

Innokenty Kantor

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

97
papers

2,479
citations

26
h-index

46
g-index

108
ext. papers

2,769
ext. citations

4.5
avg, IF

4.48
L-index

#	Paper	IF	Citations
97	Melting Curve and Phase Relations of Fe-Ni Alloys: Implications for the Earth's Core Composition. <i>Geophysical Research Letters</i> , 2020 , 47, e2020GL088169	4.9	13
96	High pressure atomic structure of Zr ₄₀ Ti ₆₀ metallic glass via EXAFS spectroscopy and molecular dynamics simulations. <i>High Pressure Research</i> , 2020 , 40, 54-64	1.6	4
95	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	4.9	7
94	Magnetism in cold subducting slabs at mantle transition zone depths. <i>Nature</i> , 2019 , 570, 102-106	50.4	11
93	Comparative study of the influence of pulsed and continuous wave laser heating on the mobilization of carbon and its chemical reaction with iron in a diamond anvil cell. <i>Journal of Applied Physics</i> , 2019 , 125, 095901	2.5	12
92	Resonant inelastic X-ray scattering of magnetic excitations under pressure. <i>Journal of Synchrotron Radiation</i> , 2019 , 26, 1725-1732	2.4	5
91	Experimental investigation of FeCO ₃ (siderite) stability in Earth's lower mantle using XANES spectroscopy. <i>American Mineralogist</i> , 2019 , 104, 1083-1091	2.9	7
90	Compression of liquid Ni and Co under extreme conditions explored by x-ray absorption spectroscopy. <i>Physical Review B</i> , 2019 , 100,	3.3	6
89	Synthesis and detailed characterization of bulk Sr ₂ PdO ₃ . <i>Physica B: Condensed Matter</i> , 2019 , 554, 148-1538		
88	Electronic origins of the giant volume collapse in the pyrite mineral MnS ₂ . <i>Journal of Solid State Chemistry</i> , 2019 , 269, 540-546	3.3	4
87	Behaviour of niobium during early Earth's differentiation: insights from its local structure and oxidation state in silicate melts at high pressure. <i>Journal of Physics Condensed Matter</i> , 2018 , 30, 084004	1.8	4
86	A laser heating facility for energy-dispersive X-ray absorption spectroscopy. <i>Review of Scientific Instruments</i> , 2018 , 89, 013111	1.7	20
85	Pressure-mediated structural transitions in bulk EuTiO ₃ . <i>Physical Review B</i> , 2018 , 98,	3.3	5
84	Measurement of temperature in the laser heated diamond anvil cell: comparison between reflective and refractive optics. <i>High Pressure Research</i> , 2018 , 38, 250-269	1.6	19
83	Pressure tuning of charge ordering in iron oxide. <i>Nature Communications</i> , 2018 , 9, 4142	17.4	14
82	Solving Controversies on the Iron Phase Diagram Under High Pressure. <i>Geophysical Research Letters</i> , 2018 , 45, 11,074	4.9	39
81	Pressure-induced transformations in Ce-Al metallic glasses: The role of stiffness of interatomic pairs. <i>Journal of Alloys and Compounds</i> , 2018 , 757, 484-488	5.7	3

