Vitaliy Mikhailik

List of Publications by Year
in descending order

121 papers	4,106 citations	126901 33 h-index	123420 61 g-index
123 all docs	123 docs citations	123 times ranked	3875 citing authors

#	Article	IF	Citations
1	Characterization and engineering of a plastic-degrading aromatic polyesterase. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E4350-E4357.	7.1	632
2	Luminescence of CaWO4, CaMoO4, and ZnWO4 scintillating crystals under different excitations. Journal of Applied Physics, 2005, 97, 083523.	2.5	226
3	Performance of scintillation materials at cryogenic temperatures. Physica Status Solidi (B): Basic Research, 2010, 247, 1583-1599.	1.5	156
4	One- and two-photon excited luminescence and band-gap assignment inCaWO4. Physical Review B, 2004, 69, .	3.2	128
5	Importance of potassium ions for ribosome structure and function revealed by long-wavelength X-ray diffraction. Nature Communications, 2019, 10, 2519.	12.8	124
6	Commissioning run of the CRESST-II dark matter search. Astroparticle Physics, 2009, 31, 270-276.	4.3	121
7	Cryogenic scintillators in searches for extremely rare events. Journal Physics D: Applied Physics, 2006, 39, 1181-1191.	2.8	114
8	Bright and fast scintillation of organolead perovskite MAPbBr₃ at low temperatures. Materials Horizons, 2019, 6, 1740-1747.	12.2	105
9	Studies of electronic excitations in MgMoO4, CaMoO4 and CdMoO4 crystals using VUV synchrotron radiation. Physica Status Solidi (B): Basic Research, 2005, 242, R17-R19.	1.5	93
10	Detection of the naturalÎ±decay of tungsten. Physical Review C, 2004, 70, .	2.9	90
11	In-vacuum long-wavelength macromolecular crystallography. Acta Crystallographica Section D: Structural Biology, 2016, 72, 430-439.	2.3	89
12	Tungstate and Molybdate Scintillators to Search for Dark Matter and Double Beta Decay. IEEE Transactions on Nuclear Science, 2009, 56, 2513-2518.	2.0	86
13	Temperature dependence of CaMoO4 scintillation properties. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 583, 350-355.	1.6	79
14	Feasibility study of a ZnWO4 scintillator for exploiting materials signature in cryogenic WIMP dark matter searches. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2005, 610, 37-44.	4.1	76
15	Radiative decay of self-trapped excitons in CaMoO4and MgMoO4crystals. Journal of Physics Condensed Matter, 2005, 17, 7209-7218.	1.8	65
16	Optical anisotropy and electronic structures of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">Cd</mml:mi><mml:mi mathvariant="normal">Mo</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:mrow></mml:math>and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">Cd</mml:mi><mml:mi mathvariant="normal">W</mml:mi><mml:msub><mml:mi	3.2	64
17	Characterization of CaWO4 scintillator at room and liquid nitrogen temperatures. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 553, 578-591.	1.6	63
18	Optical and luminescence studies of ZnMoO4 using vacuum ultraviolet synchrotron radiation. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 562, 513-516.	1.6	63

