Yiannis Pontikes

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3453809/publications.pdf

Version: 2024-02-01

129 papers	6,205 citations	66343 42 h-index	74163 75 g-index
131 all docs	131 docs citations	131 times ranked	4478 citing authors

#	Article	IF	Citations
1	Towards zero-waste valorisation of rare-earth-containing industrial process residues: a critical review. Journal of Cleaner Production, 2015, 99, 17-38.	9.3	463
2	Leaching of rare earths from bauxite residue (red mud). Minerals Engineering, 2015, 76, 20-27.	4.3	368
3	Enhanced Landfill Mining in view of multiple resource recovery: a critical review. Journal of Cleaner Production, 2013, 55, 45-55.	9.3	282
4	Productive sugar isomerization with highly active Sn in dealuminated Î² zeolites. Green Chemistry, 2013, 15, 2777.	9.0	232
5	Recovery of Rare Earths and Other Valuable Metals From Bauxite Residue (Red Mud): A Review. Journal of Sustainable Metallurgy, 2016, 2, 365-386.	2.3	231
6	Characterization of landfilled materials: screening of the enhanced landfill mining potential. Journal of Cleaner Production, 2013, 55, 72-83.	9.3	209
7	Advances in alkali-activation of clay minerals. Cement and Concrete Research, 2020, 132, 106050.	11.0	201
8	Cooperative Catalysis for Multistep Biomass Conversion with Sn/Al Beta Zeolite. ACS Catalysis, 2015, 5, 928-940.	11.2	164
9	Effect of mechanical activation on the hydraulic properties of stainless steel slags. Cement and Concrete Research, 2012, 42, 778-788.	11.0	145
10	Selective recovery of rare earths from bauxite residue by combination of sulfation, roasting and leaching. Minerals Engineering, 2016, 92, 151-159.	4.3	140
11	Bauxite residue in cement and cementitious applications: Current status and a possible way forward. Resources, Conservation and Recycling, 2013, 73, 53-63.	10.8	136
12	Smelting of Bauxite Residue (Red Mud) in View of Iron and Selective Rare Earths Recovery. Journal of Sustainable Metallurgy, 2016, 2, 28-37.	2.3	126
13	Effect of accelerated carbonation on AOD stainless steel slag for its valorisation as a CO2-sequestering construction material. Chemical Engineering Journal, 2014, 246, 39-52.	12.7	121
14	Near-zero-waste processing of low-grade, complex primary ores and secondary raw materials in Europe: technology development trends. Resources, Conservation and Recycling, 2020, 160, 104919.	10.8	114
15	Post-synthesis SnÎ²: An exploration of synthesis parameters and catalysis. Journal of Catalysis, 2015, 330, 545-557.	6.2	89
16	Effect of firing temperature and atmosphere on ceramics made of NW Peloponnese clay sediments. Part I: Reaction paths, crystalline phases, microstructure and colour. Journal of the European Ceramic Society, 2010, 30, 1841-1851.	5.7	87
17	Valorisation of electric arc furnace steel slag as raw material for low energy belite cements. Journal of Hazardous Materials, 2011, 196, 287-294.	12.4	87
18	Slags with a high Al and Fe content as precursors for inorganic polymers. Applied Clay Science, 2013, 73, 93-102.	5.2	85