80	Local structure investigation of $\text{Ni}(\text{OH})_2$ 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	1.6	10
79	Methodology for in situ synchrotron X-ray studies in the laser-heated diamond anvil cell. <i>High Pressure Research</i> , 2017 , 37, 170-180	1.6	26
78	Stability of iron-bearing carbonates in the deep Earth's interior. <i>Nature Communications</i> , 2017 , 8, 15960	17.4	59
77	SiO_2 Glass Density to Lower-Mantle Pressures. <i>Physical Review Letters</i> , 2017 , 119, 215701	7.4	25
76	The Melting Curve of Nickel Up to 100 GPa Explored by XAS. <i>Journal of Geophysical Research: Solid Earth</i> , 2017 , 122, 9921-9930	3.6	21
75	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	1.6	8
74	Atomic-level mechanism of elastic deformation in the Zr-Cu metallic glass. <i>Physical Review B</i> , 2016 , 93,	3.3	10
73	Magnetic interactions in NiO at ultrahigh pressure. <i>Physical Review B</i> , 2016 , 93,	3.3	9
72	Local structure and spin transition in Fe_2O_3 hematite at high pressure. <i>Physical Review B</i> , 2016 , 94,	3.3	24
71	High pressure dynamic XAS studies using an energy-dispersive spectrometer. <i>High Pressure Research</i> , 2016 , 36, 404-418	1.6	5
70	Structure and magnetism of cobalt at high pressure and low temperature. <i>Physical Review B</i> , 2016 , 94,	3.3	14
69	The Time-resolved and Extreme-conditions XAS (TEXAS) facility at the European Synchrotron Radiation Facility: the energy-dispersive X-ray absorption spectroscopy beamline ID24. <i>Journal of Synchrotron Radiation</i> , 2016 , 23, 353-68	2.4	74
68	Thermal decomposition of ammonium hexachloroosmate. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 33134-33141	3.6	8
67	Universal amorphous-amorphous transition in $\text{Ge}_{100-x}\text{Se}_x$ glasses under pressure. <i>Scientific Reports</i> , 2016 , 6, 27317	4.9	7
66	Nb K-edge x-ray absorption investigation of the pressure induced amorphization in A-site deficient double perovskite $\text{La}_{1/3}\text{NbO}_3$. <i>Journal of Physics Condensed Matter</i> , 2016 , 28, 045401	1.8	4
65	Thermal and magnetic anomalies of Hron: an exploration by extended x-ray absorption fine structure spectroscopy and synchrotron x-ray diffraction. <i>Journal of Physics Condensed Matter</i> , 2016 , 28, 355401	1.8	5
64	High pressure XANES and XMCD in the tender X-ray energy range. <i>High Pressure Research</i> , 2016 , 36, 445-457	11	
63	Time-Resolved XAS Using an Energy Dispersive Spectrometer: Techniques and Applications 2016 , 185-212	5	

62	Bromine speciation in hydrous silicate melts at high pressure. <i>Chemical Geology</i> , 2015 , 404, 18-26	4.2	18
61	Quenching rattling modes in skutterudites with pressure. <i>Physical Review B</i> , 2015 , 91,	3.3	12
60	Local structure of solid Rb at megabar pressures. <i>Journal of Chemical Physics</i> , 2015 , 142, 214503	3.9	9
59	Melting of iron determined by X-ray absorption spectroscopy to 100 GPa. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 12042-5	11.5	49
58	High-pressure synthesis of skiaigite-majorite garnet and investigation of its crystal structure. <i>American Mineralogist</i> , 2015 , 100, 2650-2654	2.9	4
57	High-pressure spectroscopic study of siderite (FeCO ₃) with a focus on spin crossover. <i>American Mineralogist</i> , 2015 , 100, 2670-2681	2.9	38
56	The time-resolved and extreme conditions XAS (TEXAS) facility at the European Synchrotron Radiation Facility: the general-purpose EXAFS bending-magnet beamline BM23. <i>Journal of Synchrotron Radiation</i> , 2015 , 22, 1548-54	2.4	106
55	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, 723-8	2.4	9
54	Effect of pressure-driven local structural rearrangement on the superconducting properties of FeSe _{0.5} Te _{0.5} . <i>Physical Review B</i> , 2014 , 90,	3.3	7
53	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	1.6	13
52	A new detector for sub-millisecond EXAFS spectroscopy at the European Synchrotron Radiation Facility. <i>Journal of Synchrotron Radiation</i> , 2014 , 21, 1240-6	2.4	19
51	¹²¹ Sb and ¹²⁵ Te nuclear inelastic scattering in Sb ₂ Te ₃ under high pressure. <i>Semiconductor Science and Technology</i> , 2014 , 29, 124001	1.8	5
50	On-line laser heating setup for ED-XAS at ID24: preliminary optical design and test results. <i>High Pressure Research</i> , 2013 , 33, 108-113	1.6	7
49	Iron spin state in silicate perovskite at conditions of the Earth's deep interior. <i>High Pressure Research</i> , 2013 , 33, 663-672	1.6	22
48	Hyperfine splitting and room-temperature ferromagnetism of Ni at multimegabar pressure. <i>Physical Review Letters</i> , 2013 , 111, 157601	7.4	21
47	Brillouin scattering and x-ray diffraction of solid argon to 65 GPa and 700 K: Shear strength of argon at HP/HT. <i>Journal of Applied Physics</i> , 2013 , 114, 093517	2.5	16
46	BX90: a new diamond anvil cell design for X-ray diffraction and optical measurements. <i>Review of Scientific Instruments</i> , 2012 , 83, 125102	1.7	169
45	High-pressure structural studies of eskolaite by means of single-crystal X-ray diffraction. <i>American Mineralogist</i> , 2012 , 97, 1764-1770	2.9	17

