

Innokenty Kantor

List of Publications by Year in descending order

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107
papers

3,138
citations

159358

30
h-index

168136

53
g-index

108
all docs

108
docs citations

108
times ranked

3077
citing authors

#	ARTICLE	IF	CITATIONS
1	BX90: A new diamond anvil cell design for X-ray diffraction and optical measurements. Review of Scientific Instruments, 2012, 83, 125102.	0.6	251
2	Body-Centered Cubic Iron-Nickel Alloy in Earth's Core. Science, 2007, 316, 1880-1883.	6.0	187
3	Stable intermediate-spin ferrous iron in lower-mantle perovskite. Nature Geoscience, 2008, 1, 684-687.	5.4	150
4	The time-resolved and extreme conditions XAS (TEXAS) facility at the European Synchrotron Radiation Facility: the general-purpose EXAFS bending-magnet beamline BM23. Journal of Synchrotron Radiation, 2015, 22, 1548-1554.	1.0	140
5	Superhard Semiconducting Optically Transparent High Pressure Phase of Boron. Physical Review Letters, 2009, 102, 185501.	2.9	139
6	Optical Absorption and Radiative Thermal Conductivity of Silicate Perovskite to 125 Gigapascals. Science, 2008, 322, 1529-1532.	6.0	105
7	A novel gas-loading system for mechanically closing of various types of diamond anvil cells. Review of Scientific Instruments, 2008, 79, 045110.	0.6	101
8	The Time-resolved and Extreme-conditions XAS (TEXAS) facility at the European Synchrotron Radiation Facility: the energy-dispersive X-ray absorption spectroscopy beamline ID24. Journal of Synchrotron Radiation, 2016, 23, 353-368.	1.0	86
9	Stability of iron-bearing carbonates in the deep Earth's interior. Nature Communications, 2017, 8, 15960.	5.8	84
10	X-ray diffraction and Mössbauer spectroscopy study of fcc iron hydride FeH at high pressures and implications for the composition of the Earth's core. Earth and Planetary Science Letters, 2011, 307, 409-414.	1.8	78
11	Spin crossover in (Mg,Fe)O: A Mössbauer effect study with an alternative interpretation of x-ray emission spectroscopy data. Physical Review B, 2006, 73, .	1.1	68
12	Optical absorption spectra of ferropiclasite to 84 GPa. American Mineralogist, 2007, 92, 433-436.	0.9	68
13	Melting of iron determined by X-ray absorption spectroscopy to 100 GPa. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 12042-12045.	3.3	68
14	Beating the Miscibility Barrier between Iron Group Elements and Magnesium by High-Pressure Alloying. Physical Review Letters, 2005, 95, 245502.	2.9	65
15	Solving Controversies on the Iron Phase Diagram Under High Pressure. Geophysical Research Letters, 2018, 45, 11,074.	1.5	65
16	Sound wave velocities of fcc Fe-Ni alloy at high pressure and temperature by mean of inelastic X-ray scattering. Physics of the Earth and Planetary Interiors, 2007, 164, 83-89.	0.7	57
17	High-pressure spectroscopic study of siderite (FeCO ₃) with a focus on spin crossover. American Mineralogist, 2015, 100, 2670-2681.	0.9	57
18	Pressure-Induced Magnetization in FeO: Evidence from Elasticity and Mössbauer Spectroscopy. Physical Review Letters, 2004, 93, 215502.	2.9	55