#	Article	IF	Citations
19	Effect of NaOH content on hydration, mineralogy, porosity and strength in alkali/sulfate-activated binders from ground granulated blast furnace slag and phosphogypsum. Cement and Concrete Research, 2020, 132, 106054.	11.0	83
20	Ladle metallurgy stainless steel slag as a raw material in Ordinary Portland Cement production: a possibility for industrial symbiosis. Journal of Cleaner Production, 2016, 112, 872-881.	9.3	81
21	Use of boron wastes in the production of heavy clay ceramics. Ceramics International, 2009, 35, 447-452.	4.8	76
22	Geopolymers, inorganic polymers, alkali-activated materials and hybrid binders from bauxite residue (red mud) â€“ Putting things in perspective. Journal of Cleaner Production, 2020, 258, 120610.	9.3	76
23	Thermal behaviour of clay mixtures with bauxite residue for the production of heavy-clay ceramics. Journal of the European Ceramic Society, 2007, 27, 1645-1649.	5.7	73
24	Influence of mechanical and chemical activation on the hydraulic properties of gamma dicalcium silicate. Cement and Concrete Research, 2014, 55, 59-68.	11.0	72
25	Cementitious binders from activated stainless steel refining slag and the effect of alkali solutions. Journal of Hazardous Materials, 2015, 286, 211-219.	12.4	71
26	Potassium-rich biomass ashes as activators in metakaolin-based inorganic polymers. Applied Clay Science, 2016, 119, 401-409.	5.2	69
27	Synthesis, characterization and properties of calcium ferroaluminate belite cements produced with electric arc furnace steel slag as raw material. Cement and Concrete Composites, 2013, 44, 1-8.	10.7	67
28	Recovery of Rare Earths and Major Metals from Bauxite Residue (Red Mud) by Alkali Roasting, Smelting, and Leaching. Journal of Sustainable Metallurgy, 2017, 3, 393-404.	2.3	65
29	Confinement Effects in Lewis Acid-Catalyzed Sugar Conversion: Steering Toward Functional Polyester Building Blocks. ACS Catalysis, 2015, 5, 5803-5811.	11.2	62
30	Effect of firing temperature and atmosphere on sintering of ceramics made from Bayer process bauxite residue. Ceramics International, 2009, 35, 401-407.	4.8	59
31	New perspectives and issues arising from the introduction of (NORM) residues in building materials: A critical assessment on the radiological behaviour. Construction and Building Materials, 2015, 82, 323-331.	7.2	56
32	Alkali-activated binders based on ground granulated blast furnace slag and phosphogypsum. Construction and Building Materials, 2019, 215, 371-380.	7.2	56
33	Use of modified bauxite residue-based porous inorganic polymer monoliths as adsorbents of methylene blue. Journal of Cleaner Production, 2019, 227, 877-889.	9.3	55
34	Sintered esseneiteâ€“wollastoniteâ€“plagioclase glassâ€“ceramics from vitrified waste. Journal of the European Ceramic Society, 2009, 29, 2921-2927.	5.7	52
35	A Proposal for a 100Â% Use of Bauxite Residue Towards Inorganic Polymer Mortar. Journal of Sustainable Metallurgy, 2016, 2, 394-404.	2.3	52
36	Byproduct-based ettringite binder â€“ A synergy between ladle slag and gypsum. Construction and Building Materials, 2019, 197, 143-151.	7.2	51

