Yury N Palyanov

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5733062/publications.pdf

Version: 2024-02-01

125

papers

3,004

citations

172457

29

h-index

189892

50

g-index

125

all docs

125

docs citations

125

times ranked

1559

citing authors

#	Article	IF	Citations
1	Experimental Petrology Applied to Natural Diamond Growth. Reviews in Mineralogy and Geochemistry, 2022, 88, 755-808.	4.8	15
2	Diamond formation in an electric field under deep Earth conditions. Science Advances, 2021, 7, .	10.3	7
3	Diamonds from the Mir Pipe (Yakutia): Spectroscopic Features and Annealing Studies. Crystals, 2021, 11, 366.	2.2	8
4	Rare-earth metal catalysts for high-pressure synthesis of rare diamonds. Scientific Reports, 2021, 11, 8421.	3.3	6
5	High-pressure synthesis and characterization of diamond from europium containing systems. Carbon, 2021, 182, 815-824.	10.3	4
6	Crystallomorphological and Crystallochemical Indicators of Diamond Formation Conditions. Crystallography Reports, 2021, 66, 142-155.	0.6	4
7	Diamond formation during sulfidation of metalâ€“carbon melts. Diamond and Related Materials, 2021, 120, 108660.	3.9	2
8	Phase relations in the Fe-Fe₃C-Fe₃N system at 7.8â€…GPa and 1150Â°C: implications for C and N hosts in metal-saturated mantle. High Pressure Research, 2021, 41, 392-404.	1.2	2
9	Experimental Modeling of Ankeriteâ€“Pyrite Interaction under Lithospheric Mantle Pâ€“T Parameters: Implications for Graphite Formation as a Result of Ankerite Sulfidation. Minerals (Basel, Switzerland), 2021, 11, 1267.	2.0	2
10	Cymrite as mineral clathrate: An overlooked redox insensitive transporter of nitrogen in the mantle. Gondwana Research, 2020, 79, 70-86.	6.0	6
11	Phase Relations in the FeO-Fe3C-Fe3N System at 7.8 GPa and 1350 Â°C: Implications for Oxidation of Native Iron at 250 km. Minerals (Basel, Switzerland), 2020, 10, 984.	2.0	2
12	Effect of Oxygen on Diamond Crystallization in Metalâ€“Carbon Systems. ACS Omega, 2020, 5, 18376-18383.	3.5	11
13	Effect of sulfur on diamond growth and morphology in metalâ€“carbon systems. CrystEngComm, 2020, 22, 5497-5508.	2.6	11
14	Magnetic Properties of 1D Ironâ€“Sulfur Compounds Formed Inside Singleâ€Walled Carbon Nanotubes. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000291.	2.4	3
15	Formation of Spessartine and CO2 via Rhodochrosite Decarbonation along a Hot Subduction P-T Path. Minerals (Basel, Switzerland), 2020, 10, 703.	2.0	3
16	Decarbonation Reactions Involving Ankerite and Dolomite under upper Mantle P,T-Parameters: Experimental Modeling. Minerals (Basel, Switzerland), 2020, 10, 715.	2.0	10
17	Effect of HPHT Treatment on Spectroscopic Features of Natural Type Ib-IaA Diamonds Containing Y Centers. Crystals, 2020, 10, 378.	2.2	6
18	Crystallization of Diamond from Melts of Europium Salts. Crystals, 2020, 10, 376.	2.2	5

