Paivo Kinnunen

List of Publications by Year
in descending order

108 papers	4,151 citations	117571 34 h-index	128225 60 g-index
110 all docs	110 docs citations	110 times ranked	2599 citing authors

#	Article	IF	Citations
1	High strength fiber reinforced one-part alkali activated slag composites from industrial side streams. Construction and Building Materials, 2022, 319, 126124.	3.2	11
2	On the carbonation of brucite: Effects of Mg-acetate on the precipitation of hydrated magnesium carbonates in aqueous environment. Cement and Concrete Research, 2022, 153, 106696.	4.6	18
3	Development of Cold-Bonded Briquettes Using By-Product-Based Ettringite Binder from Ladle Slag. Journal of Sustainable Metallurgy, 2022, 8, 468-487.	1.1	6
4	Exploring Mechanisms of Hydration and Carbonation of MgO and Mg(OH)₂ in Reactive Magnesium Oxide-Based Cements. Journal of Physical Chemistry C, 2022, 126, 6196-6206.	1.5	18
5	129Xe NMR analysis reveals efficient gas transport between inborn micro-, meso- and macropores in geopolymers. Cement and Concrete Research, 2022, 155, 106779.	4.6	2
6	Incorporation of bioleached sulfidic mine tailings in one-part alkali-activated blast furnace slag mortar. Construction and Building Materials, 2022, 333, 127195.	3.2	9
7	Investigation of different paper mill ashes as potential supplementary cementitious materials. Journal of Cleaner Production, 2022, 363, 132583.	4.6	2
8	On the hydration of synthetic aluminosilicate glass as a sole cement precursor. Cement and Concrete Research, 2022, 159, 106859.	4.6	12
9	Thermal behaviour of ladle slag mortars containing ferrochrome slag aggregates. Advances in Cement Research, 2021, 33, 168-182.	0.7	10
10	On the retardation mechanisms of citric acid in ettringite-based binders. Cement and Concrete Research, 2021, 140, 106315.	4.6	24
11	Opportunities to improve sustainability of alkali-activated materials: A review of side-stream based activators. Journal of Cleaner Production, 2021, 286, 125558.	4.6	67
12	Recycling glass wool as a fluxing agent in the production of clay- and waste-based ceramics. Journal of Cleaner Production, 2021, 289, 125673.	4.6	21
13	Curing process and pore structure of metakaolin-based geopolymers: Liquid-state 1H NMR investigation. Cement and Concrete Research, 2021, 143, 106394.	4.6	31
14	Phase evolution and mechanical performance of an ettringite-based binder during hydrothermal aging. Cement and Concrete Research, 2021, 143, 106403.	4.6	16
15	Role of surfactants on the synthesis of impure kaolin-based alkali-activated, low-temperature porous ceramics. Open Ceramics, 2021, 6, 100097.	1.0	9
16	Evidence of formation of an amorphous magnesium silicate (AMS) phase during alkali activation of (Na-Mg) aluminosilicate glasses. Cement and Concrete Research, 2021, 145, 106464.	4.6	15
17	Alkali-Activation of Synthetic Aluminosilicate Glass With Basaltic Composition. Frontiers in Chemistry, 2021, 9, 715052.	1.8	3
18	High strength one-part alkali-activated slag blends designed by particle packing optimization. Construction and Building Materials, 2021, 299, 124004.	3.2	37

