Istvan Kovacs

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/4065704/publications.pdf

Version: 2024-02-01

74 papers	2,421 citations	236925 25 h-index	214800 47 g-index
76 all docs	76 docs citations	76 times ranked	1900 citing authors

#	Article	IF	Citations
1	Plumeâ€‐induced Sinking of Intracontinental Lithospheric Mantle: An Overlooked Mechanism of Subduction Initiation?. Geochemistry, Geophysics, Geosystems, 2021, 22, e2020GC009482.	2.5	27
2	Effect of metasomatism on the electrical resistivity of the lithospheric mantle â€“ An integrated research using magnetotelluric sounding and xenoliths beneath the NÃ³grÃ¡d-GÃ¶mÃ¶r Volcanic Field. Global and Planetary Change, 2021, 197, 103389.	3.5	6
3	A Lower Miocene pyroclastic-fall deposit from the BÃ¼kk Foreland Volcanic Area, Northern Hungary: Clues for an eastward-located source. Geologica Carpathica, 2021, 72, .	0.7	6
4	The transition zone between the Eastern Alps and the Pannonian basin imaged by ambient noise tomography. Tectonophysics, 2021, 805, 228770.	2.2	6
5	Uniform â€œwaterâ€•content in quartz phenocrysts from silicic pyroclastic fallout deposits â€“ implications on pre-eruptive conditions. European Journal of Mineralogy, 2021, 33, 571-589.	1.3	2
6	Iron isotope and trace metal variations during mantle metasomatism: In situ study on sulfide minerals from peridotite xenoliths from NÃ³grÃ¡d-GÃ¶mÃ¶r Volcanic Field (Northern Pannonian Basin). Lithos, 2021, 396-397, 106238.	1.4	2
7	Metasomatism-induced wehrlite formation in the upper mantle beneath the NÃ³grÃ¡d-GÃ¶mÃ¶r Volcanic Field (Northern Pannonian Basin): Evidence from xenoliths. Geoscience Frontiers, 2020, 11, 943-964.	8.4	17
8	Geochemical evolution of the lithospheric mantle beneath the Styrian Basin (Western Pannonian) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	1.4	4
9	A Miocene Phreatoplinian eruption in the North-Eastern Pannonian Basin, Hungary: The JatÃ³ Member. Journal of Volcanology and Geothermal Research, 2020, 401, 106973.	2.1	6
10	Hazai kÃ©pzÅ‘dmÃ©nyekbÅ‘l szeparÃ¡lt kvarcok jellemzÅ‘i az OSL kormeghatÃ¡rozÃ¡s szempontjÃ¡bÃ³l. FÃ¶ldtani KÃ¶zlÃ¶ny, 2020, 150, 61.	0.4	3
11	Pargasite in fluid inclusions of mantle xenoliths from northeast Australia (Mt. Quincan): evidence of interaction with asthenospheric fluid. Chemical Geology, 2019, 508, 182-196.	3.3	11
12	3D P-wave velocity image beneath the Pannonian Basin using traveltime tomography. Acta Geodaetica Et Geophysica, 2019, 54, 373-386.	1.6	7
13	Lateral and Vertical Heterogeneity in the Lithospheric Mantle at the Northern Margin of the Pannonian Basin Reconstructed From Peridotite Xenolith Microstructures. Journal of Geophysical Research: Solid Earth, 2019, 124, 6315-6336.	3.4	12
14	On the use of nominally anhydrous minerals as phenocrysts in volcanic rocks: A review including a case study from the Carpathianâ€“Pannonian Region. Central European Geology, 2019, 62, 119-152.	0.4	0
15	Long term measurements from the MÃ¡tra Gravitational and Geophysical Laboratory. European Physical Journal: Special Topics, 2019, 228, 1693-1743.	2.6	5
16	Extremely low structural hydroxyl contents in upper mantle xenoliths from the NÃ³grÃ¡d-GÃ¶mÃ¶r Volcanic Field (northern Pannonian Basin): Geodynamic implications and the role of post-eruptive re-equilibration. Chemical Geology, 2019, 507, 23-41.	3.3	20
17	Water in the upper mantle and deep crust of eastern China: concentration, distribution and implications. National Science Review, 2019, 6, 125-144.	9.5	88
18	A fÃ¶ldkÃ¶peny reolÃ³giai kutatÃ¡sa: mennyisÃ©gi Fourier transzformÃ¡ciÃ³s infravÃ¶rÃ¶s spektrometria alkalmazÃ¡sa egy PersÃ¡ny hegysÃ©gi xenolit pÃ©ldÃ¡jÃ¡n. FÃ¶ldtani KÃ¶zlÃ¶ny, 2019, 149, 233.	0.4	2