#	ARTICLE	IF	CITATIONS
19	Effect of Rare-Earth Element Oxides on Diamond Crystallization in Mg-Based Systems. Crystals, 2019, 9, 300.	2.2	9
20	Experimental Modeling of Silicate and Carbonate Sulfidation under Lithospheric Mantle P,T-Parameters. Minerals (Basel, Switzerland), 2019, 9, 425.	2.0	5
21	Processes and Conditions of the Origin for Fe3+-Bearing MagnesiowÃ¼stite under Lithospheric Mantle Pressures and Temperatures. Minerals (Basel, Switzerland), 2019, 9, 474.	2.0	3
22	Hydrogenation of carbon at 5.5â€“7.8â€¯GPa and 1100â€“1400â€¯Â°C: Implications to formation of hydrocarbons in reduced mantles of terrestrial planets. Physics of the Earth and Planetary Interiors, 2019, 291, 12-23.	1.9	8
23	An effect of reduced S-rich fluids on diamond formation under mantle-slab interaction. Lithos, 2019, 336-337, 27-39.	1.4	6
24	Solubility of carbon and nitrogen in a sulfur-bearing iron melt: Constraints for siderophile behavior at upper mantle conditions. American Mineralogist, 2019, 104, 1857-1865.	1.9	8
25	High-pressure synthesis and characterization of Sn-doped single crystal diamond. Carbon, 2019, 143, 769-775.	10.3	31
26	Graphitization of 13C enriched fine-grained graphitic material under high-pressure annealing. Carbon, 2019, 141, 323-330.	10.3	24
27	Germanium-Vacancy Color Center in Diamond as a Temperature Sensor. ACS Photonics, 2018, 5, 765-770.	6.6	105
28	Formation of the Fe,Mg-Silicates, Fe0, and Graphite (Diamond) Assemblage as a Result of Cohenite Oxidation under Lithospheric Mantle Conditions. Doklady Earth Sciences, 2018, 479, 335-338.	0.7	1
29	Step Patterns on {100} Faces of Diamond Crystals As-Grown in Mg-Based Systems. Crystal Growth and Design, 2018, 18, 152-158.	3.0	8
30	Experimental Modeling of C0-Forming Processes Involving Cohenite and CO2-Fluid in a Silicate Mantle. Doklady Earth Sciences, 2018, 483, 1427-1430.	0.7	1
31	Formation of Water-Bearing Defects in Olivine in the Presence of Waterâ€“Hydrocarbon Fluid at 6.3 GPa and 1200Â°C. Doklady Earth Sciences, 2018, 483, 1451-1453.	0.7	4
32	Distribution of light alkanes in the reaction of graphite hydrogenation at pressure of 0.1â€“7.8â€…GPa and temperatures of 1000â€“1350Â°C. High Pressure Research, 2018, 38, 468-481.	1.2	3
33	Conditions of Formation of Ironâ€“Carbon Melt Inclusions in Garnet and Orthopyroxene under P-T Conditions of Lithospheric Mantle. Petrology, 2018, 26, 565-574.	0.9	1
34	Graphite and Diamond Formation in the Carbideâ€“Oxideâ€“Carbonate Interactions (Experimental) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	2.0	3
35	Sulfide Formation as a Result of Sulfate Subduction into Silicate Mantle (Experimental Modeling) Tj ETQq1 1 0.784314 rgBT /Overlock	2.0	11
36	Carbon Isotope Composition of Diamond Crystals Grown Via Redox Mechanism. Geochemistry International, 2018, 56, 1398-1404.	0.7	3

#	ARTICLE	IF	CITATIONS
37	Phase Relations in the Harzburgiteâ€“Hydrous Carbonate Melt at 5.5â€“7.5 GPa and 1200â€“1350Â°Ð¡. Petrology, 2018, 26, 575-587.	0.9	5
38	Correction to Germanium-Vacancy Color Center in Diamond as a Temperature Sensor. ACS Photonics, 2018, 5, 4710-4710.	6.6	4
39	Manifestation of diamond sectoriality during dissolution and graphitization. Journal of Crystal Growth, 2018, 502, 1-6.	1.5	3
40	The Feâ€“Câ€“Oâ€“Hâ€“N system at 6.3â€“7.8 GPa and 1200â€“1400ÂÂ°C: implications for deep carbon and nitrogen cycles. Contributions To Mineralogy and Petrology, 2018, 173, 1.	3.1	11
41	Influence of a silicon impurity on growth of diamond crystals in the Mg-C system. Diamond and Related Materials, 2018, 87, 27-34.	3.9	2
42	Dislocation etching of diamond crystals grown in Mg-C system with the addition of silicon. Diamond and Related Materials, 2018, 88, 67-73.	3.9	8
43	Effect of the solvent-catalyst composition on diamond crystallization in the Mg-Ge-C system. Diamond and Related Materials, 2018, 89, 1-9.	3.9	10
44	The Many Facets of Diamond Crystals. Crystals, 2018, 8, 72.	2.2	1
45	Spin Relaxation of the Neutral Germaniumâ€Vacancy Center in Diamond. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800193.	1.8	5
46	Fate of fluids at the base of subcratonic lithosphere: Experimental constraints at 5.5â€“7.8â€¯GPa and 1150â€“1350 deg C. Lithos, 2018, 318-319, 419-433.	1.4	7
47	Carbon and nitrogen speciation in nitrogen-rich Câ€“Oâ€“Hâ€“N fluids at 5.5â€“7.8 GPa. Earth and Planetary Science Letters, 2017, 460, 234-243.	4.4	45
48	Phase relations in the Fe-Fe 3 C-Fe 3 N system at 7.8 GPa and 1350 Â°C: Implications for carbon and nitrogen hosts in Fe 0 -saturated upper mantle. Physics of the Earth and Planetary Interiors, 2017, 265, 43-53.	1.9	16
49	Carbon and Nitrogen Speciation in N-poor C-O-H-N Fluids at 6.3â€‰GPa and 1100â€“1400â€‰Â°C. Scientific Reports, 2017, 7, 706.	3.3	23
50	A DFT calculation of EPR parameters of a germanium-vacancy defect in diamond. Diamond and Related Materials, 2017, 76, 86-89.	3.9	22
51	Iron carbide as a source of carbon for graphite and diamond formation under lithospheric mantle P-T parameters. Lithos, 2017, 286-287, 151-161.	1.4	17
52	Stability of phlogopite in ultrapotassic kimberlite-like systems at 5.5â€“7.5 GPa. Contributions To Mineralogy and Petrology, 2017, 172, 1.	3.1	19
53	Ranges of 10â€“350 keV H and H 2 ions in (1 1 1) diamond. Nuclear Instruments & Methods in Physics Research B, 2017, 406, 634-637.	1.4	2
54	Photoluminescence of HPHT diamonds synthesized in the Mg-Ge-C system. Diamond and Related Materials, 2017, 79, 145-149.	3.9	8