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19	Nanostructured and Advanced Designs from Biomass and Mineral Residues: Multifunctional Biopolymer Hydrogels and Hybrid Films Reinforced with Exfoliated Mica Nanosheets. ACS Applied Materials & Interfaces, 2021, 13, 57841-57850.	4.0	4
20	Potential of Mechanochemically Activated Sulfidic Mining Waste Rock for Alkali Activation. Journal of Sustainable Metallurgy, 2021, 7, 1575-1588.	1.1	7
21	Microstructural Analysis and Strength Development of One-Part Alkali-Activated Slag/Ceramic Binders Under Different Curing Regimes. Waste and Biomass Valorization, 2020, 11, 3081-3096.	1.8	39
22	Effects of Activator Properties and Curing Conditions on Alkali-Activation of Low-Alumina Mine Tailings. Waste and Biomass Valorization, 2020, 11, 5027-5039.	1.8	29
23	Fiber reinforced alkali-activated stone wool composites fabricated by hot-pressing technique. Materials and Design, 2020, 186, 108315.	3.3	20
24	Towards sustainable bricks made with fiber-reinforced alkali-activated desulfurization slag mortars incorporating carbonated basic oxygen furnace aggregates. Construction and Building Materials, 2020, 232, 117258.	3.2	24
25	Influence of sodium silicate powder silica modulus for mechanical and chemical properties of dry-mix alkali-activated slag mortar. Construction and Building Materials, 2020, 233, 117354.	3.2	73
26	Radiological and leaching assessment of an ettringite-based mortar from ladle slag and phosphogypsum. Cement and Concrete Research, 2020, 128, 105954.	4.6	24
27	Nanostructural evolution of alkali-activated mineral wools. Cement and Concrete Composites, 2020, 106, 103472.	4.6	30
28	Thermal stability of one-part metakaolin geopolymer composites containing high volume of spodumene tailings and glass wool. Cement and Concrete Composites, 2020, 114, 103792.	4.6	59
29	Upcycling of mechanically treated silicate mine tailings as alkali activated binders. Minerals Engineering, 2020, 158, 106587.	1.8	42
30	Alternative alkali-activator from steel-making waste for one-part alkali-activated slag. Journal of Cleaner Production, 2020, 274, 123020.	4.6	65
31	Low-velocity impact of hot-pressed PVA fiber-reinforced alkali-activated stone wool composites. Cement and Concrete Composites, 2020, 114, 103805.	4.6	12
32	Field Strength of Network-Modifying Cation Dictates the Structure of (Na-Mg) Aluminosilicate Glasses. Frontiers in Materials, 2020, 7, .	1.2	24
33	Reuse of copper slag in high-strength building ceramics containing spodumene tailings as fluxing agent. Minerals Engineering, 2020, 155, 106448.	1.8	34
34	Surface Modification of Cured Inorganic Foams with Cationic Cellulose Nanocrystals and Their Use as Reactive Filter Media for Anionic Dye Removal. ACS Applied Materials & Interfaces, 2020, 12, 27745-27757.	4.0	30
35	Direct carbonation of peat-wood fly ash for carbon capture and utilization in construction application. Journal of CO2 Utilization, 2020, 40, 101203.	3.3	25
36	Peat-Wood Fly Ash as Cold-Region Supplementary Cementitious Material: Air Content and Freezeâ€“Thaw Resistance of Air-Entrained Mortars. Journal of Materials in Civil Engineering, 2020, 32, 04020119.	1.3	5

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37	Dual Measurement Mode Rotational Viscometer. , 2020, , .		2
38	Porous alkali-activated materials. , 2020, , 529-563.		5
39	Influence of cobinders on durability and mechanical properties of alkali-activated magnesium aluminosilicate binders from soapstone. , 2020, , 877-895.		4
40	Structural collapse in phlogopite mica-rich mine tailings induced by mechanochemical treatment and implications to alkali activation potential. Minerals Engineering, 2020, 151, 106331.	1.8	32
41	Utilisation of glass wool waste and mine tailings in high performance building ceramics. Journal of Building Engineering, 2020, 31, 101383.	1.6	26
42	Improvement of mechanical strength of alkali-activated materials using micro low-alumina mine tailings. Construction and Building Materials, 2020, 248, 118659.	3.2	26
43	Recycling mica and carbonate-rich mine tailings in alkali-activated composites: A synergy with metakaolin. Minerals Engineering, 2020, 157, 106535.	1.8	26
44	Sustainable batching water options for one-part alkali-activated slag mortar: Sea water and reverse osmosis reject water. PLoS ONE, 2020, 15, e0242462.	1.1	7
45	Towards designing reactive glasses for alkali activation: Understanding the origins of alkaline reactivity of Na-Mg aluminosilicate glasses. PLoS ONE, 2020, 15, e0244621.	1.1	6
46	Magnetic Particle Biosensors. , 2020, , 197-239.		0
47	Recycling lithium mine tailings in the production of low temperature (700â€"900â€Â°C) ceramics: Effect of ladle slag and sodium compounds on the processing and final properties. Construction and Building Materials, 2019, 221, 332-344.	3.2	32
48	The effect of peat and wood fly ash on the porosity of mortar. Construction and Building Materials, 2019, 223, 421-430.	3.2	16
49	Ettringite-based binder from ladle slag and gypsum â€" The effect of citric acid on fresh and hardened state properties. Cement and Concrete Research, 2019, 123, 105800.	4.6	38
50	Feasibility of incorporating phosphogypsum in ettringite-based binder from ladle slag. Journal of Cleaner Production, 2019, 237, 117793.	4.6	48
51	Alkali-activated soapstone waste - Mechanical properties, durability, and economic prospects. Sustainable Materials and Technologies, 2019, 22, e00118.	1.7	13
52	One-part geopolymers from mining residues â€" Effect of thermal treatment on three different tailings. Minerals Engineering, 2019, 144, 106026.	1.8	49
53	Durability of ettringite-based composite reinforced with polypropylene fibers under combined chemical and physical attack. Cement and Concrete Composites, 2019, 102, 157-168.	4.6	24
54	Suitability of commercial superplasticizers for one-part alkali-activated blast-furnace slag mortar. Journal of Sustainable Cement-Based Materials, 2019, 8, 244-257.	1.7	41

