Andrey N Vasil'ev

List of Publications by Year in descending order

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138 papers	3,212 citations	186265 28 h-index	182427 51 g-index
140 all docs	140 docs citations	140 times ranked	4899 citing authors

#	Article	IF	Citations
1	Influence of matrix composition and its fluctuations on excitation relaxation and emission spectrum of Ce ions in (Gd Y1-)3Al2Ga3O12:Ce scintillators. Journal of Luminescence, 2022, 242, 118590.	3.1	21
2	Towards effective indirect radioisotope energy converters with bright and radiation hard scintillators of (Gd,Y)3Al2Ga3O12 family. Nuclear Engineering and Technology, 2022, 54, 2579-2585.	2.3	13
3	Transient optical absorption as a powerful tool for engineering of lead tungstate scintillators towards faster response. Journal of Materials Chemistry C, 2022, 10, 9521-9529.	5.5	2
4	Design rules for time of flight Positron Emission Tomography (ToF-PET) heterostructure radiation detectors. Heliyon, 2022, 8, e09754.	3.2	10
5	Perspectives for CdSe/CdS spherical quantum wells as rapid-response nano-scintillators. Nanoscale, 2021, 13, 19578-19586.	5.6	11
6	Influence of Disorder in Scintillating Solid Solutions on Thermalization and Recombination of Electronic Excitations. Physica Status Solidi (B): Basic Research, 2020, 257, 1900535.	1.5	17
7	Physics of Fast Processes in Scintillators. Particle Acceleration and Detection, 2020, , .	0.5	25
8	Improvement of the timing properties of Ce-doped oxyorthosilicate LYSO scintillating crystals. Journal of Physics and Chemistry of Solids, 2020, 139, 109356.	4.0	19
9	Energy Resolution of Scintillators in Connection With Track Structure. IEEE Transactions on Nuclear Science, 2020, 67, 880-887.	2.0	7
10	Shallow Traps in Scintillation Materials. Particle Acceleration and Detection, 2020, , 113-130.	0.5	3
11	Free Carrier Dynamics in Scintillation Materials. Particle Acceleration and Detection, 2020, , 131-191.	0.5	0
12	Transient Phenomena in Scintillators. Particle Acceleration and Detection, 2020, , 193-210.	0.5	0
13	Wide-Band-Gap Semiconductor Scintillators. Particle Acceleration and Detection, 2020, , 211-226.	0.5	0
14	Release of Ionizing Radiation Energy in Inorganic Scintillator. Particle Acceleration and Detection, 2020, , 1-21.	0.5	0
15	Improvement of the Time Resolution of Radiation Detectors Based on Gd₃Al₂Ga₃O₁₂ Scintillators With SiPM Readout. IEEE Transactions on Nuclear Science, 2019, 66, 1879-1888.	2.0	37
16	On the use of CdSe scintillating nanoplatelets as time taggers for high-energy gamma detection. Npj 2D Materials and Applications, 2019, 3, .	7.9	53
17	Carrier Trap Parameters in NaI with Tl, In, and Eu Dopants. Journal of Physical Chemistry C, 2019, 123, 13519-13530.	3.1	5
18	Diffusion of 5p-holes in BaF2 nanoparticles. Optical Materials, 2019, 91, 115-119.	3.6	5

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19	Time-resolved luminescence Z-scan of CsI using power femtosecond laser pulses. Radiation Measurements, 2019, 124, 1-8.	1.4	6
20	Scintillator energy resolution and a way to improve it by kinetic waveform analysis. Radiation Measurements, 2019, 122, 108-114.	1.4	13
21	Excitation density effects in luminescence properties of CaMoO4 and ZnMoO4. Optical Materials, 2019, 90, 7-13.	3.6	12
22	Quenching of exciton luminescence in SrF2 nanoparticles within a diffusion model. Journal of Applied Physics, 2018, 123, .	2.5	5
23	Luminescence properties of solid solutions LuxY1-xPO4:Eu3+. Optical Materials, 2018, 75, 607-611.	3.6	13