#	Article	IF	Citations
37	Thermal behaviour of clays for traditional ceramics with sodaâ€“limeâ€“silica waste glass admixture. Journal of the European Ceramic Society, 2007, 27, 1657-1663.	5.7	50
38	Effect of firing temperature and atmosphere on ceramics made of NW Peloponnese clay sediments: Part II. Chemistry of pyrometamorphic minerals and comparison with ancient ceramics. Journal of the European Ceramic Society, 2010, 30, 1853-1866.	5.7	48
39	Early Age Microstructural Transformations of an Inorganic Polymer Made of Fayalite Slag. Journal of the American Ceramic Society, 2015, 98, 2269-2277.	3.8	48
40	Feasibility of incorporating phosphogypsum in ettringite-based binder from ladle slag. Journal of Cleaner Production, 2019, 237, 117793.	9.3	48
41	Effect of High Cooling Rates on the Mineralogy and Hydraulic Properties of Stainless Steel Slags. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2013, 44, 1173-1184.	2.1	46
42	Effect of curing temperatures on the alkali activation of crystalline continuous casting stainless steel slag. Construction and Building Materials, 2014, 71, 308-316.	7.2	45
43	The Rare Earth Elements Potential of Greek Bauxite Active Mines in the Light of a Sustainable REE Demand. Journal of Sustainable Metallurgy, 2019, 5, 20-47.	2.3	44
44	Inorganic polymers made of fayalite slag: On the microstructure and behavior of Fe. Journal of the American Ceramic Society, 2018, 101, 2245-2257.	3.8	43
45	Nano-mineralogy and -geochemistry of high-grade diasporic karst-type bauxite from Parnassos-Ghiona mines, Greece. Ore Geology Reviews, 2017, 84, 228-244.	2.7	42
46	Molecular structure of CaOâ€“FeO_xâ€“SiO₂ glassy slags and resultant inorganic polymer binders. Journal of the American Ceramic Society, 2018, 101, 5846-5857.	3.8	40
47	Mix-design Parameters and Real-life Considerations in the Pursuit of Lower Environmental Impact Inorganic Polymers. Waste and Biomass Valorization, 2018, 9, 879-889.	3.4	39
48	The impact of slag fineness on the reactivity of blended cements with high-volume non-ferrous metallurgy slag. Construction and Building Materials, 2020, 257, 119400.	7.2	39
49	Boosting the use of bauxite residue (red mud) in cement - Production of an Fe-rich calciumsulfoaluminate-ferrite clinker and characterisation of the hydration. Cement and Concrete Research, 2021, 145, 106463.	11.0	39
50	Inorganic Polymers from a Plasma Convertor Slag: Effect of Activating Solution on Microstructure and Properties. Journal of Sustainable Metallurgy, 2015, 1, 240-251.	2.3	38
51	Upcycling of non-ferrous metallurgy slags: Identifying the most reactive slag for inorganic polymer construction materials. Resources, Conservation and Recycling, 2020, 154, 104627.	10.8	38
52	Inorganic Polymer Cement from Fe-Silicate Glasses: Varying the Activating Solution to Glass Ratio. Waste and Biomass Valorization, 2014, 5, 411-428.	3.4	37
53	The influence of curing conditions on the mechanical properties and leaching of inorganic polymers made of fayalitic slag. Frontiers of Chemical Science and Engineering, 2017, 11, 317-327.	4.4	37
54	The fate of iron during the alkaliâ€activation of synthetic (CaOâ€)FeO_xâ€SiO₂ slags: An Fe Kâ€edge XANES study. Journal of the American Ceramic Society, 2018, 101, 2107-2118.	3.8	36

#	Article	IF	Citations
55	Metakaolinite Phosphate Cementitious Matrix: Inorganic Polymer Obtained by Acidic Activation. Materials, 2019, 12, 442.	2.9	36
56	Identifying hotspots of environmental impact in the development of novel inorganic polymer paving blocks from bauxite residue. Resources, Conservation and Recycling, 2018, 138, 87-98.	10.8	34
57	Progress and Prospects in the Field of Biomass and Waste to Energy and Added-Value Materials. Waste and Biomass Valorization, 2017, 8, 1875-1884.	3.4	32
58	Inorganic Polymers From CaO-FeOx-SiO2 Slag: The Start of Oxidation of Fe and the Formation of a Mixed Valence Binder. Frontiers in Materials, 2019, 6, .	2.4	32
59	Valorisation of different types of boron-containing wastes for the production of lightweight aggregates. Journal of Hazardous Materials, 2011, 185, 1381-1389.	12.4	29
60	Integrated Mineral Carbonation Reactor Technology for Sustainable Carbon Dioxide Sequestration: â€˜CO2 Energy Reactorâ€™. Energy Procedia, 2013, 37, 5884-5891.	1.8	26
61	Incorporating Cs and Sr into blast furnace slag inorganic polymers and their effect on matrix properties. Journal of Nuclear Materials, 2018, 503, 1-12.	2.7	26
62	Porous, Sintered Glassâ€€eramics from Inorganic Polymers Based on Fayalite Slag. Journal of the American Ceramic Society, 2016, 99, 1985-1991.	3.8	25
63	Mud2Metal: Lessons Learned on the Path for Complete Utilization of Bauxite Residue Through Industrial Symbiosis. Journal of Sustainable Metallurgy, 2017, 3, 551-560.	2.3	24
64	Transforming Enhanced Landfill Mining Derived Gasification/Vitrification Glass into Low-Carbon Inorganic Polymer Binders and Building Products. Journal of Sustainable Metallurgy, 2017, 3, 405-415.	2.3	24
65	Radiological and leaching assessment of an ettringite-based mortar from ladle slag and phosphogypsum. Cement and Concrete Research, 2020, 128, 105954.	11.0	24
66	Unraveling the nano-structure of a glassy CaO-FeO-SiO2 slag by molecular dynamics simulations. Journal of Non-Crystalline Solids, 2020, 528, 119771.	3.1	23
67	Classical and alternative fuel mix optimization in cement production using mathematical programming. Fuel, 2011, 90, 1277-1284.	6.4	22
68	Magnetic Glass Ceramics by Sintering of Borosilicate Glass and Inorganic Waste. Materials, 2014, 7, 5565-5580.	2.9	22
69	Radon immobilization potential of alkali-activated materials containing ground granulated blast furnace slag and phosphogypsum. Construction and Building Materials, 2018, 184, 68-75.	7.2	22
70	Impact of the solidification path of FeO_xâ€“SiO₂ slags on the resultant inorganic polymers. Journal of the American Ceramic Society, 2020, 103, 2173-2184.	3.8	21
71	Influence of CaO/FeO ratio on the formation mechanism and properties of alkali-activated Fe-rich slags. Cement and Concrete Research, 2021, 146, 106466.	11.0	20
72	The influence of air and temperature on the reaction mechanism and molecular structure of Fe-silicate inorganic polymers. Journal of Non-Crystalline Solids, 2019, 526, 119675.	3.1	19

