Chen Zhu

List of Publications by Year
in descending order

94 papers	4,630 citations	109321 35 h-index	106344 65 g-index
99 all docs	99 docs citations	99 times ranked	4640 citing authors

#	Article	IF	Citations
1	An improved model for the calculation of CO2 solubility in aqueous solutions containing Na+, K+, Ca2+, Mg2+, Clâˆ', and SO42âˆ'. Marine Chemistry, 2006, 98, 131-139.	2.3	480
2	Partitioning of F-Cl-OH between minerals and hydrothermal fluids. Geochimica Et Cosmochimica Acta, 1991, 55, 1837-1858.	3.9	285
3	F-Cl-OH partitioning between biotite and apatite. Geochimica Et Cosmochimica Acta, 1992, 56, 3435-3467.	3.9	228
4	Trace element cycling in a subterranean estuary: Part 1. Geochemistry of the permeable sediments. Geochimica Et Cosmochimica Acta, 2005, 69, 2095-2109.	3.9	206
5	CO2â€"brineâ€"caprock interaction: Reactivity experiments on Eau Claire shale and a review of relevant literature. International Journal of Greenhouse Gas Control, 2012, 7, 153-167.	4.6	181
6	In situ feldspar dissolution rates in an aquifer. Geochimica Et Cosmochimica Acta, 2005, 69, 1435-1453.	3.9	141
7	Antimony speciation and contamination of waters in the Xikuangshan antimony mining and smelting area, China. Environmental Geochemistry and Health, 2010, 32, 401-413.	3.4	127
8	On the potential of CO2â€"waterâ€"rock interactions for CO2 storage using a modified kinetic model. International Journal of Greenhouse Gas Control, 2011, 5, 1002-1015.	4.6	123
9	Accurate Thermodynamic Model for the Calculation of H2S Solubility in Pure Water and Brines. Energy & Fuels, 2007, 21, 2056-2065.	5.1	120
10	Iron oxide coatings on sand grains from the Atlantic coastal plain: High-resolution transmission electron microscopy characterization. Geology, 2001, 29, 843.	4.4	111
11	Alkali feldspar dissolution and secondary mineral precipitation in batch systems: 3. Saturation states of product minerals and reaction paths. Geochimica Et Cosmochimica Acta, 2009, 73, 3171-3200.	3.9	110
12	Naturally weathered feldspar surfaces in the Navajo Sandstone aquifer, Black Mesa, Arizona: Electron microscopic characterization. Geochimica Et Cosmochimica Acta, 2006, 70, 4600-4616.	3.9	109
13	SUPCRTBL: A revised and extended thermodynamic dataset and software package of SUPCRT92. Computers and Geosciences, 2016, 90, 97-111.	4.2	108
14	PVTx properties of the CO2â€"H2O and CO2â€"H2Oâ€"NaCl systems below 647ÂK: Assessment of experimental data and thermodynamic models. Chemical Geology, 2007, 238, 249-267.	3.3	104
15	Arsenic Ehâ€"pH diagrams at 25Â°C and 1Âbar. Environmental Earth Sciences, 2011, 62, 1673-1683.	2.7	100
16	Stable silicon isotopes of groundwater, feldspars, and clay coatings in the Navajo Sandstone aquifer, Black Mesa, Arizona, USA. Geochimica Et Cosmochimica Acta, 2009, 73, 2229-2241.	3.9	98
17	Coupled reactive flow and transport modeling of CO2 sequestration in the Mt. Simon sandstone formation, Midwest U.S.A.. International Journal of Greenhouse Gas Control, 2011, 5, 294-307.	4.6	98
18	Coupled alkali-feldspar dissolution and secondary mineral precipitation in batch systems: 1. New experiments at 200ÂÂ°C and 300Âbars. Chemical Geology, 2009, 258, 125-135.	3.3	96