24	Composition effect in luminescence properties of Y(NbxTa1-x)O4 mixed crystals. Optical Materials, 2018, 80, 247-252.	3.6	11
25	Needs, Trends, and Advances in Inorganic Scintillators. IEEE Transactions on Nuclear Science, 2018, 65, 1977-1997.	2.0	305
26	History of NMR Gyroscope Development in Russia in 1960â€“2000s. Gyroscopy and Navigation, 2018, 9, 147-161.	1.3	2
27	History of NMR Gyroscope Development in Russia in 1960-2000s. Giroskopiya I Navigatsiya, 2018, 26, 3-27.	0.2	0
28	Intrinsic luminescence of SrF2 nanoparticles. Journal of Luminescence, 2017, 190, 10-15.	3.1	9
29	Microtheory of Scintillation in Crystalline Materials. Springer Proceedings in Physics, 2017, , 3-34.	0.2	9
30	Electronic and Optical Properties of Scintillators Based on Mixed Ionic Crystals. Springer Proceedings in Physics, 2017, , 63-82.	0.2	5
31	Fluctuations of ionizing particle track structure and energy resolution of scintillators. Functional Materials, 2017, 24, 621-627.	0.1	10
32	Theoretical analysis of non-radiative multiphonon recombination activity of intrinsic defects in CdTe. Journal of Applied Physics, 2016, 119, .	2.5	20
33	New features of hot intraband luminescence for fast timing. Journal of Luminescence, 2016, 176, 309-317.	3.1	51
34	Optical and luminescent VUV spectroscopy using synchrotron radiation. Crystallography Reports, 2016, 61, 886-896.	0.6	4
35	Modeling of X-ray excited luminescence intensity dependence on the nanoparticle size. Radiation Measurements, 2016, 90, 174-177.	1.4	13
36	Scintillation, phonon and defect channel balance; the sources for fundamental yield increase. Functional Materials, 2016, 23, 183-190.	0.1	6

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37	Cation influence on exciton localization in homologue scheelites. Journal of Physics Condensed Matter, 2015, 27, 385501.	1.8	8
38	New detecting techniques for a future calorimetry. Journal of Physics: Conference Series, 2015, 587, 012056.	0.4	8
39	Modelling energy deposition in nanoscintillators to predict the efficiency of the X-ray-induced photodynamic effect. Nanoscale, 2015, 7, 5744-5751.	5.6	72
40	Emission spectrum of intraband luminescence for single parabolic band under excitation of wide-band-gap insulators by ionizing radiation and particles. Physics of Wave Phenomena, 2015, 23, 186-191.	1.1	6
41	Kinetic Model of Energy Relaxation in CsI:A (A = Tl and In) Scintillators. Journal of Physical Chemistry C, 2015, 119, 20578-20590.	3.1	33
42	Effect of the activator impurity on the scintillation yield in alkali-halide crystals. Physica Status Solidi (B): Basic Research, 2015, 252, 380-385.	1.5	4
43	Excitonic and activator recombination channels in binary halide scintillation crystals. Physica Status Solidi (B): Basic Research, 2014, 251, 942-949.	1.5	10
44	Can Transient Phenomena Help Improving Time Resolution in Scintillators?. IEEE Transactions on Nuclear Science, 2014, 61, 229-234.	2.0	87
45	Scintillation Efficiency Improvement by Mixed Crystal Use. IEEE Transactions on Nuclear Science, 2014, 61, 262-270.	2.0	83
46	Multiscale Approach to Estimation of Scintillation Characteristics. IEEE Transactions on Nuclear Science, 2014, 61, 235-245.	2.0	152
47	Picosecond transient absorption rise time for ultrafast tagging of the interaction of ionizing radiation with scintillating crystals in high energy physics experiments. Journal of Instrumentation, 2014, 9, P07017-P07017.	1.2	11