#	Article	IF	Citations
73	Modifications of basic-oxygen-furnace slag microstructure and their effect on the rheology and the strength of alkali-activated binders. Cement and Concrete Composites, 2019, 97, 143-153.	10.7	19
74	Reaction kinetics and structural analysis of alkali activated Feâ€“Siâ€“Ca rich materials. Journal of Cleaner Production, 2020, 246, 119065.	9.3	19
75	Comparative Analysis of Processes for Recovery of Rare Earths from Bauxite Residue. Jom, 2016, 68, 2958-2962.	1.9	18
76	Radiological and non-radiological leaching assessment of alkali-activated materials containing ground granulated blast furnace slag and phosphogypsum. Science of the Total Environment, 2019, 660, 1098-1107.	8.0	18
77	Shrinkage and Mitigation Strategies to Improve the Dimensional Stability of CaO-FeOx-Al2O3-SiO2 Inorganic Polymers. Materials, 2019, 12, 3679.	2.9	18
78	Alkali Activation of AOD Stainless Steel Slag Under Steam Curing Conditions. Journal of the American Ceramic Society, 2015, 98, 3062-3074.	3.8	17
79	The influence of porosity on radon emanation in alkali-activated mortars containing high volume bauxite residue. Construction and Building Materials, 2020, 230, 116982.	7.2	17
80	Evolution of microstructure, mineralogy and properties during firing of clay-based ceramics with borates. Ceramics International, 2010, 36, 567-575.	4.8	16
81	Stabilisation and Microstructural Modification of Stainless Steel Converter Slag by Addition of an Alumina Rich By-Product. Waste and Biomass Valorization, 2014, 5, 343-353.	3.4	16
82	The role of nano-perovskite in the negligible thorium release in seawater from Greek bauxite residue (red mud). Scientific Reports, 2016, 6, 21737.	3.3	16
83	Silicaâ€“Carbon Nanocomposite Acid Catalyst with Large Mesopore Interconnectivity by Vapor-Phase Assisted Hydrothermal Treatment. ACS Sustainable Chemistry and Engineering, 2018, 6, 7859-7870.	6.7	15
84	In-situ measurements of high-temperature dielectric properties of municipal solid waste incinerator bottom ash. Ceramics International, 2019, 45, 18751-18759.	4.8	15
85	A new approach for the vitrification of municipal solid waste incinerator bottom ash by microwave irradiation. Journal of Cleaner Production, 2021, 284, 124787.	9.3	15
86	On a new hydraulic binder from stainless steel converter slag. Advances in Cement Research, 2013, 25, 21-31.	1.6	14
87	Hydraulic Behavior of Mechanically and Chemically Activated Synthetic Merwinite. Journal of the American Ceramic Society, 2014, 97, 3973-3981.	3.8	13
88	Understanding the leaching behavior of inorganic polymers made of iron rich slags. Journal of Cleaner Production, 2019, 238, 117736.	9.3	13
89	Valorising Slags from Non-ferrous Metallurgy into Hybrid Cementitious Binders: Mix Design and Performance. Waste and Biomass Valorization, 2021, 12, 4679-4694.	3.4	13
90	Evaluating the material resource efficiency of secondary aluminium production: A Monte Carlo-based decision-support tool. Journal of Cleaner Production, 2019, 215, 488-496.	9.3	12