44	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. <i>Earth and Planetary Science Letters</i> , 2011 , 307, 409-414	5.3	57
43	Chemically homogeneous spin transition zone in Earth's lower mantle. <i>Physics of the Earth and Planetary Interiors</i> , 2011 , 185, 107-111	2.3	13
42	Phase relations in FeNiO system at high pressures and temperatures. <i>Physics and Chemistry of Minerals</i> , 2011 , 38, 203-214	1.6	11
41	Pressure-induced structural phase transition of the iron end-member of ringwoodite (g-Fe ₂ SiO ₄) investigated by X-ray diffraction and Mössbauer spectroscopy. <i>American Mineralogist</i> , 2011 , 96, 833-840	2.9	8
40	X-ray diffraction in the pulsed laser heated diamond anvil cell. <i>Review of Scientific Instruments</i> , 2010 , 81, 113902	1.7	40
39	Low-spin Fe ²⁺ in silicate perovskite and a possible layer at the base of the lower mantle. <i>Physics of the Earth and Planetary Interiors</i> , 2010 , 180, 215-221	2.3	40
38	Electronic state of Fe ²⁺ in (Mg,Fe)(Si,Al)O ₃ perovskite and (Mg,Fe)SiO ₃ majorite at pressures up to 81 GPa and temperatures up to 800 K. <i>Physics and Chemistry of Minerals</i> , 2010 , 37, 407-415	1.6	17
37	Specific Heat of Olive Oil to 356 MPa. <i>JAOCs, Journal of the American Oil Chemists Society</i> , 2010 , 87, 1517-1520	1.8	3
36	Effect of Spin Transitions in Iron on Structure and Properties of Mantle Minerals. <i>NATO Science for Peace and Security Series B: Physics and Biophysics</i> , 2010 , 231-240	0.2	2
35	Superhard semiconducting optically transparent high pressure phase of boron. <i>Physical Review Letters</i> , 2009 , 102, 185501	7.4	123
34	Iron oxidation state of FeTiO ₃ under high pressure. <i>Physical Review B</i> , 2009 , 79,	3.3	26
33	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. <i>Physical Review B</i> , 2009 , 79,	3.3	16
32	XANES study of spin crossover in Fe-bearing silicate perovskite. <i>Phase Transitions</i> , 2009 , 82, 336-343	1.3	
31	Short-range order and Fe clustering in Mg _{1-x} Fe _x O under high pressure. <i>Physical Review B</i> , 2009 , 80,	3.3	35
30	High-pressure behavior of perovskite: FeTiO ₃ dissociation into (Fe _{1-δ} ,Ti _δ)O and Fe _{1+δ} Ti _{2-δ} O ₅ . <i>Physical Review Letters</i> , 2009 , 103, 065503	7.4	19
29	Phase relations of Fe-Si alloy in Earth's core. <i>Geophysical Research Letters</i> , 2009 , 36,	4.9	27
28	Stable intermediate-spin ferrous iron in lower-mantle perovskite. <i>Nature Geoscience</i> , 2008 , 1, 684-687	18.3	141
27	High-pressure studies of (Mg _{0.9} Fe _{0.1}) ₂ SiO ₄ olivine using raman spectroscopy, X-ray diffraction, and Mössbauer spectroscopy. <i>Inorganic Chemistry</i> , 2008 , 47, 2668-73	5.1	21