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19	X-ray diffraction in the pulsed laser heated diamond anvil cell. Review of Scientific Instruments, 2010, 81, 113902.	0.6	48
20	Effect of non-hydrostatic conditions on the elastic behaviour of magnetite: an in situ single-crystal X-ray diffraction study. Physics and Chemistry of Minerals, 2007, 34, 627-635.	0.3	44
21	Short-range order and Fe clustering in $\text{Mg}_{1-x}\text{Fe}_x\text{O}$ at high pressure. Physical Review B, 2009, 80, .	1.1	44
22	Low-spin Fe ²⁺ in silicate perovskite and a possible layer at the base of the lower mantle. Physics of the Earth and Planetary Interiors, 2010, 180, 215-221.	0.7	44
23	Large oxygen excess in the primitive mantle could be the source of the Great Oxygenation Event. Geochemical Perspectives Letters, 0, , 5-10.	1.0	42
24	Mössbauer spectroscopic study of pressure-induced magnetisation in wüstite (FeO). Journal of Alloys and Compounds, 2004, 376, 5-8.	2.8	36
25	The Melting Curve of Nickel Up to 100 GPa Explored by XAS. Journal of Geophysical Research: Solid Earth, 2017, 122, 9921-9930.	1.4	35
26	Methodology for <i>in situ</i> synchrotron X-ray studies in the laser-heated diamond anvil cell. High Pressure Research, 2017, 37, 170-180.	0.4	34
27	Local structure and spin transition in Fe_2O_3 hematite at high pressure. Physical Review B, 2016, 94, .	1.1	33
28	SiO_2 Glass Density to Lower-Mantle Pressures. Physical Review Letters, 2017, 119, 215701.	2.9	33
29	Magnetism in cold subducting slabs at mantle transition zone depths. Nature, 2019, 570, 102-106.	13.7	33
30	Iron-carbon interactions at high temperatures and pressures. Applied Physics Letters, 2008, 92, .	1.5	32
31	Phase relations of Fe-Si alloy in Earth's core. Geophysical Research Letters, 2009, 36, .	1.5	32
32	Phase transitions in MnO and FeO at low temperatures: A neutron powder diffraction study. Journal of Alloys and Compounds, 2005, 402, 42-45.	2.8	29
33	Iron oxidation state of FeTiO_3 at high pressure. Physical Review B, 2009, 79, .	1.1	29
34	High-pressure experimental and computational XANES studies of (Mg,Fe)(Si,Al)O ₃ perovskite and (Mg,Fe)O ferropericlasite as in the Earth's lower mantle. Physical Review B, 2009, 79, .	1.1	27
35	Iron spin state in silicate perovskite at conditions of the Earth's deep interior. High Pressure Research, 2013, 33, 663-672.	0.4	27
36	Hyperfine Splitting and Room-Temperature Ferromagnetism of Ni at Multimegabar Pressure. Physical Review Letters, 2013, 111, 157601.	2.9	27

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37	High-pressure structural studies of eskolaite by means of single-crystal X-ray diffraction. American Mineralogist, 2012, 97, 1764-1770.	0.9	26
38	Bromine speciation in hydrous silicate melts at high pressure. Chemical Geology, 2015, 404, 18-26.	1.4	26
39	Pressure-induced phase transition in Mg _{0.8} Fe _{0.2} O ferropericlae. Physics and Chemistry of Minerals, 2006, 33, 35-44.	0.3	24
40	High-Pressure Studies of (Mg _{0.9} Fe _{0.1}) ₂ SiO ₄ Olivine Using Raman Spectroscopy, X-ray Diffraction, and Mössbauer Spectroscopy. Inorganic Chemistry, 2008, 47, 2668-2673.	1.9	24
41	Measurement of temperature in the laser heated diamond anvil cell: comparison between reflective and refractive optics. High Pressure Research, 2018, 38, 250-269.	0.4	24
42	High-Pressure Behavior of Perovskite: FeTiO_3 Dissociation into FeTiO_3		