48	The luminescence of BaF2 nanoparticles upon high-energy excitation. Journal of Applied Physics, 2014, 116, .	2.5	27
49	Energy transfer in solid solutions ZnxMg1â^'xWO4. Optical Materials, 2014, 36, 1660-1664.	3.6	28
50	The features of energy transfer to the emission centers in ZnWO4 and ZnWO4:Mo. Journal of Luminescence, 2013, 144, 105-111.	3.1	24
51	Estimation of the Electron Thermalization Length in Ionic Materials. Journal of Physical Chemistry Letters, 2013, 4, 3534-3538.	4.6	30
52	Self-trapped exciton and core-valence luminescence in BaF2 nanoparticles. Journal of Applied Physics, 2013, 114, .	2.5	21
53	Band tail absorption saturation in CdWO4with 100 fs laser pulses. Journal of Physics Condensed Matter, 2013, 25, 245901.	1.8	11
54	Recombination of Correlated Electronâ€“Hole Pairs With Account of Hot Capture With Emission of Optical Phonons. IEEE Transactions on Nuclear Science, 2012, 59, 2057-2064.	2.0	168

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55	Relaxation of electronic excitations in CaF2 nanoparticles. Journal of Applied Physics, 2012, 112, .	2.5	30
56	The Origins of Scintillator Non-Proportionality. IEEE Transactions on Nuclear Science, 2012, 59, 2038-2044.	2.0	81
57	Modeling of the luminescence-decay kinetics of self-trapped excitons at a high excitation density under conditions of absorption saturation. Bulletin of the Lebedev Physics Institute, 2012, 39, 155-161.	0.6	1
58	Numerical simulation of energy relaxation processes in a ZnMoO4 single crystal. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2012, 112, 72-78.	0.6	9
59	Electronic structure and luminescence mechanisms in ZnMoO₄crystals. Journal of Physics Condensed Matter, 2011, 23, 365501.	1.8	45
60	Thermal and magnetic properties of La1 â^' x Pb x MnO3. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 190-192.	0.6	3
61	Calorimetric and spectroscopic study of quasi-one-dimensional Haldane magnets (Y1 â^' x Nd x)2BaNiO5 (x = 1, 0.75, 0.50, 0.25). Journal of Experimental and Theoretical Physics, 2010, 111, 204-208.	0.9	4
62	Electron heating through a set of random levels in the conduction band of insulators induced by femtosecond laser pulses. Applied Physics A: Materials Science and Processing, 2010, 98, 679-689.	2.3	11
63	Anomalous magnetism and 209Bi nuclear spin relaxation in Bi4Ge3O12 crystals. Hyperfine Interactions, 2010, 197, 65-70.	0.5	3
64	Usage of polarization approximation for the estimation of scintillator intrinsic energy resolution. Radiation Measurements, 2010, 45, 258-261.	1.4	4
65	Excitonâ€"Exciton Interaction in CdWO$_{4}$ Under Resonant Excitation by Intense Femtosecond Laser Pulses. IEEE Transactions on Nuclear Science, 2010, 57, 1182-1186.	2.0	25
66	Time-Resolved VUV Excited Luminescence of $hbox {Y}_{2}hbox {O}_{3}hbox {--} hbox {Yb}$ Nanoparticles. IEEE Transactions on Nuclear Science, 2010, 57, 1355-1360.	2.0	6
67	Potentiality of Ceramic Scintillators: General Considerations and YAG-Yb Optical Ceramics Performance. IEEE Transactions on Nuclear Science, 2010, 57, 1211-1217.	2.0	9
68	Luminescence investigation of zinc molybdate single crystals. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1579-1583.	1.8	49
69	The role of different linear and non-linear channels of relaxation in scintillator non-proportionality. Journal of Luminescence, 2009, 129, 1790-1793.	3.1	41
70	Trapping and self-trapping in ytterbium-doped oxides with charge transfer luminescence. Journal of Luminescence, 2009, 129, 1509-1513.	3.1	8