#	Article	IF	Citations
19	Coupled alkali feldspar dissolution and secondary mineral precipitation in batch systems: 4. Numerical modeling of kinetic reaction paths. Geochimica Et Cosmochimica Acta, 2010, 74, 3963-3983.	3.9	80
20	Coprecipitation in the barite isostructural family: 1. binary mixing properties. Geochimica Et Cosmochimica Acta, 2004, 68, 3327-3337.	3.9	76
21	Estimate of recharge from radiocarbon dating of groundwater and numerical flow and transport modeling. Water Resources Research, 2000, 36, 2607-2620.	4.2	75
22	Sequestration of CO₂ in Mixtures of Bauxite Residue and Saline Wastewater. Energy & Fuels, 2008, 22, 343-353.	5.1	67
23	Water: Is There a Global Crisis?. Elements, 2011, 7, 157-162.	0.5	67
24	Bridging the gap between laboratory measurements and field estimations of silicate weathering using simple calculations. Environmental Geology, 2007, 53, 599-610.	1.2	60
25	Multi-component reactive transport modeling of natural attenuation of an acid groundwater plume at a uranium mill tailings site. Journal of Contaminant Hydrology, 2001, 52, 85-108.	3.3	59
26	Benchmark modeling of the Sleipner CO2 plume: Calibration to seismic data for the uppermost layer and model sensitivity analysis. International Journal of Greenhouse Gas Control, 2015, 43, 233-246.	4.6	55
27	Predicting Possible Effects of H₂S Impurity on CO₂ Transportation and Geological Storage. Environmental Science & Technology, 2013, 47, 55-62.	10.0	52
28	Coupled alkali feldspar dissolution and secondary mineral precipitation in batch systems â€“ 2: New experiments with supercritical CO2 and implications for carbon sequestration. Applied Geochemistry, 2013, 30, 75-90.	3.0	51
29	Lead coprecipitation with iron oxyhydroxide nano-particles. Geochimica Et Cosmochimica Acta, 2011, 75, 4547-4561.	3.9	50
30	Navajo Sandstoneâ€“brineâ€“CO2 interaction: implications for geological carbon sequestration. Environmental Earth Sciences, 2011, 62, 101-118.	2.7	48
31	Mineralogical compositions of aquifer matrix as necessary initial conditions in reactive contaminant transport models. Journal of Contaminant Hydrology, 2001, 51, 145-161.	3.3	44
32	Hydrogeochemical Processes and Controls on Water Quality and Water Management. Elements, 2011, 7, 169-174.	0.5	44
33	Estimation of surface precipitation constants for sorption of divalent metals onto hydrous ferric oxide and calcite. Chemical Geology, 2002, 188, 23-32.	3.3	43
34	Electron Microbeam Investigation of Uranium-Contaminated Soils from Oak Ridge, TN, USA. Environmental Science & Technology, 2006, 40, 2108-2113.	10.0	43
35	Responses of ground water in the Black Mesa basin, northeastern Arizona, to paleoclimatic changes during the late Pleistocene and Holocene. Geology, 1998, 26, 127.	4.4	37
36	Geochemical Modeling of Reaction Paths and Geochemical Reaction Networks. Reviews in Mineralogy and Geochemistry, 2009, 70, 533-569.	4.8	36