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55	Magnetic interactions in NiO at ultrahigh pressure. <i>Physical Review B</i> , 2016, 93, .	1.1	15
56	Probing the electronic and local structural changes across the pressure-induced insulator-to-metal transition in VO ₂ . <i>Europhysics Letters</i> , 2014, 108, 36003.	0.7	14
57	Atomic-level mechanism of elastic deformation in the Zr-Cu metallic glass. <i>Physical Review B</i> , 2016, 93, .	1.1	14
58	Chemically homogeneous spin transition zone in Earth's lower mantle. <i>Physics of the Earth and Planetary Interiors</i> , 2011, 185, 107-111.	0.7	13
59	Melting properties by X-ray absorption spectroscopy: common signatures in binary Fe-C, Fe-O, Fe-S and Fe-Si systems. <i>Scientific Reports</i> , 2020, 10, 11663.	1.6	13
60	High-brilliance X-ray system for high-pressure in-house research: applications for studies of superhard materials. <i>High Pressure Research</i> , 2006, 26, 137-143.	0.4	12
61	Pressure-induced structural phase transition of the iron end-member of ringwoodite (Fe ₂ SiO ₄) investigated by X-ray diffraction and Mossbauer spectroscopy. <i>American Mineralogist</i> , 2011, 96, 833-840.	0.9	12
62	Decomposition of ferropericlasite (Mg _{0.80} Fe _{0.20})O at high pressures and temperatures. <i>Journal of Alloys and Compounds</i> , 2005, 390, 41-45.	2.8	11
63	Phase relations in Fe-Ni-C system at high pressures and temperatures. <i>Physics and Chemistry of Minerals</i> , 2011, 38, 203-214.	0.3	11
64	Local structure of solid Rb at megabar pressures. <i>Journal of Chemical Physics</i> , 2015, 142, 214503.	1.2	11
65	Local structure investigation of Ni(OH) ₂ under pressure using combined Raman and Ni K-edge extended x-ray absorption fine structure studies. <i>High Pressure Research</i> , 2017, 37, 1-10.	0.4	11
66	Experimental investigation of FeCO ₃ (siderite) stability in Earth's lower mantle using XANES spectroscopy. <i>American Mineralogist</i> , 2019, 104, 1083-1091.	0.9	11
67	Monoclinic FeO at high pressures. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 2008, 223, 461-464.	0.4	10
68	Synchrotron radiation Mössbauer spectra of a rotating absorber with implications for testing velocity and acceleration time dilation. <i>Journal of Synchrotron Radiation</i> , 2015, 22, 723-728.	1.0	10
69	Probing the local, electronic and magnetic structure of matter under extreme conditions of temperature and pressure. <i>High Pressure Research</i> , 2016, 36, 293-302.	0.4	10
70	Thermal decomposition of ammonium hexachloroosmate. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 33134-33141.	1.3	9
71	Universal amorphous-amorphous transition in Ge _x Se _{100-x} glasses under pressure. <i>Scientific Reports</i> , 2016, 6, 27317.	1.6	9
72	Resonant inelastic X-ray scattering of magnetic excitations under pressure. <i>Journal of Synchrotron Radiation</i> , 2019, 26, 1725-1732.	1.0	8

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73	Compression of liquid Ni and Co under extreme conditions explored by x-ray absorption spectroscopy. Physical Review B, 2019, 100, .	1.1	8
74	Anelasticity of FeO at high pressure. Applied Physics Letters, 2008, 93, 034106.	1.5	7
75	On-line laser heating setup for ED-XAS at ID24: preliminary optical design and test results. High Pressure Research, 2013, 33, 108-113.	0.4	7
76	Effect of pressure-driven local structural rearrangement on the superconducting properties of $\text{FeSe}_{1-x}\text{Te}_x$. Physical Review B, 2014, 90, .	1.7	7
77	Electronic origins of the giant volume collapse in the pyrite mineral MnS_2 . Journal of Solid State Chemistry, 2019, 269, 540-546.	1.4	7
78	High pressure atomic structure of Zr-Cu metallic glass via EXAFS spectroscopy and molecular dynamics simulations. High Pressure Research, 2020, 40, 54-64.	0.4	7
79	High-pressure synthesis of skiaegite-majorite garnet and investigation of its crystal structure. American Mineralogist, 2015, 100, 2650-2654.	0.9	6
80	Pressure-mediated structural transitions in bulk EuTiO_3 . Physical Review B, 2018, 98, .	1.1	6
81	^{121}Sb and ^{125}Te nuclear inelastic scattering in Sb_2Te_3 under high pressure. Semiconductor Science and Technology, 2014, 29, 124001.	1.0	5
82	Thermal and magnetic anomalies of \pm -iron: an exploration by extended x-ray absorption fine structure spectroscopy and synchrotron x-ray diffraction. Journal of Physics Condensed Matter, 2016, 28, 355401.	0.7	5
83	High pressure dynamic XAS studies using an energy-dispersive spectrometer. High Pressure Research, 2016, 36, 404-418.	0.4	5
84	Nb K-edge x-ray absorption investigation of the pressure induced amorphization in A-site deficient double perovskite $\text{La}_{1/3}\text{NbO}_3$. Journal of Physics Condensed Matter, 2016, 28, 045401.	0.7	5
85	Behaviour of niobium during early Earth's differentiation: insights from its local structure and oxidation state in silicate melts at high pressure. Journal of Physics Condensed Matter, 2018, 30, 084004.	0.7	4
86	Pressure-induced transformations in Ce-Al metallic glasses: The role of stiffness of interatomic pairs. Journal of Alloys and Compounds, 2018, 757, 484-488.	2.8	4
87	Trigonal distortion of ferropericlae $(\text{Mg}_{0.8}\text{Fe}_{0.2})\text{O}$ at high pressures. Doklady Physics, 2005, 50, 343-345.	0.2	3
88	Specific Heat of Olive Oil to 356 MPa. JAOCS, Journal of the American Oil Chemists' Society, 2010, 87, 1517-1520.	0.8	3
89	Reply to "Comments on "Spin crossover in $(\text{Mg,Fe})\text{O}$: A Mössbauer effect study with an alternative interpretation of x-ray emission spectroscopy data". Physical Review B, 2007, 75, .	1.1	2
90	Effect of Spin Transitions in Iron on Structure and Properties of Mantle Minerals. NATO Science for Peace and Security Series B: Physics and Biophysics, 2010, , 231-240.	0.2	2