#	Article	IF	Citations
91	Porous glass-ceramics made from microwave vitrified municipal solid waste incinerator bottom ash. Construction and Building Materials, 2021, 270, 121452.	7.2	12
92	Recycling and valorization of glass fibre thermoset composite waste by cold incorporation into a sustainable inorganic polymer matrix. Composites Part B: Engineering, 2021, 223, 109120.	12.0	12
93	Transformation of stainless steel slag toward a reactive cementitious binder. Journal of the American Ceramic Society, 2018, 101, 1727-1736.	3.8	12
94	Correlating the amorphous phase structure of vitrified bauxite residue (red mud) to the initial reactivity in binder systems. Cement and Concrete Composites, 2022, 127, 104410.	10.7	12
95	The effect of gamma radiation on the mechanical and microstructural properties of Fe-rich inorganic polymers. Journal of Nuclear Materials, 2019, 521, 126-136.	2.7	11
96	Iron-rich slag addition in ternary binders of Portland cement, aluminate cement and calcium sulfate. Cement and Concrete Research, 2022, 153, 106689.	11.0	10
97	Characterization of bauxite residue (red mud) for 235 U, 238 U, 232 Th and 40 K using neutron activation analysis and the radiation dose levels as modeled by MCNP. Journal of Environmental Radioactivity, 2017, 173, 97-101.	1.7	9
98	Rheology of an alkali-activated Fe-rich slag suspension: Identifying the impact of the activator chemistry and slag particle interactions. Journal of Non-Crystalline Solids, 2021, 561, 120747.	3.1	9
99	Investigating the binding potential of continuous casting stainless steel slag by alkali activation. Advances in Cement Research, 2014, 26, 256-270.	1.6	8
100	Kinetics of pore formation and resulting properties of lightweight inorganic polymers. Journal of the American Ceramic Society, 2019, 102, 3940-3950.	3.8	8
101	Hydrogen reduction of bauxite residue and selective metal recovery. Materials Today: Proceedings, 2022, 57, 705-710.	1.8	8
102	High-Temperature Behavior of CaO-FeOx-Al2O3-SiO2-Rich Alkali Activated Materials. Applied Sciences (Switzerland), 2022, 12, 2572.	2.5	8
103	High performance mortars from vitrified bauxite residue; the quest for the optimal chemistry and processing conditions. Cement and Concrete Research, 2022, 155, 106739.	11.0	8
104	Revisiting the iron-rich â€œordinary Portland cementâ€•towards valorisation of wastes: study of Fe-to-Al ratio on the clinker production and the hydration reaction. Materials and Structures/Materiaux Et Constructions, 2021, 54, 1.	3.1	7
105	Properties of calcium aluminate blended cement incorporating iron-rich slag: Evolution over a curing period of 1 year. Construction and Building Materials, 2021, 282, 122569.	7.2	7
106	Cementitious Binders IncorporatingÂResidues. , 2014, , 219-229.		6
107	Scalable Synthesis of Acidic Mesostructured Silicaâ€“Carbon Nanocomposite Catalysts by Rotary Evaporation. ChemCatChem, 2017, 9, 65-69.	3.7	6
108	The effect of high dose rate gamma irradiation on the curing of CaO-FexOy-SiO2 slag based inorganic polymers: Mechanical and microstructural analysis. Journal of Nuclear Materials, 2020, 539, 152237.	2.7	6

