Richard Pokorny

List of Publications by Year
in descending order

49 papers	954 citations	516710 16 h-index	501196 28 g-index
49 all docs	49 docs citations	49 times ranked	403 citing authors

#	Article	IF	Citations
1	Effect of Al and Fe sources on conversion of high-level nuclear waste feed to glass. Journal of Nuclear Materials, 2022, 559, 153423.	2.7	4
2	Conversion kinetics during melting of simulated nuclear waste glass feeds measured by dissolution of silica. Journal of Non-Crystalline Solids, 2022, 579, 121363.	3.1	8
3	In-situ X-ray and visual observation of foam morphology and behavior at the batch-melt interface during melting of simulated waste glass. Ceramics International, 2022, 48, 7975-7985.	4.8	6
4	Elemental mapping and iron oxidation state measurement of synthetic low-activity waste feeds. Journal of Non-Crystalline Solids, 2022, 591, 121725.	3.1	0
5	Conversion kinetics of container glass batch melting. Journal of the American Ceramic Society, 2021, 104, 34-44.	3.8	13
6	Heat transfer from glass melt to cold cap: Computational fluid dynamics study of cavities beneath cold cap. International Journal of Applied Glass Science, 2021, 12, 233-244.	2.0	15
7	Effect of water vapor and thermal history on nuclear waste feed conversion to glass. International Journal of Applied Glass Science, 2021, 12, 145-157.	2.0	5
8	Model for batch-to-glass conversion: coupling the heat transfer with conversion kinetics. Journal of Asian Ceramic Societies, 2021, 9, 652-664.	2.3	10
9	Melting rate correlation with batch properties and melter operating conditions during conversion of nuclear waste melter feeds to glasses. International Journal of Applied Glass Science, 2021, 12, 398-414.	2.0	10
10	Through a glass darkly: In-situ x-ray computed tomography imaging of feed melting in continuously fed laboratory-scale glass melter. Ceramics International, 2021, 47, 15807-15818.	4.8	11
11	Viscosity of glassâ€forming melt at the bottom of highâ€level waste melterâ€feed cold caps: Effects of temperature and incorporation of solid components. Journal of the American Ceramic Society, 2020, 103, 1615-1630.	3.8	12
12	Modeling batch melting: Roles of heat transfer and reaction kinetics. Journal of the American Ceramic Society, 2020, 103, 701-718.	3.8	13
13	Simplified melting rate correlation for radioactive waste vitrification in electric furnaces. Journal of the American Ceramic Society, 2020, 103, 5573-5578.	3.8	11
14	Effect of cold cap coverage and emissivity on the plenum temperature in a pilotâ€scale waste vitrification melter. International Journal of Applied Glass Science, 2020, 11, 357-368.	2.0	12
15	Feed-to-glass conversion during low activity waste vitrification. Ceramics International, 2020, 46, 9826-9833.	4.8	8
16	In situ characterization of foam morphology during melting of simulated waste glass using x-ray computed tomography. Ceramics International, 2020, 46, 17176-17185.	4.8	15
17	Heat transfer from glass melt to cold cap: Melting rate correlation equation. International Journal of Applied Glass Science, 2019, 10, 143-150.	2.0	15
18	Challenges with vitrification of Hanford High-Level Waste (HLW) to borosilicate glass â€“ An overview. Journal of Non-Crystalline Solids: X, 2019, 4, 100033.	1.2	65