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55	Spodumene tailings for porcelain and structural materials: Effect of temperature (1050â€“1200â€¯Â°C) on the sintering and properties. Minerals Engineering, 2019, 141, 105843.	1.8	22
56	Efficient entrapment and separation of anionic pollutants from aqueous solutions by sequential combination of cellulose nanofibrils and halloysite nanotubes. Chemical Engineering Journal, 2019, 374, 1013-1024.	6.6	16
57	Production of Lightweight Alkali Activated Mortars Using Mineral Wools. Materials, 2019, 12, 1695.	1.3	26
58	Using Carbonated BOF Slag Aggregates in Alkali-Activated Concretes. Materials, 2019, 12, 1288.	1.3	30
59	Impacts of Casting Scales and Harsh Conditions on the Thermal, Acoustic, and Mechanical Properties of Indoor Acoustic Panels Made with Fiber-Reinforced Alkali-Activated Slag Foam Concretes. Materials, 2019, 12, 825.	1.3	19
60	Alkali activation of low-alumina mine tailings for more sustainable raw material supply. International Journal of Mining and Mineral Engineering, 2019, 10, 255.	0.1	1
61	Phase separation in alumina-rich glasses to increase glass reactivity for low-CO2 alkali-activated cements. Journal of Cleaner Production, 2019, 213, 126-133.	4.6	22
62	Multi-fiber reinforced ettringite-based composites from industrial side streams. Journal of Cleaner Production, 2019, 211, 1065-1077.	4.6	22
63	Byproduct-based ettringite binder â€“ A synergy between ladle slag and gypsum. Construction and Building Materials, 2019, 197, 143-151.	3.2	51
64	Development of One-Part Alkali-Activated Ceramic/Slag Binders Containing Recycled Ceramic Aggregates. Journal of Materials in Civil Engineering, 2019, 31, .	1.3	36
65	Strain hardening polypropylene fiber reinforced composite from hydrated ladle slag and gypsum. Composites Part B: Engineering, 2019, 158, 328-338.	5.9	42
66	Alkali activation of low-alumina mine tailings for more sustainable raw material supply. International Journal of Mining and Mineral Engineering, 2019, 10, 255.	0.1	1
67	One-part geopolymer cement from slag and pretreated paper sludge. Journal of Cleaner Production, 2018, 185, 168-175.	4.6	126
68	Comparison of alkali and silica sources in one-part alkali-activated blast furnace slag mortar. Journal of Cleaner Production, 2018, 187, 171-179.	4.6	168
69	Cellulose-mineral interactions based on the DLVO theory and their correlation with flotability. Minerals Engineering, 2018, 122, 44-52.	1.8	26
70	Performance of Steel Fiber-Reinforced High-Performance One-Part Geopolymer Concrete. , 2018, , 533-539.		1
71	Fiber-reinforced one-part alkali-activated slag/ceramic binders. Ceramics International, 2018, 44, 8963-8976.	2.3	65
72	Pulverization of fibrous mineral wool waste. Journal of Material Cycles and Waste Management, 2018, 20, 1248-1256.	1.6	17

