Maxim V Portnyagin

List of Publications by Year
in descending order

107 papers	3,633 citations	136950 32 h-index	144013 57 g-index
107 all docs	107 docs citations	107 times ranked	2546 citing authors

#	Article	IF	Citations
1	Constraints on mantle melting and composition and nature of slab components in volcanic arcs from volatiles (H2O, S, Cl, F) and trace elements in melt inclusions from the Kamchatka Arc. Earth and Planetary Science Letters, 2007, 255, 53-69.	4.4	274
2	Oxygen isotope evidence for slab melting in modern and ancient subduction zones. Earth and Planetary Science Letters, 2005, 235, 480-496.	4.4	217
3	Experimental evidence for rapid water exchange between melt inclusions in olivine and host magma. Earth and Planetary Science Letters, 2008, 272, 541-552.	4.4	214
4	Solubility of H2O- and CO2-bearing fluids in tholeiitic basalts at pressures up to 500MPa. Chemical Geology, 2010, 277, 115-125.	3.3	175
5	Komatiites reveal a hydrous Archaean deep-mantle reservoir. Nature, 2016, 531, 628-632.	27.8	137
6	Subduction cycling of volatiles and trace elements through the Central American volcanic arc: evidence from melt inclusions. Contributions To Mineralogy and Petrology, 2008, 155, 433-456.	3.1	125
7	Drastic shift in lava geochemistry in the volcanic-front to rear-arc region of the Southern Kamchatkan subduction zone: Evidence for the transition from slab surface dehydration to sediment melting. Geochimica Et Cosmochimica Acta, 2007, 71, 452-480.	3.9	108
8	The origin of hydrous, high-Î´18O voluminous volcanism: diverse oxygen isotope values and high magmatic water contents within the volcanic record of Klyuchevskoy volcano, Kamchatka, Russia. Contributions To Mineralogy and Petrology, 2009, 157, 209-230.	3.1	104
9	The Role of Subducted Basalt in the Source of Island Arc Magmas: Evidence from Seafloor Lavas of the Western Aleutians. Journal of Petrology, 2015, 56, 441-492.	2.8	96
10	Large-volume silicic volcanism in Kamchatka: Arâ€“Ar and Uâ€“Pb ages, isotopic, and geochemical characteristics of major pre-Holocene caldera-forming eruptions. Journal of Volcanology and Geothermal Research, 2010, 189, 57-80.	2.1	91
11	Transition from arc to oceanic magmatism at the Kamchatka-Aleutian junction. Geology, 2005, 33, 25.	4.4	81
12	New Olivine Reference Material for <i>In Situ</i> Microanalysis. Geostandards and Geoanalytical Research, 2019, 43, 453-473.	3.1	77
13	Quantification of the CO 2 budget and H 2 Oâ€“CO 2 systematics in subduction-zone magmas through the experimental hydration of melt inclusions in olivine at high H 2 O pressure. Earth and Planetary Science Letters, 2015, 425, 1-11.	4.4	75
14	Deep hydrous mantle reservoir provides evidence for crustal recycling before 3.3 billion years ago. Nature, 2019, 571, 555-559.	27.8	64
15	Coexistence of two distinct mantle sources during formation of ophiolites: a case study of primitive pillow-lavas from the lowest part of the volcanic section of the Troodos Ophiolite, Cyprus. Contributions To Mineralogy and Petrology, 1997, 128, 287-301.	3.1	56
16	FTIR Spectrum of Phenocryst Olivine as an Indicator of Silica Saturation in Magmas. Journal of Petrology, 2004, 46, 603-614.	2.8	56
17	Early Holocene M~6 explosive eruption from Plosky volcanic massif (Kamchatka) and its tephra as a link between terrestrial and marine paleoenvironmental records. International Journal of Earth Sciences, 2013, 102, 1673-1699.	1.8	55
18	Fluid bubbles in melt inclusions and pillow-rim glasses: high-temperature precursors to hydrothermal fluids?. Chemical Geology, 2002, 183, 349-364.	3.3	54

#	Article	IF	Citations
19	Geochemistry of the late Holocene rocks from the Tolbachik volcanic field, Kamchatka: Quantitative modelling of subduction-related open magmatic systems. Journal of Volcanology and Geothermal Research, 2015, 307, 133-155.	2.1	53
20	Olivine Major and Trace Element Compositions in Southern Payenia Basalts, Argentina: Evidence for Pyroxeniteâ€“Peridotite Melt Mixing in a Back-arc Setting. Journal of Petrology, 2015, 56, 1495-1518.	2.8	51