71	Theoretical investigations on the high light yield of the LuI3:Ce scintillator. Journal of Luminescence, 2009, 129, 1555-1559.	3.1	16
72	Quenching of excitonic luminescence of alkaline earth fluorides excited by VUV harmonics of femtosecond laser. Journal of Luminescence, 2009, 129, 1813-1816.	3.1	9

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73	The CMS barrel calorimeter response to particle beams fromÂ2ÂtoÂ350 GeV/c. European Physical Journal C, 2009, 60, 359-373.	3.9	29
74	Application of the model of a set of harmonic oscillators in intense femtosecond laser pulsed field for the estimation of the limits of electron heating in insulators. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika), 2009, 64, 465-469.	0.4	0
75	Exciton-exciton interactions in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>CdWO</mml:mtext></mml:mrow><mml:mn>4</mml:mn></mml:msub></mml:mrow></mml:math> by intense femtosecond vacuum ultraviolet pulses. Physical Review B, 2009, 79, .	3.2	52
76	An analytical model of nonproportional scintillator light yield in terms of recombination rates. Journal of Applied Physics, 2009, 105, .	2.5	104
77	Progress in Studying Scintillator Proportionality: Phenomenological Model. IEEE Transactions on Nuclear Science, 2009, 56, 2313-2320.	2.0	34
78	Behaviour of scintillators under XUV free electron laser radiation. Journal of Luminescence, 2008, 128, 732-734.	3.1	4
79	Model of Y2O3â€“Yb charge-transfer luminescence based on ab initio cluster calculations. Journal of Luminescence, 2008, 128, 1748-1752.	3.1	16
80	Self-quenching effects of excitons in CaWO4 under high density XUV free electron laser excitation. Physics of the Solid State, 2008, 50, 1789-1794.	0.6	13
81	From Luminescence Non-Linearity to Scintillation Non-Proportionality. IEEE Transactions on Nuclear Science, 2008, 55, 1054-1061.	2.0	69
82	Efficient Channels of Energy Transfer in High Light Yield LuI3:Ce Scintillator. Materials Research Society Symposia Proceedings, 2008, 1111, 1.	0.1	0
83	Critical behavior of La0.825Sr0.175MnO2.912 anion-deficient manganite in the magnetic phase transition region. JETP Letters, 2007, 85, 507-512.	1.4	119
84	Luminescence excitation and its relation to the structures of natural crystalline diamond and diamond-like films. Journal of Surface Investigation, 2007, 1, 651-655.	0.5	1
85	Interaction d'impulsions VUV intenses avec les solides luminescents. European Physical Journal Special Topics, 2006, 138, 155-161.	0.2	5
86	Electron heating in the conduction band of insulators irradiated by ultrashort laser pulses. Physical Review B, 2006, 74, .	3.2	19
87	Utilisation des matÃ©riaux luminescents pour la mÃ©trologie des faisceaux intenses UVX d'impulsions ultracourtes. European Physical Journal Special Topics, 2006, 138, 251-257.	0.2	4
88	Temperature dependence of the charge transfer and fâ€“f luminescence of Yb3+ in garnets and YAP. Journal of Physics Condensed Matter, 2005, 17, 5587-5594.	1.8	25
89	Ferromagnetic shape memory alloys Ni _{2 ± x ± y} Mn _{1 ± x} Ga _{1 ± y}. International Journal of Applied Electromagnetics and Mechanics, 2004, 20, 37-56.	0.6	5
90	Heating of conduction band electrons by intense femtosecond laser pulses. Europhysics Letters, 2004, 67, 301-306.	2.0	23

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91	Observation of high energy photoelectrons from solids at moderate laser intensity. Applied Physics B: Lasers and Optics, 2004, 78, 989-994.	2.2	15
92	PhotoÃ©mission de Csl induite par une impulsion laser intense femtoseconde. European Physical Journal Special Topics, 2003, 108, 113-117.	0.2	4