#	ARTICLE	IF	CITATIONS
19	Effect of sucrose on foaming and melting behavior of a lowâ€activity waste melter feed. Journal of the American Ceramic Society, 2019, 102, 7594-7605.	3.8	10
20	Heat transfer from glass melt to cold cap: Gas evolution and foaming. Journal of the American Ceramic Society, 2019, 102, 5853-5865.	3.8	15
21	Heat transfer from glass melt to cold cap: Effect of heating rate. International Journal of Applied Glass Science, 2019, 10, 401-413.	2.0	15
22	Glass production rate in electric furnaces for radioactive waste vitrification. Journal of the American Ceramic Society, 2019, 102, 5828-5842.	3.8	18
23	Cold-cap formation from a slurry feed during nuclear waste vitrification. Ceramics International, 2019, 45, 6405-6412.	4.8	16
24	Foaming during nuclear waste melter feeds conversion to glass: Application of evolved gas analysis. International Journal of Applied Glass Science, 2018, 9, 487-498.	2.0	28
25	Rheology of simulated radioactive waste slurry and cold cap during vitrification. Journal of the American Ceramic Society, 2018, 101, 5020-5029.	3.8	13
26	Development of a Validation Approach for an Integrated Waste Glass Melter Model. Nuclear Technology, 2018, 203, 244-260.	1.2	14
27	Effect of melter feed foaming on heat flux to the cold cap. Journal of Nuclear Materials, 2017, 496, 54-65.	2.7	24
28	Effects of alumina sources (gibbsite, boehmite, and corundum) on melting behavior of high-level radioactive waste melter feed. MRS Advances, 2017, 2, 603-608.	0.9	7
29	Balance of oxygen throughout the conversion of a high-level waste melter feed to glass. Ceramics International, 2017, 43, 13113-13118.	4.8	13
30	Xâ€ray tomography of feedâ€toâ€glass transition of simulated borosilicate waste glasses. Journal of the American Ceramic Society, 2017, 100, 3883-3894.	3.8	18
31	Determination of heat conductivity of waste glass feed and its applicability for modeling the batchâ€toâ€glass conversion. Journal of the American Ceramic Society, 2017, 100, 5096-5106.	3.8	11
32	Effects of heating rate, quartz particle size, viscosity, and form of glass additives on highâ€level waste melter feed volume expansion. Journal of the American Ceramic Society, 2017, 100, 583-591.	3.8	33
33	Process Model for Styrene and <i>n</i>-Butyl Acrylate Emulsion Copolymerization in Smart-Scale Tubular Reactor. Industrial & Engineering Chemistry Research, 2016, 55, 472-484.	3.7	15
34	Oneâ€Dimensional Cold Cap Model for Melters with Bubblers. Journal of the American Ceramic Society, 2015, 98, 3112-3118.	3.8	41
35	Free and constrained amorphous phases in polyethylene: Interpretation of 1H NMR and SAXS data over a broad range of crystallinity. Polymer, 2015, 58, 189-198.	3.8	24
36	Temperature Distribution within a Cold Cap during Nuclear Waste Vitrification. Environmental Science & Technology, 2015, 49, 8856-8863.	10.0	45

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37	Determination of Heat Conductivity and Thermal Diffusivity of Waste Glass Melter Feed: Extension to High Temperatures. Journal of the American Ceramic Society, 2014, 97, 1952-1958.	3.8	15
38	Model for the conversion of nuclear waste melter feed to glass. Journal of Nuclear Materials, 2014, 445, 190-199.	2.7	40
39	Multiphase approach to coupled conductionâ€“radiation heat transfer in reconstructed polymeric foams. International Journal of Thermal Sciences, 2014, 83, 68-79.	4.9	30
40	Kinetic model for quartz and spinel dissolution during melting of high-level-waste glass batch. Journal of Nuclear Materials, 2013, 443, 230-235.	2.7	26
41	Cold-cap reactions in vitrification of nuclear waste glass: Experiments and modeling. Thermochimica Acta, 2013, 559, 32-39.	2.7	36
42	Heat transfer in one-dimensional micro- and nano-cellular foams. Chemical Engineering Science, 2013, 97, 50-58.	3.8	66
43	Determination of Temperatureâ€Dependent Heat Conductivity and Thermal Diffusivity of Waste Glass Melter Feed. Journal of the American Ceramic Society, 2013, 96, 1891-1898.	3.8	16
44	Determining the Thermal Conductivity of a Melter Feed. Ceramic Transactions, 2013, , 91-101.	0.1	0
45	Melting of glass batch: Model for multiple overlapping gas-evolving reactions. Thermochimica Acta, 2012, 541, 8-14.	2.7	49
46	Nuclear waste vitrification efficiency: Cold cap reactions. Journal of Non-Crystalline Solids, 2012, 358, 3559-3562.	3.1	30
47	Mathematical modeling of cold cap. Journal of Nuclear Materials, 2012, 429, 245-256.	2.7	45
48	Diffusion Transport in Reconstructed Semiâ€Crystalline Structure of Polyolefins. Macromolecular Symposia, 2011, 302, 121-128.	0.7	3
49	Diffusion in semi-crystalline polymers. Computer Aided Chemical Engineering, 2009, 26, 961-966.	0.5	5