21	Petrogenesis of Olivine-phyric Basalts from the Aphanasey Nikitin Rise: Evidence for Contamination by Cratonic Lower Continental Crust. Journal of Petrology, 2001, 42, 277-319.	2.8	50
22	Tephra from andesitic Shiveluch volcano, Kamchatka, NW Pacific: chronology of explosive eruptions and geochemical fingerprinting of volcanic glass. International Journal of Earth Sciences, 2015, 104, 1459-1482.	1.8	49
23	Mid-Cretaceous Hawaiian tholeiites preserved in Kamchatka. Geology, 2008, 36, 903.	4.4	48
24	Tephra without Borders: Far-Reaching Clues into Past Explosive Eruptions. Frontiers in Earth Science, 2015, 3, .	1.8	44
25	Along and across arc geochemical variations in NW Central America: Evidence for involvement of lithospheric pyroxenite. Geochimica Et Cosmochimica Acta, 2012, 84, 459-491.	3.9	39
26	Geology and petrology of the lava complex of Young Shiveluch Volcano, Kamchatka. Petrology, 2011, 19, 134-166.	0.9	38
27	Boninite-like intraplate magmas from Manihiki Plateau require ultra-depleted and enriched source components. Nature Communications, 2017, 8, 14322.	12.8	37
28	Geochemistry of primitive lavas of the Central Kamchatka Depression: Magma generation at the edge of the Pacific Plate. Geophysical Monograph Series, 2007, , 199-239.	0.1	36
29	H2O-rich melt inclusions in fayalitic olivine from Hekla volcano: Implications for phase relationships in silicic systems and driving forces of explosive volcanism on Iceland. Earth and Planetary Science Letters, 2012, 357-358, 337-346.	4.4	36
30	H2O and CO2 in parental magmas of Kliuchevskoi volcano inferred from study of melt and fluid inclusions in olivine. Russian Geology and Geophysics, 2011, 52, 1353-1367.	0.7	35
31	Silicate-sulfide liquid immiscibility in modern arc basalt (Tolbachik volcano, Kamchatka): Part II. Composition, liquidus assemblage and fractionation of the silicate melt. Chemical Geology, 2017, 471, 92-110.	3.3	35
32	A full holocene tephrochronology for the Kamchatsky Peninsula region: Applications from Kamchatka to North America. Quaternary Science Reviews, 2017, 168, 101-122.	3.0	34
33	Unexpected HIMU-type late-stage volcanism on the Walvis Ridge. Earth and Planetary Science Letters, 2018, 492, 251-263.	4.4	34
34	Mantle temperature control on composition of arc magmas along the Central Kamchatka Depression. Geology, 2008, 36, 519.	4.4	33
35	Volcanic CO₂output at the Central American subduction zone inferred from melt inclusions in olivine crystals from mafic tephras. Geochemistry, Geophysics, Geosystems, 2011, 12, n/a-n/a.	2.5	33
36	The role and conditions of second-stage mantle melting in the generation of low-Ti tholeiites and boninites: the case of the Manihiki Plateau and the Troodos ophiolite. Contributions To Mineralogy and Petrology, 2017, 172, 1.	3.1	33

#	Article	IF	Citations
37	First identification of cryptotephra from the Kamchatka Peninsula in a Greenland ice core: Implications of a widespread marker deposit that links Greenland to the Pacific northwest. Quaternary Science Reviews, 2018, 181, 200-206.	3.0	32
38	Dehydration of melt inclusions in olivine and implications for the origin of silica-undersaturated island-arc melts. Earth and Planetary Science Letters, 2019, 517, 95-105.	4.4	32
39	Experimental calibration and implications of olivine-melt vanadium oxybarometry for hydrous basaltic arc magmas. American Mineralogist, 2018, 103, 369-383.	1.9	32
40	Identification of a widespread Kamchatkan tephra: A middle Pleistocene tieâ€point between Arctic and Pacific paleoclimatic records. Geophysical Research Letters, 2013, 40, 3538-3543.	4.0	30
41	Bowers Ridge (Bering Sea): An Oligocene-Early Miocene island arc. Geology, 2012, 40, 687-690.	4.4	29
42	Immiscible sulfide melts in primitive oceanic magmas: Evidence and implications from picrite lavas (Eastern Kamchatka, Russia). American Mineralogist, 2018, 103, 886-898.	1.9	29
43	Sr and O isotopes in western Aleutian seafloor lavas: Implications for the source of fluids and trace element character of arc volcanic rocks. Earth and Planetary Science Letters, 2017, 475, 169-180.	4.4	28