#	ARTICLE	IF	CITATIONS
55	Optical and microwave control of germanium-vacancy center spins in diamond. Physical Review B, 2017, 96, .	3.2	125
56	Multiscale characterization of 13C-enriched fine-grained graphitic materials for chemical and electrochemical applications. Carbon, 2017, 124, 161-169.	10.3	13
57	Stability of methane in reduced Câ€“Oâ€“H fluid at 6.3 GPa and 1300â€“1400Â°C. Doklady Earth Sciences, 2017, 474, 680-683.	0.7	4
58	Phases of the Feâ€“Câ€“N system as hosts of mantle carbon and nitrogen: Experimental studies at 7.8 GPa and 1350Â°C. Doklady Earth Sciences, 2017, 475, 780-783.	0.7	2
59	Raman scattering in the submicrometer diamond membrane formed by the lift-off technique. Bulletin of the Lebedev Physics Institute, 2017, 44, 210-214.	0.6	1
60	High-pressure crystallization and properties of diamond from magnesium-based catalysts. CrystEngComm, 2017, 19, 4459-4475.	2.6	54
61	Optical and electrical properties of synthetic single-crystal diamond under high-fluence ion irradiation. Journal of Surface Investigation, 2017, 11, 619-624.	0.5	4
62	HPHT Diamond Crystallization in the Mg-Si-C System: Effect of Mg/Si Composition. Crystals, 2017, 7, 119.	2.2	16
63	Specific Internal Structure of Diamonds from Zarnitsa Kimberlite Pipe. Crystals, 2017, 7, 133.	2.2	8
64	Experimental and Theoretical Evidence for Surface-Induced Carbon and Nitrogen Fractionation during Diamond Crystallization at High Temperatures and High Pressures. Crystals, 2017, 7, 190.	2.2	10
65	Incorporation of Large Impurity Atoms into the Diamond Crystal Lattice: EPR of Split-Vacancy Defects in Diamond. Crystals, 2017, 7, 237.	2.2	41
66	Nitrogen and hydrogen aggregation in natural octahedral and cuboid diamonds. Geochemical Journal, 2017, 51, 181-192.	1.0	4
67	Graphite and diamond formation via the interaction of iron carbide and Fe,Ni-sulfide under mantle Pâ€“T parameters. Doklady Earth Sciences, 2016, 471, 1144-1148.	0.7	5
68	High-Pressure Synthesis and Characterization of Ge-Doped Single Crystal Diamond. Crystal Growth and Design, 2016, 16, 3510-3518.	3.0	68
69	Unusual growth macrolayers on {100} faces of diamond crystals from magnesium-based systems. Journal of Crystal Growth, 2016, 455, 76-82.	1.5	6
70	EPR study of Siâ€•and Geâ€•related defects in HPHT diamonds synthesized from Mgâ€•based solventâ€•catalysts. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 2623-2628.	1.8	35
71	HPHT growth and characterization of diamond from a copper-carbon system. Diamond and Related Materials, 2016, 69, 198-206.	3.9	16
72	The dislocation structure of diamond crystals grown on seeds in the Mg-C system. Diamond and Related Materials, 2016, 70, 1-6.	3.9	13