#	ARTICLE	IF	CITATIONS
19	Feasibility study of PbWO4 and PbMoO4 crystal scintillators for cryogenic rare events experiments. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 622, 608-613.	1.6	63
20	Bright and fast scintillations of an inorganic halide perovskite CsPbBr3 crystal at cryogenic temperatures. Scientific Reports, 2020, 10, 8601.	3.3	59
21	Scintillation studies ofCaWO4in the millikelvin temperature range. Physical Review B, 2007, 75, .	3.2	57
22	Scintillation studies of Bi4Ge3O12 (BGO) down to a temperature of 6K. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 594, 358-361.	1.6	55
23	Lattice dynamics and thermal properties ofCaWO4. Physical Review B, 2004, 70, .	3.2	51
24	Structure, luminescence and scintillation properties of the MgWO₄â€“MgMoO₄system. Journal of Physics Condensed Matter, 2008, 20, 365219.	1.8	50
25	Multimodal Non-Contact Luminescence Thermometry with Cr-Doped Oxides. Sensors, 2020, 20, 5259.	3.8	50
26	Multiple photon counting coincidence (MPCC) technique for scintillator characterisation and its application to studies of CaWO4 and ZnWO4 scintillators. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 553, 522-534.	1.6	47
27	Thermal properties ofCaMoO4: Lattice dynamics and synchrotron powder diffraction studies. Physical Review B, 2006, 73, .	3.2	45
28	Two-photon excitation and luminescence of a CaWO4 scintillator. Radiation Measurements, 2004, 38, 585-588.	1.4	43
29	MgWO4â€“A new crystal scintillator. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 608, 107-115.	1.6	43
30	Crystal structure of ZnWO₄scintillator material in the range of 3â€“1423 K. Journal of Physics Condensed Matter, 2009, 21, 325402.	1.8	39
31	Studies of concentration dependences in the luminescence of Ti-doped Al2O3. Journal of Applied Physics, 2011, 109, .	2.5	37
32	EURECA â€” the European Future of Dark Matter Searches with Cryogenic Detectors. Nuclear Physics, Section B, Proceedings Supplements, 2007, 173, 168-171.	0.4	36
33	Scintillation properties of pure CaF2. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 566, 522-525.	1.6	34
34	ZnWO4 scintillators for cryogenic dark matter experiments. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 600, 594-598.	1.6	33
35	Luminescence and scintillation properties of CsI: A potential cryogenic scintillator. Physica Status Solidi (B): Basic Research, 2015, 252, 804-810.	1.5	31
36	Low-temperature spectroscopic and scintillation characterisation of Ti-doped Al2O3. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 546, 523-534.	1.6	29

#	Article	IF	Citations
37	Effect of Ca doping on the structure and scintillation properties of ZnWO4. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 730-736.	1.8	28
38	Characterisation of tungstate and molybdate crystals ABO4 (Aâ€¯=â€¯Ca, Sr, Zn, Cd; Bâ€¯=â€¯W, Mo) for luminescence lifetime cryothermometry. Materialia, 2018, 4, 287-296.	2.7	28
39	Large Volume ${m ZnWO}_{4}$ Crystal Scintillators With Excellent Energy Resolution and Low Background. IEEE Transactions on Nuclear Science, 2009, 56, 994-997.	2.0	27
40	Growth and characterization of isotopically enriched ⁴⁰Ca¹⁰⁰MoO₄ single crystals for rare event search experiments. Crystal Research and Technology, 2011, 46, 1223-1228.	1.3	27
41	Studies of scintillation properties of CaMoO4 at millikelvin temperatures. Applied Physics Letters, 2015, 106, .	3.3	27
42	Efficient VUV sensitization of Eu³⁺ emission by Tb³⁺ in potassium rareâ€earth double phosphate. Physica Status Solidi - Rapid Research Letters, 2009, 3, 13-15.	2.4	26
43	Structure of the cyanobactin oxidase ThcOx from<i>Cyanothece</i>sp. PCC 7425, the first structure to be solved at Diamond Light Source beamline I23 by means of S-SAD. Acta Crystallographica Section D: Structural Biology, 2016, 72, 1174-1180.	2.3	26
44	CaWO4 crystals as scintillators for cryogenic dark matter search. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 537, 339-343.	1.6	25
45	Luminescence studies of Ti-doped Al2O3 using vacuum ultraviolet synchrotron radiation. Applied Physics Letters, 2005, 86, 101909.	3.3	25
46	EURECA â€" the European future of cryogenic dark matter searches. Journal of Physics: Conference Series, 2006, 39, 139-141.	0.4	25
47	Effect of tungsten doping on ZnMoO4 scintillating bolometer performance. Optical Materials, 2015, 49, 67-74.	3.6	24
48	VUV sensitisation of Eu3+ emission by Tb3+ in Ba3Tb(PO4)3â€"Eu. Journal of Luminescence, 2009, 129, 945-947.	3.1	23
49	Impact of geometry on light collection efficiency of scintillation detectors for cryogenic rare event searches. Nuclear Instruments & Methods in Physics Research B, 2014, 336, 26-30.	1.4	23
50	VUV sensitization of Mn2+ emission by Tb3+ in strontium aluminate phosphor. Materials Letters, 2009, 63, 803-805.	2.6	22
51	Effect of recrystallisation on the radioactive contamination of CaWO4 crystal scintillators. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 631, 44-53.	1.6	22
52	Visualization of membrane protein crystals in lipid cubic phase using X-ray imaging. Acta Crystallographica Section D: Biological Crystallography, 2013, 69, 1252-1259.	2.5	22
53	Temperature dependence of scintillation properties of SrMoO4. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 792, 1-5.	1.6	22
54	Thermal structural properties of calcium tungstate. Journal of Applied Crystallography, 2011, 44, 319-326.	4.5	21