26	Monoclinic FeO at high pressures. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 2008 , 223, 461-464		7
25	Optical absorption and radiative thermal conductivity of silicate perovskite to 125 gigapascals. <i>Science</i> , 2008 , 322, 1529-32	33.3	91
24	A novel gas-loading system for mechanically closing of various types of diamond anvil cells. <i>Review of Scientific Instruments</i> , 2008 , 79, 045110	1.7	76
23	Anelasticity of Fe _x O at high pressure. <i>Applied Physics Letters</i> , 2008 , 93, 034106	3.4	6
22	Iron-carbon interactions at high temperatures and pressures. <i>Applied Physics Letters</i> , 2008 , 92, 121912	3.4	30
21	Letter. Optical absorption spectra of ferropericlase to 84 GPa. <i>American Mineralogist</i> , 2007 , 92, 433-436	2.9	56
20	Effect of non-hydrostatic conditions on the elastic behaviour of magnetite: an in situ single-crystal X-ray diffraction study. <i>Physics and Chemistry of Minerals</i> , 2007 , 34, 627-635	1.6	39
19	Reply to Comments on Spin crossover in (Mg,Fe)O: A Mössbauer effect study with an alternative interpretation of x-ray emission spectroscopy data. <i>Physical Review B</i> , 2007 , 75,	3.3	2
18	Sound wave velocities of fcc FeNi alloy at high pressure and temperature by mean of inelastic X-ray scattering. <i>Physics of the Earth and Planetary Interiors</i> , 2007 , 164, 83-89	2.3	48
17	FeO and MnO high-pressure phase diagrams: relations between structural and magnetic properties. <i>Phase Transitions</i> , 2007 , 80, 1151-1163	1.3	15
16	Body-centered cubic iron-nickel alloy in Earth's core. <i>Science</i> , 2007 , 316, 1880-3	33.3	171
15	Pressure-induced phase transition in Mg _{0.8} Fe _{0.2} O ferropericlase. <i>Physics and Chemistry of Minerals</i> , 2006 , 33, 35-44	1.6	19
14	High-pressure synthesis and physical properties of an orthorhombic phase of chromium dioxide. <i>Journal of Applied Physics</i> , 2006 , 99, 053909	2.5	17
13	Spin crossover in (Mg,Fe)O: A Mössbauer effect study with an alternative interpretation of x-ray emission spectroscopy data. <i>Physical Review B</i> , 2006 , 73,	3.3	52
12	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	1.6	11
11	Spin transitions in ferropericlase under high pressure: Comparison of Mössbauer-spectroscopy and X-Ray emission-spectroscopy data. <i>Doklady Physics</i> , 2006 , 51, 229-233	0.8	
10	Measuring the speed of sound in an iron-nickel alloy at high pressure by inelastic X-ray scattering. <i>Doklady Physics</i> , 2006 , 51, 584-587	0.8	
9	Decomposition of ferropericlase (Mg _{0.80} Fe _{0.20})O at high pressures and temperatures. <i>Journal of Alloys and Compounds</i> , 2005 , 390, 41-45	5.7	10

8	Phase transitions in MnO and FeO at low temperatures: A neutron powder diffraction study. <i>Journal of Alloys and Compounds</i> , 2005 , 402, 42-45	5-7	21
7	Trigonal distortion of ferropericlase (Mg _{0.8} Fe _{0.2})O at high pressures. <i>Doklady Physics</i> , 2005 , 50, 343-345.	8	3
6	Beating the miscibility barrier between iron group elements and magnesium by high-pressure alloying. <i>Physical Review Letters</i> , 2005 , 95, 245502	7-4	52
5	Pressure-induced magnetization in FeO: evidence from elasticity and Mössbauer spectroscopy. <i>Physical Review Letters</i> , 2004 , 93, 215502	7-4	51
4	Mössbauer spectroscopic study of pressure-induced magnetisation in wüstite (FeO). <i>Journal of Alloys and Compounds</i> , 2004 , 376, 5-8	5-7	34
3	Atomistic simulation of the properties and phase transformations of FeO wüstite under high pressures. <i>Doklady Physics</i> , 2003 , 48, 394-397	0.8	1
2	Simulation of the properties of periclase by minimizing atomization energy. <i>Doklady Physics</i> , 2002 , 47, 717-720	0.8	
1	Large oxygen excess in the primitive mantle could be the source of the Great Oxygenation Event. <i>Geochemical Perspectives Letters</i> , 5-10	3	29