#	Article	IF	Citations
19	AlpArray in Hungary: temporary and permanent seismological networks in the transition zone between the Eastern Alps and the Pannonian basin. Acta Geodaetica Et Geophysica, 2018, 53, 221-245.	1.6	20
20	Quantitative analysis of H-species in anisotropic minerals by unpolarized infrared spectroscopy: An experimental evaluation. American Mineralogist, 2018, 103, 1761-1769.	1.9	12
21	Metamorphic and deformation history of the Mecsekalja Zone around the SzentlÅ‘rinc-1 well using individual quartz grains from drilling chips. Central European Geology, 2018, 61, 85-108.	0.4	0
22	Probing tectonic processes with space geodesy in the south Carpathians: insights from archive SAR data. Acta Geodaetica Et Geophysica, 2018, 53, 331-345.	1.6	4
23	Upper mantle xenoliths as sources of geophysical information: the PerÅŸani Mts. area as a case study. Acta Geodaetica Et Geophysica, 2018, 53, 415-438.	1.6	9
24	Phase relations and melting of nominally â€˜dryâ€™ residual eclogites with variable CaO/Na2O from 3 to 5â€¯GPa and 1250 to 1500â€¯Â°C; implications for refertilisation of upwelling heterogeneous mantle. Lithos, 2018, 314-315, 506-519.	1.4	8
25	TÃ¶bbvÃ¡ltozÃ³s adatelemzÃ©ssel kombinÃ¡lt gyengÃ¤tett teljes reflexiÃ³s infravÃ¶rÃ¶s spektroszkÃ³pia az Ã¡svÃ¡nyos Ã¶sszetÃ©tel vizsgÃ¡latÃ¡ban. FÃ¶ldtani KÃ¶zlÃ¶ny, 2018, 148, 161-178.	0.4	0
26	Effect of iron and trivalent cations on OH defects in olivine. American Mineralogist, 2017, 102, 302-311.	1.9	39
27	Water-bearing, high-pressure Ca-silicates. Earth and Planetary Science Letters, 2017, 469, 148-155.	4.4	11
28	2H/1H measurements of amphiboles and nominally anhydrous minerals (clinopyroxene, garnet and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 spectrometry. Rapid Communications in Mass Spectrometry, 2017, 31, 2066-2072.	1.5	3
29	Detailed Mineralogical and Petrographic Analysis of the Caprock from a Natural CO2 Occurrence in Hungary. Energy Procedia, 2017, 114, 4926-4933.	1.8	0
30	Experimental Study of CO2-saturated Water â€“ Illite/Kaolinite/Montmorillonite System at 70-80 Â°C, 100-105 Bar. Energy Procedia, 2017, 114, 4934-4947.	1.8	7
31	Fluidâ€Enhanced Annealing in the Subcontinental Lithospheric Mantle Beneath the Westernmost Margin of the Carpathianâ€Pannonian Extensional Basin System. Tectonics, 2017, 36, 2987-3011.	2.8	20
32	The role of pargasitic amphibole in the formation of major geophysical discontinuities in the shallow upper mantle. Acta Geodaetica Et Geophysica, 2017, 52, 183-204.	1.6	22
33	Evidence for post-depositional diffusional loss of hydrogen in quartz phenocryst fragments within ignimbrites. American Mineralogist, 2017, 102, 1187-1201.	1.9	11
34	Water concentrations and hydrogen isotope compositions of alkaline basalt-hosted clinopyroxene megacrysts and amphibole clinopyroxenites: the role of structural hydroxyl groups and molecular water. Contributions To Mineralogy and Petrology, 2016, 171, 1.	3.1	9
35	Concentration of hydroxyl defects in quartz from various rhyolitic ignimbrite horizons: results from unpolarized micro-FTIR analyses on unoriented phenocryst fragments. European Journal of Mineralogy, 2016, 28, 313-327.	1.3	21
36	Caprock analysis from the MihÃ¡lyi-RÃ©pcelak natural CO2 occurrence, Western Hungary. Environmental Earth Sciences, 2016, 75, 1.	2.7	9