93	Influence of random electric fields on luminescence yield and kinetics of insulators. Radiation Effects and Defects in Solids, 2002, 157, 665-669.	1.2	1
94	POLARIZATION PROPERTIES OF SYNCHROTRON RADIATION IN THE STUDY OF ANISOTROPIC INSULATING CRYSTALS. Surface Review and Letters, 2002, 09, 469-472.	1.1	0
95	Study of optical and luminescent properties of some inorganic scintillators in the fundamental absorption region. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2002, 486, 367-373.	1.6	13
96	Cerium-doped fluorescent and scintillating ionic crystals. Radiation Effects and Defects in Solids, 2001, 154, 277-286.	1.2	8
97	Optical and luminescence properties of complex lead oxides. IEEE Transactions on Nuclear Science, 2001, 48, 2324-2329.	2.0	8
98	Photoinduced paramagnetism of group III impurities in A[sub IV]B[sub VI] narrow-gap semiconductors. AIP Conference Proceedings, 2001, , .	0.4	0
99	Optical properties and luminescence centres of lead tungstate, sulphate and carbonate. Radiation Effects and Defects in Solids, 2001, 154, 307-311.	1.2	6
100	Defect creation at the core edges of cesium and potassium bromides. Radiation Effects and Defects in Solids, 2001, 155, 153-157.	1.2	2
101	Impact production of secondary electronic excitations in insulators: Multiple-parabolic-branch band model. Physical Review B, 1999, 60, 5340-5347.	3.2	22
102	Energy transfer in inorganic scintillators. Radiation Effects and Defects in Solids, 1999, 150, 1-10.	1.2	10
103	Optical Functions and Luminescence Quantum Yield of Lead Tungstate. Physica Status Solidi A, 1998, 170, 167-173.	1.7	22
104	Simulation of energy conversion and transfer in CeF3 after VUV photon absorption. Journal of Alloys and Compounds, 1998, 275-277, 488-492.	5.5	13
105	Density of the generalized oscillator strength of atomic hydrogen: A semiclassical approach. Physical Review A, 1998, 58, 3683-3687.	2.5	2
106	Luminescence properties and scintillation mechanisms of cerium- and praseodymium-doped lutetium orthoaluminate. Journal of Physics Condensed Matter, 1997, 9, 5229-5243.	1.8	90
107	Appearance of new lines and change in line shape in the IR spectrum of a NaV2O5 single crystal at a spin-Peierls transition. JETP Letters, 1997, 65, 743-748.	1.4	20
108	VUV excitation of intrinsic luminescence of ionic crystals with complicated band structure. Simulation. Journal of Luminescence, 1997, 72-74, 96-97.	3.1	13

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109	Decay of core holes in cesium chloride studied by the luminescence spectroscopy. Journal of Luminescence, 1997, 72-74, 930-932.	3.1	2
110	Influence of stoichiometry on the optical properties of lead tungstate crystals. Chemical Physics Letters, 1997, 277, 65-70.	2.6	25
111	Luminescence properties of the RbCaF3 crystal at X-ray excitation. Chemical Physics Letters, 1997, 278, 369-372.	2.6	15
112	Polarization approximation for electron cascade in insulators after high-energy excitation. Nuclear Instruments & Methods in Physics Research B, 1996, 107, 165-171.	1.4	26
113	Magnetostriction of the spin-Peierls compound CuGeO3. JETP Letters, 1996, 64, 166-170.	1.4	0
114	Time resolved luminescence spectroscopy of wide bandgap insulators. Journal of Electron Spectroscopy and Related Phenomena, 1996, 79, 99-102.	1.7	5
115	Crossluminescence in ionic crystals. Journal of Electron Spectroscopy and Related Phenomena, 1996, 79, 111-116.	1.7	19