44	TephraKam: geochemical database of glass compositions in tephra and welded tuffs from the Kamchatka volcanic arc (northwestern Pacific). Earth System Science Data, 2020, 12, 469-486.	9.9	28
45	Late Glacial to Holocene paleoenvironmental change on the northwestern Pacific seaboard, Kamchatka Peninsula (Russia). Quaternary Science Reviews, 2017, 157, 14-28.	3.0	27
46	Ultra-depleted melts from Kamchatkan ophiolites: Evidence for the interaction of the Hawaiian plume with an oceanic spreading center in the Cretaceous?. Earth and Planetary Science Letters, 2009, 287, 194-204.	4.4	26
47	Volcanic structure and composition of Old Shiveluch volcano, Kamchatka. Journal of Volcanology and Geothermal Research, 2013, 263, 193-208.	2.1	26
48	Chromium spinel in Late Quaternary volcanic rocks from Kamchatka: Implications for spatial compositional variability of subarc mantle and its oxidation state. Lithos, 2018, 322, 212-224.	1.4	23
49	Contrasting conditions of rift and offâ€rift silicic magma origin on Iceland. Geophysical Research Letters, 2014, 41, 5813-5820.	4.0	22
50	Volatile contents of primitive bubble-bearing melt inclusions from Klyuchevskoy volcano, Kamchatka: Comparison of volatile contents determined by mass-balance versus experimental homogenization. Journal of Volcanology and Geothermal Research, 2018, 358, 124-131.	2.1	22
51	Belingwe komatiites (2.7 Ga) originate from a plume with moderate water content, as inferred from inclusions in olivine. Chemical Geology, 2018, 478, 39-59.	3.3	20
52	Coseismic coastal subsidence associated with unusually wide rupture of prehistoric earthquakes on the Kamchatka subduction zone: A record in buried erosional scarps and tsunami deposits. Quaternary Science Reviews, 2020, 233, 106171.	3.0	19
53	Copper partitioning between olivine and melt inclusions and its content in primitive island-arc magmas of Kamchatka. Petrology, 2017, 25, 419-432.	0.9	18
54	Geochemistry of deep Manihiki Plateau crust: Implications for compositional diversity of large igneous provinces in the Western Pacific and their genetic link. Chemical Geology, 2018, 493, 553-566.	3.3	18

#	Article	IF	Citations
55	Large-magnitude Pauzhetka caldera-forming eruption in Kamchatka: Astrochronologic age, composition and tephra dispersal. Journal of Volcanology and Geothermal Research, 2018, 366, 1-12.	2.1	17
56	Contrasting compositional trends of rocks and olivine-hosted melt inclusions from Cerro Negro volcano (Central America): implications for decompression-driven fractionation of hydrous magmas. International Journal of Earth Sciences, 2014, 103, 1963-1982.	1.8	15
57	Tephra layers of in the quaternary deposits of the Sea of Okhotsk: Distribution, composition, age and volcanic sources. Quaternary International, 2016, 425, 248-272.	1.5	15
58	Coupling of Redox Conditions of Mantle Melting and Copper and Sulfur Contents in Primary Magmas of the Tolbachinsky Dol (Kamchatka) and Juan de Fuca Ridge (Pacific Ocean). Petrology, 2018, 26, 145-166.	0.9	15
59	Compositions and Formation Conditions of Primitive Magmas of the Karymsky Volcanic Center, Kamchatka: Evidence from Melt Inclusions and Trace-Element Thermobarometry. Petrology, 2019, 27, 243-264.	0.9	15
60	The origin and evolution of the parental magmas of frontal volcanoes in Kamchatka: Evidence from magmatic inclusions in olivine from Zhupanovsky volcano. Geochemistry International, 2011, 49, 743-767.	0.7	14
61	The first continuous late Pleistocene tephra record from Kamchatka Peninsula (NW Pacific) and its volcanological and paleogeographic implications. Quaternary Science Reviews, 2021, 257, 106838.	3.0	14
62	Silicification of peridotites at the stalemate fracture zone (Northwestern Pacific): Reconstruction of the conditions of low-temperature weathering and tectonic interpretation. Petrology, 2012, 20, 21-39.	0.9	13
63	Formation conditions of allivalites, olivine-anorthite crystal enclaves, in the volcanics of the Kuril-Kamchatka arc. Petrology, 2008, 16, 232-260.	0.9	12