#	Article	IF	Citations
37	Deformation in the asthenospheric mantle beneath the Carpathianâ€Pannonian Region. Journal of Geophysical Research: Solid Earth, 2016, 121, 6644-6657.	3.4	24
38	Origin and weathering of landslide material in a loess area: a geochemical study of the Kulcs landslide, Hungary. Environmental Earth Sciences, 2016, 75, 1.	2.7	7
39	Passive seismic experiment and receiver functions analysis to determine crustal structure at the contact of the northern Dinarides and southwestern Pannonian Basin. Geophysical Journal International, 2016, 205, 1420-1436.	2.4	15
40	Melting, fluid migration and fluid-rock interactions in the lower crust beneath the Bakony-Balaton Highland volcanic field: a silicate melt and fluid inclusion study. Mineralogy and Petrology, 2015, 109, 217-234.	1.1	7
41	Constraints on the thickness and seismic properties of the lithosphere in an extensional setting (NÃ³grÃ¡d-GÃ¶mÃ¶r Volcanic Field, Northern Pannonian Basin). Acta Geodaetica Et Geophysica, 2015, 50, 133-149.	1.6	13
42	Characterization of the sub-continental lithospheric mantle beneath the Cameroon volcanic line inferred from alkaline basalt hosted peridotite xenoliths from Barombi Mbo and Nyos Lakes. Journal of African Earth Sciences, 2015, 111, 170-193.	2.0	28
43	Identification of hydrogen defects linked to boron substitution in synthetic forsterite and natural olivine. American Mineralogist, 2014, 99, 2138-2141.	1.9	28
44	Experimental Study of the Influence of Water on Melting and Phase Assemblages in the Upper Mantle. Journal of Petrology, 2014, 55, 2067-2096.	2.8	135
45	Application of attenuated total reflectance Fourier transform infrared spectroscopy in the mineralogical study of a landslide area, Hungary. Sedimentary Geology, 2014, 313, 1-14.	2.1	30
46	Continuous eclogite melting and variable refertilisation in upwelling heterogeneous mantle. Scientific Reports, 2014, 4, 6099.	3.3	61
47	A 13,600-year diatom oxygen isotope record from the South Carpathians (Romania): Reflection of winter conditions and possible links with North Atlantic circulation changes. Quaternary International, 2013, 293, 136-149.	1.5	38
48	High water content in Mesozoic primitive basalts of the North China Craton and implications on the destruction of cratonic mantle lithosphere. Earth and Planetary Science Letters, 2013, 361, 85-97.	4.4	169
49	Comment on â€œThe beginnings of hydrous mantle wedge meltingâ€• CB Till, TL Grove, AC Withers, Contributions to Mineralogy and Petrology, DOI 10.1007/s00410-011-0692-6. Contributions To Mineralogy and Petrology, 2012, 164, 1077-1081.	3.1	13
50	An Experimental Study of Water in Nominally Anhydrous Minerals in the Upper Mantle near the Water-saturated Solidus. Journal of Petrology, 2012, 53, 2067-2093.	2.8	84
51	Seismic anisotropy and deformation patterns in upper mantle xenoliths from the central Carpathianâ€“Pannonian region: Asthenospheric flow as a driving force for Cenozoic extension and extrusion?. Tectonophysics, 2012, 514-517, 168-179.	2.2	58
52	Crustal structure of the Western Carpathians and Pannonian Basin: Seismic models from CELEBRATION 2000 data and geological implications. Journal of Geodynamics, 2011, 52, 97-113.	1.6	55
53	A seismic discontinuity in the upper mantle between the Eastern Alps and the Western Carpathians: Constraints from wide angle reflections and geological implications. Tectonophysics, 2011, 504, 122-134.	2.2	9
54	Theoretical infrared spectrum of OH-defects in forsterite. European Journal of Mineralogy, 2011, 23, 285-292.	1.3	69