116	Luminescence quenching as a probe for the local density of electronic excitations in insulators. Journal of Electron Spectroscopy and Related Phenomena, 1996, 79, 147-150.	1.7	38
117	Photoemission, photodesorption and luminescence studies of CsI in the 20â€“140 eV region. Journal of Electron Spectroscopy and Related Phenomena, 1996, 80, 109-112.	1.7	7
118	Extensive studies on CeF3 crystals, a good candidate for electromagnetic calorimetry at future accelerators. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1996, 383, 367-390.	1.6	66
119	Fast luminescence of undoped PbWO4 crystal. Chemical Physics Letters, 1995, 243, 552-558.	2.6	50
120	X-ray excitation of luminescence of scintillator materials in the 7â€“22 keV region. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1995, 361, 384-387.	1.6	20
121	Monte-Carlo simulation of the creation of excited regions in insulators by a photon. Radiation Effects and Defects in Solids, 1995, 135, 315-319.	1.2	7
122	The role of cation vacancies in excitation mechanism of re-ions in alkaline-earth sulphides. Radiation Effects and Defects in Solids, 1995, 135, 383-389.	1.2	2
123	LSO-Ce fluorescence spectra and kinetics for UV, VUV and X-ray excitation. Radiation Effects and Defects in Solids, 1995, 135, 391-396.	1.2	15
124	Effect of quenching processes on the decay of fast luminescence from barium fluoride excited by VUV synchrotron radiation. Physical Review B, 1995, 52, 3117-3121.	3.2	44
125	Theory of X-ray photoacoustic spectroscopy. Applied Physics A: Materials Science and Processing, 1995, 60, 333-341.	2.3	8
126	Experimental study of the excitation threshold of fast intrinsic luminescence of CsI. Physical Review B, 1994, 49, 13197-13200.	3.2	43

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127	Monte-Carlo Study of Energy Losses in Hot Stage of Electronic Excitation Relaxation in Scintillators. Materials Research Society Symposia Proceedings, 1994, 348, 387.	0.1	5
128	The Role of Core Levels in Scintillation Processes. Materials Research Society Symposia Proceedings, 1994, 348, 241.	0.1	2
129	Time-resolved luminescence of CeF3 crystals excited by X-ray synchrotron radiation. Chemical Physics Letters, 1993, 206, 470-474.	2.6	54
130	Fast U.V. scintillations in CsI-type crystals. Nuclear Tracks and Radiation Measurements (1993), 1993, 21, 11-13.	0.1	19
131	Timeâ€resolved XEOL spectroscopy of new scintillators based on CsI. Review of Scientific Instruments, 1992, 63, 806-809.	1.3	25
132	Urbach effects in the kinetics of core holes for excitation of cross-luminescence. Journal of Luminescence, 1992, 51, 275-282.	3.1	15
133	Electronic excitations in crystals with complex oxyanions. Physica Scripta, 1990, 41, 530-536.	2.5	28
134	High-energy excitation of luminescence of crystals with oxyanions. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1989, 282, 599-606.	1.6	19
135	Station for VUV-spectroscopy at beam line M of the storage ring Siberia-I. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1987, 261, 85-87.	1.6	10
136	Electromagnetic generation of ultrasound in metals at low temperatures. Pramana - Journal of Physics, 1987, 28, 483-488.	1.8	0
137	Vibrational Relaxation in a Localized Excited Electronic State by the GME Method. Physica Status Solidi (B): Basic Research, 1984, 125, 477-482.	1.5	2
138	Enhancing and Quenching of Intrinsic Luminescence and Characteristic Features of Calcium Tungstate Phosphorescence in the Presence of Lanthanides. Physica Status Solidi A, 1983, 77, 375-380.	1.7	5