#	Article	IF	Citations
55	Low temperature scintillation properties of Ga2O3. Applied Physics Letters, 2019, 115, .	3.3	21
56	The Monte-Carlo refractive index matching technique for determining the input parameters for simulation of the light collection in scintillating crystals. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 570, 529-535.	1.6	20
57	Scintillation properties of pure and Caâ€doped ZnWO₄ crystals. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 335-339.	1.8	20
58	Investigation of luminescence and scintillation properties of a ZnSâ€“Ag/6LiF scintillator in the 7â€“295K temperature range. Journal of Luminescence, 2013, 134, 63-66.	3.1	20
59	Effect of thermo-chemical treatments on the luminescence and scintillation properties of CaWO4. Optical Materials, 2008, 30, 1630-1634.	3.6	19
60	Development of techniques for characterisation of scintillation materials for cryogenic application. Radiation Measurements, 2013, 49, 7-12.	1.4	19
61	Non-contact luminescence lifetime cryothermometry for macromolecular crystallography. Journal of Synchrotron Radiation, 2017, 24, 636-645.	2.4	19
62	Scintillating and optical spectroscopy of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si32.gif" overflow="scroll"><mml:msub><mml:mrow><mml:mi>Al</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></m mathvariant="normal">O</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub><mml:mo>:</mml:mo for dark matter searches. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 606, 545-551.	1.6	18
63	Optimization of light collection from crystal scintillators for cryogenic experiments. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 744, 41-47.	1.6	18
64	Application of In Situ Diffraction in High-Throughput Structure Determination Platforms. Methods in Molecular Biology, 2015, 1261, 233-253.	0.9	18
65	Thermal contact conductance of demountable in vacuum copper-copper joint between 14 and 100 K. Review of Scientific Instruments, 2012, 83, 034902.	1.3	17
66	Time resolved luminescence spectroscopy of CsPbBr3 single crystal. Journal of Luminescence, 2020, 225, 117346.	3.1	17
67	Discrimination of recoil backgrounds in scintillating calorimeters. Astroparticle Physics, 2010, 33, 60-64.	4.3	16
68	Excited states of molybdenum oxyanion in scheelite and wolframite structures. Radiation Measurements, 2007, 42, 767-770.	1.4	15
69	Electron and gamma background in CRESST detectors. Astroparticle Physics, 2010, 32, 318-324.	4.3	14
70	Long-wavelength macromolecular crystallography â€“ First successful native SAD experiment close to the sulfur edge. Nuclear Instruments & Methods in Physics Research B, 2017, 411, 12-16.	1.4	14
71	Application of the Monte-Carlo refractive index matching (MCRIM) technique to the determination of the absolute light yield of a calcium molybdate scintillator. Journal of Instrumentation, 2013, 8, P06002-P06002.	1.2	13
72	ZnTe cryogenic scintillator. Journal of Luminescence, 2017, 188, 600-603.	3.1	11