#	ARTICLE	IF	CITATIONS
73	Synthesis of diamonds with mineral, fluid and melt inclusions. Lithos, 2016, 265, 292-303.	1.4	16
74	Effect of CO 2 on crystallization and properties of diamond from ultra-alkaline carbonate melt. Lithos, 2016, 265, 339-350.	1.4	21
75	Diamond crystallization in a CO 2 -rich alkaline carbonate melt with a nitrogen additive. Journal of Crystal Growth, 2016, 449, 119-128.	1.5	6
76	WÃ¼stite stability in the presence of a CO 2 -fluid and a carbonate-silicate melt: Implications for the graphite/diamond formation and generation of Fe-rich mantle metasomatic agents. Lithos, 2016, 244, 20-29.	1.4	10
77	The system Na₂CO₃â€“CaCO₃â€“MgCO₃at 6â€…GPa and 900â€“1250Â°C and its relation to the partial melting of carbonated mantle. High Pressure Research, 2016, 36, 23-41.	1.2	23
78	Carbonatite meltâ€“peridotite interaction at 5.5â€“7.0 GPa: Implications for metasomatism in lithospheric mantle. Lithos, 2016, 248-251, 66-79.	1.4	49
79	Sulfidation of silicate mantle by reduced S-bearing metasomatic fluids and melts. Geology, 2016, 44, 271-274.	4.4	17
80	Phase relations on the K₂CO₃-CaCO₃-MgCO₃join at 6 GPa and 900â€“1400 Â°C: Implications for incipient melting in carbonated mantle domains. American Mineralogist, 2016, 101, 437-447.	1.9	28
81	Germanium: a new catalyst for diamond synthesis and a new optically active impurity in diamond. Scientific Reports, 2015, 5, 14789.	3.3	145
82	The influence of HTHP treatment on the OK1 and N3 centers in natural diamond crystals. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2474-2479.	1.8	9
83	EPR of synthetic diamond heavily doped with phosphorus. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2568-2571.	1.8	4
84	Phase relations in the K2CO3â€“FeCO3 and MgCO3â€“FeCO3 systems at 6 GPa and 900â€“1700Â° C. European Journal of Mineralogy, 2015, 27, 487-499.	1.3	15
85	Thermal expansion of iron carbides, Fe7C3 and Fe3C, at 297â€“911 K determined by in situ X-ray diffraction. Journal of Alloys and Compounds, 2015, 628, 102-106.	5.5	21
86	Na-Ca carbonates synthesized under upper-mantle conditions: Raman spectroscopic and X-ray diffraction studies. European Journal of Mineralogy, 2015, 27, 175-184.	1.3	27
87	The system Na2CO3-FeCO3 at 6 GPa and its relation to the system Na2CO3-FeCO3-MgCO3. American Mineralogist, 2015, 100, 130-137.	1.9	17
88	Effect of nitrogen impurity on etching of synthetic diamond crystals. Journal of Crystal Growth, 2015, 430, 71-74.	1.5	9
89	Effect of crystal defects on diamond morphology during dissolution in the mantle. American Mineralogist, 2015, 100, 1528-1532.	1.9	19
90	Diamond crystallization from a tinâ€“carbon system at HPHT conditions. Diamond and Related Materials, 2015, 58, 40-45.	3.9	13