#	Article	IF	Citations
55	Water and its influence on the lithosphereâ€“asthenosphere boundary. Nature, 2010, 467, 448-451.	27.8	293
56	Site-specific infrared O-H absorption coefficients for water substitution into olivine. American Mineralogist, 2010, 95, 292-299.	1.9	100
57	Relation between mantle shear zone deformation and metasomatism in spinel peridotite xenoliths of Jeju Island (South Korea): Evidence from olivine CPO and trace elements. Journal of Geodynamics, 2010, 50, 424-440.	1.6	26
58	Coexisting silicate melt inclusions and H2O-bearing, CO2-rich fluid inclusions in mantle peridotite xenoliths from the Carpathianâ€“Pannonian region (central Hungary). Chemical Geology, 2010, 274, 1-18.	3.3	40
59	Meltâ€“wall rock interaction in the mantle shown by silicate melt inclusions in peridotite xenoliths from the central Pannonian Basin (western Hungary). Island Arc, 2009, 18, 375-400.	1.1	15
60	Primary carbonatite melt inclusions in apatite and in K-feldspar of clinopyroxene-rich mantle xenoliths hosted in lamprophyre dikes (Hungary). Mineralogy and Petrology, 2008, 94, 225-242.	1.1	23
61	Quantitative absorbance spectroscopy with unpolarized light: Part II. Experimental evaluation and development of a protocol for quantitative analysis of mineral IR spectra. American Mineralogist, 2008, 93, 765-778.	1.9	150
62	Middle Miocene volcanism in the vicinity of the Middle Hungarian zone: Evidence for an inherited enriched mantle source. Journal of Geodynamics, 2008, 45, 1-17.	1.6	53
63	A Quartz-bearing Orthopyroxene-rich Websterite Xenolith from the Pannonian Basin, Western Hungary: Evidence for Release of Quartz-saturated Melts from a Subducted Slab. Journal of Petrology, 2008, 49, 421-439.	2.8	27
64	Quantitative absorbance spectroscopy with unpolarized light: Part I. Physical and mathematical development. American Mineralogist, 2008, 93, 751-764.	1.9	85
65	Paleogeneâ€“early Miocene igneous rocks and geodynamics of the Alpine-Carpathian-Pannonian-Dinaric region: An integrated approach. , 2007, , .		23
66	Seismic Properties of Anita Bay Dunite: an Exploratory Study of the Influence of Water. Journal of Petrology, 2007, 49, 841-855.	2.8	80
67	Geodynamic implications of flattened tabular equigranular textured peridotites from the Bakony-Balaton Highland Volcanic Field (Western Hungary). Journal of Geodynamics, 2007, 43, 484-503.	1.6	34
68	Evolution of Mafic Alkaline Melts Crystallized in the Uppermost Lithospheric Mantle: a Melt Inclusion Study of Olivine-Clinopyroxenite Xenoliths, Northern Hungary. Journal of Petrology, 2007, 48, 853-883.	2.8	32
69	Symplectite in spinel lherzolite xenoliths from the Little Hungarian Plain, Western Hungary: A key for understanding the complex history of the upper mantle of the Pannonian Basin. Lithos, 2007, 94, 230-247.	1.4	19
70	Petrology and geochemistry of granulite xenoliths beneath the NÃ³grÃ¡d-GÃ¶mÃ¶r Volcanic Field, Carpathian-Pannonian Region (N-Hungary/S-Slovakia). Mineralogy and Petrology, 2005, 85, 269-290.	1.1	15
71	Composition and evolution of lithosphere beneath the Carpathianâ€“Pannonian Region: a review. Tectonophysics, 2004, 393, 119-137.	2.2	77
72	Type-II xenoliths and related metasomatism from the NÃ³grÃ¡d-GÃ¶mÃ¶r Volcanic Field, Carpathian-Pannonian region (northern Hungaryâ€“southern Slovakia). Tectonophysics, 2004, 393, 139-161.	2.2	39

#	Article	IF	Citations
73	Origin of the South Australian Heat Flow Anomaly. Journal of the Virtual Explorer, 0, 20, .	0.0	1
74	Ãgy figyeljÃ¼k hazÃ¡nk fÃ¶ldjÃ©nek minden rezdÃ¼lÃ©sÃ©t. A CsillagÃ¡szati Ã©s FÃ¶ldtudomÃ¡nyi KutatÃ³kÃ¶zpont GeodÃ©ziai Ã©s Geofizikai IntÃ©zet KÃ¶vesligethy RadÃ³ SzeizmolÃ³giai ObszervatÃ³rium fejlÅ‘dÃ©se Ã©s kÃ¼lde 2013-tÃ³l napjainkig. Magyar TudomÃ¡ny, 0, , .	0.0	1