#	Article	IF	Citations
73	Al₂O₃ co-doped with Cr³⁺ and Mn⁴⁺, a dual-emitter probe for multimodal non-contact luminescence thermometry. Dalton Transactions, 2021, 50, 14820-14831.	3.3	11
74	The use of calcium silicate bricks for retrospective dosimetry. Radiation Measurements, 2004, 38, 91-99.	1.4	10
75	Multiple photon counting technique for detection and analysis of slow scintillation processes. Radiation Measurements, 2007, 42, 921-924.	1.4	10
76	First test of a cryogenic scintillation module with a CaWO4 scintillator and a low-temperature photomultiplier down to 6 K. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 621, 395-400.	1.6	10
77	The 66-channel SQUID readout for CRESST II. Journal of Instrumentation, 2007, 2, P11003-P11003.	1.2	9
78	SQUID magnetometry for the cryoEDM experimentâ€”Tests at LSBB. Journal of Instrumentation, 2008, 3, P11003-P11003.	1.2	9
79	Enhancement through sensitization of VUVâ€excited luminescence in redâ€emitting pentaborate phosphors. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 2339-2343.	1.8	9
80	Towards long-wavelength protein crystallography: keeping a protein crystal frozen in vacuum. Journal of Physics: Conference Series, 2013, 425, 012010.	0.4	9
81	Growth, structure, and temperature dependent emission processes in emerging metal hexachloride scintillators Cs₂HfCl₆ and Cs₂ZrCl₆. Dalton Transactions, 2022, 51, 6944-6954.	3.3	9
82	The CRESST dark matter search. Progress in Particle and Nuclear Physics, 2011, 66, 202-207.	14.4	8
83	Composite CaWO[sub 4] Detectors for the CRESST-II Experiment. , 2009, , .		7
84	Phase and structural behavior and photocatalytic properties of new mixed bismuth-praseodymium vanadates. Journal of Solid State Chemistry, 2021, 296, 122002.	2.9	7
85	Dark-matter search with CRESST. European Physical Journal D, 2006, 56, 535-542.	0.4	6
86	Megahertz non-contact luminescence decay time cryothermometry by means of ultrafast PbI2 scintillator. Scientific Reports, 2019, 9, 5274.	3.3	6
87	Mn2+ luminescence of Gd(Zn,Mg)B5O10 pentaborate under high pressure. Dalton Transactions, 2020, 49, 14268-14279.	3.3	6
88	Performance of ZnSe-based scintillators at low temperatures. Journal of Luminescence, 2021, 239, 118360.	3.1	6
89	Status of the CRESST Dark Matter Search. , 2009, , .		5
90	Feasibility Study of VUV Sensitization Effect of Tb³⁺. Spectroscopy Letters, 2010, 43, 350-356.	1.0	5