64	Volcanic ash layers in Lake El'gygytgyn: eight new regionally significant chronostratigraphic markers for western Beringia. Climate of the Past, 2014, 10, 1041-1062.	3.4	12
65	Can magmatic water contents be estimated from clinopyroxene phenocrysts in some lavas? A case study with implications for the origin of the Azores Islands. Chemical Geology, 2017, 466, 436-445.	3.3	12
66	Holocene tephra from the Chukchi-Alaskan margin, Arctic Ocean: Implications for sediment chronostratigraphy and volcanic history. Quaternary Geochronology, 2018, 45, 85-97.	1.4	11
67	Middle to late Pleistocene record of explosive volcanic eruptions in marine sediments offshore Kamchatka (Meiji Rise, NW Pacific). Journal of Quaternary Science, 2020, 35, 362-379.	2.1	11
68	Estimation of CO2 Content in the Gas Phase of Melt Inclusions Using Raman Spectroscopy: Case Study of Inclusions in Olivine from the Karymsky Volcano (Kamchatka). Russian Geology and Geophysics, 2020, 61, 600-610.	0.7	10
69	Composition and evolution of the melts erupted in 1996 at Karymskoe Lake, Eastern Kamchatka: Evidence from inclusions in minerals. Geochemistry International, 2011, 49, 1085-1110.	0.7	9
70	Marker tephra layers in the late quaternary deposits of the Sea of Okhotsk as evidence of catastrophic eruptions in the Nemo caldera complex (Onekotan Island, Kuril Islands). Stratigraphy and Geological Correlation, 2013, 21, 553-571.	0.8	9
71	Tephra layers of large explosive eruptions of Baitoushan/Changbaishan Volcano in the Japan Sea sediments. Quaternary International, 2019, 519, 200-214.	1.5	9
72	Tephrochronological dating of paleoearthquakes in active volcanic arcs: A case of the Eastern Volcanic Front on the Kamchatka Peninsula (northwest Pacific). Journal of Quaternary Science, 2020, 35, 349-361.	2.1	9

#	Article	IF	Citations
73	Detailed tephrochronology and composition of major Holocene eruptions from Avachinsky, Kozelsky, and Koryaksky volcanoes in Kamchatka. Journal of Volcanology and Geothermal Research, 2020, 408, 107088.	2.1	9
74	Major and trace element composition of olivine from magnesian skarns and silicate marbles. American Mineralogist, 2021, 106, 206-215.	1.9	9
75	A latest Pleistocene and Holocene composite tephrostratigraphic framework for northeastern North America. Quaternary Science Reviews, 2021, 272, 107242.	3.0	9
76	Chemical composition and crystallization conditions of trachybasalts from the Dzhida field, Southern Baikal volcanic area: Evidence from melt and fluid inclusions. Geochemistry International, 2006, 44, 286-295.	0.7	8
77	Initial H2O content and conditions of parent magma origin for Gorely volcano (Southern Kamchatka) estimated by trace element thermobarometry. Doklady Earth Sciences, 2017, 472, 100-103.	0.7	8
78	The source of platinum group elements in basalts of the ophiolite complex of the Kamchatsky Mys Peninsula <i>(Eastern Kamchatka)</i>. Russian Geology and Geophysics, 2018, 59, 1592-1602.	0.7	8
79	Ultramaficâ€"Mafic Assemblage of Plutonic Rocks and Hornblende Schists of Shirshov Rise, Bering Sea, and Stalemate Ridge, Northwest Pacific: Geodynamic Interpretations of Geochemical Data. Petrology, 2018, 26, 492-514.	0.9	8
80	Widespread tephra layers in the Bering Sea sediments: distal clues to large explosive eruptions from the Aleutian volcanic arc. Bulletin of Volcanology, 2018, 80, 1.	3.0	8
81	Reprint of Silicate-sulfide liquid immiscibility in modern arc basalt (Tolbachik volcano, Kamchatka): Part II. Composition, liquidus assemblage and fractionation of the silicate melt. Chemical Geology, 2018, 478, 112-130.	3.3	7
82	The Composition of Volcanic Ash and the Dynamics of the 2013â€"2016 Zhupanovsky Volcano Eruption. Journal of Volcanology and Seismology, 2018, 12, 155-171.	0.7	7
83	Land-sea correlations in the Eastern Mediterranean region over the past c. 800 kyr based on macro- and cryptotephras from ODP Site 964 (Ionian Basin). Quaternary Science Reviews, 2021, 255, 106811.	3.0	7
84	Two-stage evolution of mantle peridotites from the Stalemate Fracture Zone, northwestern Pacific. Geochemistry International, 2013, 51, 683-695.	0.7	6