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73	High performance cementitious composite from alkali-activated ladle slag reinforced with polypropylene fibers. Cement and Concrete Composites, 2018, 90, 150-160.	4.6	70
74	Recycling mine tailings in chemically bonded ceramics â€“ A review. Journal of Cleaner Production, 2018, 174, 634-649.	4.6	136
75	One-part alkali-activated materials: A review. Cement and Concrete Research, 2018, 103, 21-34.	4.6	813
76	Ladle slag cement â€“ Characterization of hydration and conversion. Construction and Building Materials, 2018, 193, 128-134.	3.2	36
77	Drying shrinkage in alkali-activated binders â€“ A critical review. Construction and Building Materials, 2018, 190, 533-550.	3.2	261
78	Immobilization of sulfates and heavy metals in gold mine tailings by sodium silicate and hydrated lime. Journal of Environmental Chemical Engineering, 2018, 6, 6530-6536.	3.3	45
79	Milling of peat-wood fly ash: Effect on water demand of mortar and rheology of cement paste. Construction and Building Materials, 2018, 180, 143-153.	3.2	37
80	Mechanical and acoustic properties of fiber-reinforced alkali-activated slag foam concretes containing lightweight structural aggregates. Construction and Building Materials, 2018, 187, 371-381.	3.2	95
81	Valorization of Finnish mining tailings for use in the ceramics industry. Bulletin of the Geological Society of Finland, 2018, 90, 33-54.	0.2	18
82	Partial Replacement of Portland-Composite Cement by Fluidized Bed Combustion Fly Ash. Journal of Materials in Civil Engineering, 2017, 29, .	1.3	33
83	Thermally treated phlogopite as magnesium-rich precursor for alkali activation purpose. Minerals Engineering, 2017, 113, 47-54.	1.8	22
84	Rockwool waste in fly ash geopolymer composites. Journal of Material Cycles and Waste Management, 2017, 19, 1220-1227.	1.6	40
85	Alkali Activation of Ladle Slag from Steel-Making Process. Journal of Sustainable Metallurgy, 2017, 3, 300-310.	1.1	37
86	Properties and durability of alkali-activated ladle slag. Materials and Structures/Materiaux Et Constructions, 2017, 50, 1.	1.3	37
87	Utilization of Mineral Wools as Alkali-Activated Material Precursor. Materials, 2016, 9, 312.	1.3	48
88	Simultaneous magnetic actuation and observation with ferromagnetic sensors. Measurement Science and Technology, 2016, 27, 025301.	1.4	6
89	Self-hardening of fly ashes from a bubbling fluidized bed combustion of peat, forest industry residuals, and wastes. Fuel, 2016, 165, 440-446.	3.4	28
90	Observation of viscoelastic solutions with ferromagnetic stirrers. Sensors and Actuators A: Physical, 2015, 236, 309-314.	2.0	1

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91	Ultrafine Grinding of Limestone with Sodium Polyacrylates as Additives in Ordinary Portland Cement Mortar. Chemical Engineering and Technology, 2014, 37, 787-794.	0.9	6
92	Reactivity and self-hardening of fly ash from the fluidized bed combustion of wood and peat. Fuel, 2014, 135, 69-75.	3.4	48
93	Rapid bacterial growth and antimicrobial response using self-assembled magnetic bead sensors. Sensors and Actuators B: Chemical, 2014, 190, 265-269.	4.0	8
94	Note: A portable magnetic field for powering nanomotors, microswimmers, and sensors. Review of Scientific Instruments, 2013, 84, 086109.	0.6	4
95	Asynchronous Magnetic Bead Rotation Microviscometer for Rapid, Sensitive, and Label-Free Studies of Bacterial Growth and Drug Sensitivity. Analytical Chemistry, 2012, 84, 5250-5256.	3.2	50
96	Selfâ€Assembled Magnetic Bead Biosensor for Measuring Bacterial Growth and Antimicrobial Susceptibility Testing. Small, 2012, 8, 2477-2482.	5.2	55
97	Experimental System for One-Dimensional Rotational Brownian Motion. Journal of Physical Chemistry B, 2011, 115, 5212-5218.	1.2	19
98	Asynchronous magnetic bead rotation (AMBR) biosensor in microfluidic droplets for rapid bacterial growth and susceptibility measurements. Lab on A Chip, 2011, 11, 2604.	3.1	75
99	Monitoring the growth and drug susceptibility of individual bacteria using asynchronous magnetic bead rotation sensors. Biosensors and Bioelectronics, 2011, 26, 2751-2755.	5.3	55
100	Label-acquired magnetorotation for biosensing: An asynchronous rotation assay. Journal of Magnetism and Magnetic Materials, 2011, 323, 272-278.	1.0	18
101	Magnetically uniform and tunable Janus particles. Applied Physics Letters, 2011, 98, .	1.5	31
102	Magnetic confinement of Brownian rotation to a single axis and application to Janus and cluster microparticles. Applied Physics Letters, 2010, 97, 144103.	1.5	8
103	High frequency asynchronous magnetic bead rotation for improved biosensors. Applied Physics Letters, 2010, 97, 223701.	1.5	24
104	Pulsed-laser creation and characterization of giant plasma membrane vesicles from cells. Journal of Biological Physics, 2009, 35, 279-295.	0.7	17
105	Compact sensor for measuring nonlinear rotational dynamics of driven magnetic microspheres with biomedical applications. Journal of Magnetism and Magnetic Materials, 2009, 321, 1648-1652.	1.0	25
106	Single Cell Detection and Analysis with Asynchronous Rotation of Driven Magnetic Microspheres. Biophysical Journal, 2009, 96, 6a.	0.2	0
107	Prototype and Applications for Asynchronous Rotation of Magnetic Microspheres. Biophysical Journal, 2009, 96, 632a.	0.2	0
108	Asynchronous Rotation as a Rapid and Sensitive Technique for Quantifying Cell Growth Dynamics. Biophysical Journal, 2009, 96, 633a.	0.2	1