect of Lone-Electron-Pair Cations on the Orientation of Crystallographic Shear Planes in Anion-Deficient Perovskites. Inorganic Chemistry, 2013, 52, 10009-10020.	1.9	15
39	Discovery of a Superhard Iron Tetraboride Superconductor. Physical Review Letters, 2013, 111, 157002.	2.9	192
40	Incommensurate Modulation and Luminescence in the $\text{CaGd}_2(1-x)\text{Eu}_x(\text{MoO}_4)_4(1-y)(\text{WO}_3)_4(1-y)$ Red Phosphors. Chemistry of Materials, 2013, 25, 4387-4395.	3.2	99
41	Synthesis, Structure, and Transport Properties of Type-I Derived Clathrate $\text{Ge}_{46-x}\text{P}_x\text{Se}_8-y(x=15.4(1);y=1)$ . Tj ETQo1 1 0.784314 rgsB	1.9	17
42	Homologous Series of Layered Perovskites $\text{An+1BnO3n-1Cl}$ : Crystal and Magnetic Structure of a New Oxychloride $\text{Pb}_4\text{BiFe}_4\text{O}_{11}\text{Cl}$ . Inorganic Chemistry, 2013, 52, 2208-2218.	1.9	7
43	Crystal structure and magnetic properties of the Cr-doped spiral antiferromagnet $\text{BiMnFe}_2\text{O}_6$ . Materials Research Bulletin, 2013, 48, 2993-2997.	2.7	3
44	Frustrated Octahedral Tilting Distortion in the Incommensurately Modulated $\text{Li}_3\text{xNd}_{2/3-x}\text{TiO}_3$ Perovskites. Chemistry of Materials, 2013, 25, 2670-2683.	3.2	41
45	$\text{Fe}_4\text{O}_5$	1.1	23
46	Synthesis, Crystal Structure, Transport, and Magnetic Properties of Novel Ternary Copper Phosphides, $\text{A}_2\text{Cu}_6\text{P}_5$ (A = Sr, Eu) and $\text{EuCu}_4\text{P}_3$ . Inorganic Chemistry, 2012, 51, 8948-8955.	1.9	14
47	Local Oxygen-Vacancy Ordering and Twinned Octahedral Tilting Pattern in the $\text{Bi}_{0.81}\text{Pb}_{0.19}\text{FeO}_{2.905}$ Cubic Perovskite. Chemistry of Materials, 2012, 24, 1378-1385.	3.2	35
48	Layered Perovskite-Like $\text{Pb}_2\text{Fe}_2\text{O}_5$ Structure as a Parent Matrix for the Nucleation and Growth of Crystallographic Shear Planes. Inorganic Chemistry, 2011, 50, 4978-4986.	1.9	17
49	Antiferroelectric $(\text{Pb,Bi})_{1-x}\text{Fe}_{1+x}\text{O}_3$ Perovskites Modulated by Crystallographic Shear Planes. Chemistry of Materials, 2011, 23, 255-265.	3.2	33
50	The High-Temperature Polymorphs of $\text{K}_3\text{AlF}_6$ . Inorganic Chemistry, 2011, 50, 7792-7801.	1.9	31