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91	Atomistic simulation of the properties and phase transformations of FeO wustite under high pressures. Doklady Physics, 2003, 48, 394-397.	0.2	1
92	Simulation of the properties of periclase by minimizing atomization energy. Doklady Physics, 2002, 47, 717-720.	0.2	0
93	Beating the miscibility barrier between iron group elements and magnesium by high-pressure alloying. Acta Crystallographica Section A: Foundations and Advances, 2006, 62, s257-s257.	0.3	0
94	Spin transitions in ferropiclase under high pressure: Comparison of Mössbauer-spectroscopy and X-Ray emission-spectroscopy data. Doklady Physics, 2006, 51, 229-233.	0.2	0
95	Measuring the speed of sound in an iron-nickel alloy at high pressure by inelastic X-ray scattering. Doklady Physics, 2006, 51, 584-587.	0.2	0
96	XANES study of spin crossover in Fe-bearing silicate perovskite. Phase Transitions, 2009, 82, 336-343.	0.6	0
97	Pressure-induced structural changes in nanosized materials studied with on-line Brillouin spectroscopy and XRD. Acta Crystallographica Section A: Foundations and Advances, 2009, 65, s122-s122.	0.3	0
98	Structural studies of ^{57}Fe -Fe ₂ SiO ₄ ringwoodite and its high-pressure polymorph. Acta Crystallographica Section A: Foundations and Advances, 2010, 66, s43-s43.	0.3	0
99	Synthesis and detailed characterization of bulk Sr ₂ PdO ₃ . Physica B: Condensed Matter, 2019, 554, 148-153.	1.3	0
100	Structural and electronic properties of ferropiclase at high pressures. Acta Crystallographica Section A: Foundations and Advances, 2006, 62, s258-s258.	0.3	0
101	Sound wave velocities of Fe-Ni alloy at high pressure and temperature. Acta Crystallographica Section A: Foundations and Advances, 2006, 62, s259-s259.	0.3	0
102	High-pressure anelastic behaviour of Fe _x O. Acta Crystallographica Section A: Foundations and Advances, 2009, 65, s126-s126.	0.3	0
103	Interplay between structural and electronic behavior in iron-bearing earth lower mantle minerals. Acta Crystallographica Section A: Foundations and Advances, 2010, 66, s42-s42.	0.3	0
104	High-pressure melting of silicon. Acta Crystallographica Section A: Foundations and Advances, 2010, 66, s47-s47.	0.3	0
105	High-pressure behavior of single-crystal and nanocrystalline ZnO studied with XRD and BS. Acta Crystallographica Section A: Foundations and Advances, 2013, 69, s200-s200.	0.3	0
106	McXtrace 1.4: latest developments in the new release. , 2017, , .		0
107	Exploring liquid-liquid transitions in ZnSe at extreme conditions. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, C985-C985.	0.0	0