#	Article	IF	Citations
109	New Insights into the Mineralogy and Geochemistry of Sb Ores from Greece. Minerals (Basel,) Tj ETQq1 1 0.784314 rgBT /Overlock 10	2.6	6
110	Micromechanical and microstructural analysis of Fe-rich plasma slag-based inorganic polymers. Cement and Concrete Composites, 2021, 118, 103968.	10.7	6
111	Slag Valorisation as a Contribution to Zero-Waste Metallurgy. Journal of Sustainable Metallurgy, 2016, 2, 1-2.	2.3	5
112	Experimental and Mathematical Simulation Study on the Granulation of a Modified Basic Oxygen Furnace Steel Slag. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2019, 50, 1260-1268.	2.1	4
113	Shielding effectiveness of construction materials. International Journal of Applied Electromagnetics and Mechanics, 2016, 52, 137-144.	0.6	4
114	Preface to the 5th International Slag Valorisation Symposium: From Fundamentals to Applications. Journal of Sustainable Metallurgy, 2018, 4, 1-2.	2.3	3
115	Recovery of Rare Earths from Bauxite Residue (Red Mud). World Scientific Series in Current Energy Issues, 2019, , 343-356.	0.1	3
116	An integrated process for iron recovery and binder production from bauxite residue (red mud). Materials Letters, 2020, 264, 127273.	2.6	3
117	VALORISATION OF STAINLESS STEEL SLAGS AS A HYDRAULIC BINDER. Acta Metallurgica Slovaca, 2013, 19, 176-183.	0.7	3
118	INCREASING THE DIMENSIONAL STABILITY OF CAO-FEOX-AL2O3-SIO2 ALKALI-ACTIVATED MATERIALS: ON THE SWELLING POTENTIAL OF CALCIUM OXIDE-RICH ADMIXTURES. Detritus, 2019, Volume 08 - December 2019, 1.	0.9	3
119	H2-Based Processes for Fe and Al Recovery from Bauxite Residue (Red Mud): Comparing the Options. Materials Proceedings, 2021, 5, .	0.2	3
120	Forming zeolites and calcium silicate hydrates in Fe-rich, slag-based, porous inorganic polymers. Cement and Concrete Research, 2022, 153, 106655.	11.0	3
121	Alteration in molecular structure of alkali activated slag with various water to binder ratios under accelerated carbonation. Scientific Reports, 2022, 12, 5524.	3.3	3
122	Bauxite Residue Valorization and Best Practices: Preface for the Thematic Section and Some of the Work to Follow. Journal of Sustainable Metallurgy, 2016, 2, 313-315.	2.3	2
123	Synthesis of Inorganic Polymers Using a CaO-Al₂O₃-FeO-SiO₂ Slag. Advances in Science and Technology, 2014, 92, 32-37.	0.2	1
124	Scalable Synthesis of Acidic Mesostructured Silica-Carbon Nanocomposite Catalysts by Rotary Evaporation. ChemCatChem, 2017, 9, 3-3.	3.7	1
125	The Use of Alkali Activated Materials in Nuclear Industry. , 2020, , 537-556.		1
126	Performance of Fe-Rich Alkali-Activated Materials in Na2SO4 Solution: Role of MgO/(MgO + CaO) in the Slag. , 2022, 5, .		0

#	Article	IF	Citations
127	Towards Sustainable Inorganic Polymers: Production and Use of Alternative Activator. , 2022, 5, .		0
128	The Development and Assessment of Alkali Activated Paving Blocks. , 0, , .		0
129	Formation of ceramics from K-activated FeOx-(Al2O3)-SiO2 inorganic polymers: effect of Al/K and Si/K molar ratio. Journal of the European Ceramic Society, 2022, , .	5.7	0