85	Amphibole record of the 1964 plinian and following dome-forming eruptions of Shiveluch volcano, Kamchatka. Journal of Volcanology and Geothermal Research, 2020, 407, 107108.	2.1	6
86	Identification of Icelandic tephras from the last two millennia in the White Sea region (Vodoprovodnoe peat bog, northwestern Russia). Journal of Quaternary Science, 2020, 35, 493-504.	2.1	6
87	Gigantic eruption of a Carpathian volcano marks the largest Miocene transgression of Eastern Paratethys. Earth and Planetary Science Letters, 2021, 563, 116890.	4.4	6
88	Papanin Ridge and Ojin Rise Seamounts (Northwest Pacific): Dual Hotspot Tracks Formed by the Shatsky Plume. Geochemistry, Geophysics, Geosystems, 2021, 22, e2021GC009847.	2.5	6
89	Electrical stimulation of quadriceps during rehabilitation following proximal femoral fracture. International Journal of Rehabilitation Research, 2002, 25, 61-63.	1.3	5
90	Dynamics of exrtrusive dome growth and variations in chemical and mineralogical composition of Young Shiveluch andesites in 2001â€"2013. Journal of Volcanology and Seismology, 2016, 10, 360-381.	0.7	5

#	Article	IF	Citations
91	Composition and conditions of formation of the parental melts of Jurassic dolerites of southwestern Crimea: Evidence from melt inclusions in olivine phenocrysts. Petrology, 2017, 25, 272-303.	0.9	5
92	Composition, crystallization conditions and genesis of sulfide-saturated parental melts of olivine-phyric rocks from Kamchatsky Mys (Kamchatka, Russia). Lithos, 2020, 370-371, 105657.	1.4	5
93	In situ quantification of the nitrogen content of olivine-hosted melt inclusions from Klyuchevskoy volcano (Kamchatka): Implications for nitrogen recycling at subduction zones. Chemical Geology, 2021, 582, 120456.	3.3	5
94	Chlorine in the Earthâ€™s Mantle as an Indicator of the Global Recycling of Oceanic Crust. Russian Geology and Geophysics, 2020, 61, 937-950.	0.7	5
95	Kliuchevskoi volcano diary. International Journal of Earth Sciences, 2012, 101, 195-195.	1.8	4
96	Mineral composition of tephra layers in the Quaternary deposits of the Sea of Okhotsk:: Heavy minerals associations and their geochemistry. Geochemistry International, 2016, 54, 167-196.	0.7	4
97	Large-magnitude (VEIâ€‰â‰¥â€‰7) â€˜wetâ€™ explosive silicic eruption preserved a Lower Miocene habitat at the IpolytarnÃ³c Fossil Site, North Hungary. Scientific Reports, 2022, 12, .	3.3	4
98	Petrology and geochemistry of plutonic rocks in the Northwest Pacific Ocean and their geodynamic interpretation. Geochemistry International, 2014, 52, 179-196.	0.7	3
99	Constraints on lithosphere-asthenosphere melt mixing in basaltic intraplate volcanism from olivine melt inclusions from southern Payenia, Argentina. Lithos, 2018, 310-311, 225-240.	1.4	3
100	Geological Studies in the Eastern Indian Ocean: Cruise SO258/1 of the R/V Sonne (Germany) with the Participation of Russian Researchers. Oceanology, 2019, 59, 276-278.	1.2	3
101	Chlorine isotope behavior in subduction zone settings revealed by olivine-hosted melt inclusions from the Central America Volcanic Arc. Earth and Planetary Science Letters, 2022, 581, 117414.	4.4	2
102	Long-Lasting Influence of the Discovery Plume on Tholeiitic Magmatism in the South Atlantic: Data on Basalts Recovered by Hole 513a, DSDP Leg 71. Geochemistry International, 2019, 57, 113-133.	0.7	1
103	Composition of Volcanic Tuffs, Neotectonics, and Structure of the Upper Sedimentary Cover of the Osborn Plateau (Indian Ocean). Oceanology, 2020, 60, 691-703.	1.2	1
104	The EyjafjallajÃ¶kull AD 2010 eruption and the preservation of medium-sized eruptions in marine surface sediment offshore southern Iceland. Quaternary Research, 2017, 87, 386-406.	1.7	0
105	New Data on the Geology of Osborn Plateau, Indian Ocean. Doklady Earth Sciences, 2019, 489, 1469-1473.	0.7	0
106	40Ar/39Ar ages and bulk-rock chemistry of the lower submarine units of the central and western Aleutian Arc. Lithos, 2021, 392-393, 106147.	1.4	0
107	Tephra and Cryptotefra on the East European Plain - new geochronological perspectives. , 2019, , .		0