#	ARTICLE	IF	CITATIONS
91	Morphology of diamond crystals grown in magnesium-based systems at high temperatures and high pressures. Journal of Crystal Growth, 2015, 426, 276-282.	1.5	22
92	High-temperature calibration of a multi-anvil high pressure apparatus. High Pressure Research, 2015, 35, 139-147.	1.2	71
93	Diamond Crystallization from an Antimonyâ€“Carbon System under High Pressure and Temperature. Crystal Growth and Design, 2015, 15, 2539-2544.	3.0	16
94	Siliconâ€containing defects in HPHT diamond synthetized in Mgâ€“Siâ€“C system. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2460-2462.	1.8	10
95	Carbon isotope fractionation during experimental crystallisation of diamond from carbonate fluid at mantle conditions. Contributions To Mineralogy and Petrology, 2015, 170, 1.	3.1	11
96	Phase relationships in the system K2CO3-CaCO3 at 6 GPa and 900-1450 ÂC. American Mineralogist, 2015, 100, 223-232.	1.9	26
97	Crystal Growth of Diamond. , 2015, , 671-713.		27
98	The role of water in generation of group II kimberlite magmas: Constraints from multiple saturation experiments. American Mineralogist, 2014, 99, 2292-2302.	1.9	10
99	EPR study of the hydrogen center in HPHT diamonds grown in carbonate medium. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 2274-2278.	1.8	9
100	Phase relations in the system FeCO3-CaCO3 at 6 GPa and 900-1700 ÂC and its relation to the system CaCO3-FeCO3-MgCO3. American Mineralogist, 2014, 99, 773-785.	1.9	38
101	Effect of nitrogen impurity on the dislocation structure of large HPHT synthetic diamond crystals. Journal of Crystal Growth, 2014, 386, 162-167.	1.5	16
102	The system K2CO3-MgCO3 at 6 GPa and 900-1450 ÂC. American Mineralogist, 2013, 98, 1593-1603.	1.9	79
103	Partitioning of H2O between olivine and carbonateâ€“silicate melts at 6.3 GPa and 1400â€‰Â°C: Implications for kimberlite formation. Earth and Planetary Science Letters, 2013, 383, 58-67.	4.4	57
104	Diamond Growth and Morphology under the Influence of Impurity Adsorption. Crystal Growth and Design, 2013, 13, 5411-5419.	3.0	58
105	Mantleâ€“slab interaction and redox mechanism of diamond formation. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20408-20413.	7.1	163
106	Melting and subsolidus phase relations in the system Na2CO3-MgCO3ÂH2O at 6 GPa and the stability of Na2Mg(CO3)2 in the upper mantle. American Mineralogist, 2013, 98, 2172-2182.	1.9	47
107	New experimental data on phase relations for the system Na2CO3-CaCO3 at 6 GPa and 900-1400 ÂC. American Mineralogist, 2013, 98, 2164-2171.	1.9	42
108	<scp>EPR</scp> study of impurity defects in diamonds grown in carbonate medium. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 2074-2077.	1.8	5

#	ARTICLE	IF	CITATIONS
109	Melting experiments on the Udachnaya kimberlite at 6.3â€“7.5GPa: Implications for the role of H2O in magma generation and formation of hydrous olivine. Geochimica Et Cosmochimica Acta, 2013, 101, 133-155.	3.9	47
110	Effect of H₂O on Diamond Crystal Growth in Metalâ€“Carbon Systems. Crystal Growth and Design, 2012, 12, 5571-5578.	3.0	55
111	Distribution of OK1, N3 and NU1 defects in diamond crystals of different habits. European Journal of Mineralogy, 2012, 24, 645-650.	1.3	17
112	Diamond Growth from a Phosphorusâ€“Carbon System at High Pressure High Temperature Conditions. Crystal Growth and Design, 2011, 11, 2599-2605.	3.0	38
113	Crystal growth and perfection of large octahedral synthetic diamonds. Journal of Crystal Growth, 2011, 317, 32-38.	1.5	23
114	X-ray topography of diamond using forbidden reflections: which defects do we really see?. Journal of Applied Crystallography, 2011, 44, 65-72.	4.5	8
115	Effect of oxygen fugacity on the H2O storage capacity of forsterite in the carbon-saturated systems. Geochimica Et Cosmochimica Acta, 2010, 74, 4793-4806.	3.9	30
116	Effect of Nitrogen Impurity on Diamond Crystal Growth Processes. Crystal Growth and Design, 2010, 10, 3169-3175.	3.0	197
117	Aluminum Nitride Crystal Growth from an Alâˆ’N System at 6.0 GPa and 1800 Â°C. Crystal Growth and Design, 2010, 10, 2563-2570.	3.0	16
118	The effect of composition of mantle fluids/melts on diamond formation processes. Lithos, 2009, 112, 690-700.	1.4	79
119	Formation of various types of graphite inclusions in diamond: Experimental data. Lithos, 2009, 112, 683-689.	1.4	18
120	Fluid regime and diamond formation in the reduced mantle: Experimental constraints. Geochimica Et Cosmochimica Acta, 2009, 73, 5820-5834.	3.9	79
121	Monitoring diamond crystal growth, a combined experimental and SIMS study. European Journal of Mineralogy, 2008, 20, 365-374.	1.3	40
122	The role of mantle ultrapotassic fluids in diamond formation. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 9122-9127.	7.1	97
123	Revealing of planar defects and partial dislocations in large synthetic diamond crystals by the selective etching. Journal of Crystal Growth, 2007, 306, 458-464.	1.5	25
124	Revealing of dislocations in diamond crystals by the selective etching method. Journal of Crystal Growth, 2006, 293, 469-474.	1.5	48
125	Conditions of diamond formation through carbonate-silicate interaction. European Journal of Mineralogy, 2005, 17, 207-214.	1.3	57