#	Article	IF	Citations
91	Low-energy X-ray detection with an in-vacuum PILATUS detector. Journal of Instrumentation, 2011, 6, C11033-C11033.	1.2	5
92	Cryogenic phononâ€“scintillation detectors with PMT readout for rare event search experiments. Astroparticle Physics, 2016, 79, 31-40.	4.3	5
93	Identifying dynamic, partially occupied residues using anomalous scattering. Acta Crystallographica Section D: Structural Biology, 2019, 75, 1084-1095.	2.3	5
94	Direct dark matter search with CRESST and EURECA. Progress in Particle and Nuclear Physics, 2010, 64, 457-459.	14.4	4
95	EURECA â€“ The Future of Cryogenic Dark Matter Detection in Europe. EAS Publications Series, 2009, 36, 249-255.	0.3	3
96	Experimental phasing with vanadium and application to nucleotide-binding membrane proteins. IUCrJ, 2020, 7, 1092-1101.	2.2	3
97	THE CRESST DARK MATTER SEARCH. , 2005, , .		2
98	CRESST â€“ status and future. Nuclear Physics, Section B, Proceedings Supplements, 2007, 173, 104-107.	0.4	2
99	CRESST. EAS Publications Series, 2009, 36, 231-236.	0.3	2
100	Results and status of the CRESST experiment. Journal of Physics: Conference Series, 2006, 39, 75-81.	0.4	1
101	Sample Preparation and Transfer Protocol for In-Vacuum Long-Wavelength Crystallography on Beamline I23 at Diamond Light Source. Journal of Visualized Experiments, 2021, , .	0.3	1
102	X-ray tomographic reconstruction and segmentation pipeline for the long-wavelength macromolecular crystallography beamline at Diamond Light Source. Journal of Synchrotron Radiation, 2021, 28, 889-901.	2.4	1
103	Luminescence of CsPbBr3 microcrystals embedded in the KBr matrix. Journal of Physical Studies, 2021, 25, .	0.5	1
104	EXPLOITING THE MATERIALS SIGNATURE IN CRYOGENIC WIMP DETECTORS. , 2005, , .		1
105	The long-wavelength macromolecular crystallography beamline at Diamond Light Source. Acta Crystallographica Section A: Foundations and Advances, 2013, 69, s78-s78.	0.3	0
106	Challenges and advances of long-wavelength macromolecular crystallography at Diamond Light Source. , 2014, , .		0
107	Optimization of light collection from oxide CaWO<inf>4</inf> scintillators. , 2014, , .		0
108	The long-wavelength macromolecular crystallography beamline I23 at Diamond Light Source. Acta Crystallographica Section A: Foundations and Advances, 2015, 71, s13-s13.	0.1	0

#	Article	IF	Citations
109	Optimization of Light Collection from Crystal Scintillators for Cryogenic Rare Decay Experiments. Solid State Phenomena, 0, 230, 199-204.	0.3	0
110	Luminescent and scintillation properties of perovskite CsPbBr3 crystal at cryogenic temperatures. Journal of Physical Studies, 2021, 25, .	0.5	0
111	CRESST II BACKGROUND DISCRIMINATION: DETECTION OF 180W NATURAL DECAY IN A PURE Î±-SPECTRUM. , 2005, , .		0
112	The long-wavelength MX beamline I23 at Diamond Light Source. Acta Crystallographica Section A: Foundations and Advances, 2011, 67, C481-C482.	0.3	0
113	Visualisation of membrane protein crystals in lipid cubic phase using X-ray imaging. Acta Crystallographica Section A: Foundations and Advances, 2013, 69, s363-s363.	0.3	0
114	The long-wavelength macromolecular crystallography beamline at Diamond Light Source. Acta Crystallographica Section A: Foundations and Advances, 2013, 69, s385-s385.	0.3	0
115	Visualisation of membrane protein crystals using X-ray imaging. Acta Crystallographica Section A: Foundations and Advances, 2014, 70, C351-C351.	0.1	0
116	The Long-Wavelength MX Beamline I23 at Diamond Light Source. Acta Crystallographica Section A: Foundations and Advances, 2014, 70, C605-C605.	0.1	0
117	First results from the long-wavelength macromolecular crystallography beamline I23 at Diamond Light Source. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, a139-a139.	0.1	0
118	The long-wavelength macromolecular crystallography beamline I23 at Diamond Light Source. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, C338-C338.	0.1	0
119	Crystallography at wavelengths longer than 2.7â€…Ã…. Acta Crystallographica Section A: Foundations and Advances, 2019, 75, a95-a95.	0.1	0
120	Long-wavelength protein crystallography at Diamond Light Source. Acta Crystallographica Section A: Foundations and Advances, 2019, 75, e745-e745.	0.1	0
121	Low temperature scintillation properties of ga₂o₃. Journal of Physical Studies, 2020, 24, .	0.5	0