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37	Late Pleistocene and Holocene groundwater recharge from the chloride mass balance method and chlorine-36 data. Water Resources Research, 2003, 39, .	4.2	34
38	Resolving the gap between laboratory and field rates of feldspar weathering. Geochimica Et Cosmochimica Acta, 2014, 147, 90-106.	3.9	32
39	A case against Kd-based transport models: natural attenuation at a mill tailings site. Computers and Geosciences, 2003, 29, 351-359.	4.2	28
40	Equilibrium and kinetic Si isotope fractionation factors and their implications for Si isotope distributions in the Earthâ€™s surface environments. Acta Geochimica, 2016, 35, 15-24.	1.7	24
41	New Method and Detection of High Concentrations of Monomethylarsonous Acid Detected in Contaminated Groundwater. Environmental Science & Technology, 2010, 44, 5875-5880.	10.0	23
42	A library of BASIC scripts of reaction rates for geochemical modeling using phreeqc. Computers and Geosciences, 2019, 133, 104316.	4.2	23
43	A new approach for measuring dissolution rates of silicate minerals by using silicon isotopes. Geochimica Et Cosmochimica Acta, 2013, 104, 261-280.	3.9	22
44	Rate equations for sodium catalyzed amorphous silica dissolution. Geochimica Et Cosmochimica Acta, 2016, 195, 120-125.	3.9	22
45	Coupled alkali feldspar dissolution and secondary mineral precipitation in batch systems: 5. Results of K-feldspar hydrolysis experiments. Diqiu Huaxue, 2015, 34, 1-12.	0.5	21
46	Measuring silicate mineral dissolution rates using Si isotope doping. Chemical Geology, 2016, 445, 146-163.	3.3	21
47	On Radiocarbon Dating of Ground Water. Ground Water, 2000, 38, 802-804.	1.3	20
48	Reactions and reaction rates in the regional aquifer beneath the Pajarito Plateau, north-central New Mexico, USA. Environmental Geology, 2007, 52, 965-977.	1.2	20
49	A SAFT equation of state for the quaternary H2Sâ€“CO2â€“H2Oâ€“NaCl system. Geochimica Et Cosmochimica Acta, 2012, 91, 40-59.	3.9	20
50	Comparison of thermodynamic data files for PHREEQC. Earth-Science Reviews, 2022, 225, 103888.	9.1	19
51	Coprecipitation in the barite isostructural family: 2. Numerical simulations of reactions and mass transport. Geochimica Et Cosmochimica Acta, 2004, 68, 3339-3349.	3.9	18
52	Natural Attenuation Reactions at a Uranium Mill Tailings Site, Western U.S.A.. Ground Water, 2002, 40, 5-13.	1.3	16
53	A SAFT Equation of State for the H2S-CO2-H2O-NaCl System and Applications for CO2 - H2S Transportation and Geological Storage. Energy Procedia, 2013, 37, 3780-3791.	1.8	15
54	Impacts of Mineral Reaction Kinetics and Regional Groundwater Flow on Long-Term CO₂ Fate at Sleipner. Energy & Fuels, 2016, 30, 4159-4180.	5.1	15

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55	Review and outlook for agromineral research in agriculture and climate mitigation. Soil Research, 2018, 56, 113.	1.1	15
56	SupPhreeqc: A program for generating customized Phreeqc thermodynamic datasets from Supcrtbl and extending calculations to elevated pressures and temperatures. Computers and Geosciences, 2020, 143, 104560.	4.2	14
57	Preliminary modeling of the long-term fate of CO2 following injection into deep geological formations. Environmental Geosciences, 2006, 13, 1-15.	0.6	13
58	Modeling of Phase Equilibria in the H₂Sâˆ'H₂O System with the Statistical Associating Fluid Theory. Energy & Fuels, 2010, 24, 6208-6213.	5.1	13
59	The Coupling of Dissolution and Precipitation Reactions as the Main Contributor to the Apparent Field-Lab Rate Discrepancy. Procedia Earth and Planetary Science, 2013, 7, 948-952.	0.6	13
60	Effects of rate law formulation on predicting CO₂sequestration in sandstone formations. International Journal of Energy Research, 2015, 39, 1890-1908.	4.5	13
61	Decoupling feldspar dissolution and precipitation rates at near-equilibrium with Si isotope tracers: Implications for modeling silicate weathering. Geochimica Et Cosmochimica Acta, 2020, 271, 132-153.	3.9	13
62	A high-resolution TEM-AEM, pH titration, and modeling study of Zn2+ coprecipitation with ferrihydrite. Geochimica Et Cosmochimica Acta, 2005, 69, 1543-1553.	3.9	12
63	A Method for Estimating In Situ Reaction Rates from Push-Pull Experiments for Arbitrary Solute Background Concentrations. Environmental and Engineering Geoscience, 2007, 13, 345-354.	0.9	12
64	12. Geochemical Modeling of Reaction Paths and Geochemical Reaction Networks. , 2009, , 533-570.		12
65	Model Predictions via History Matching of CO2 Plume Migration at the Sleipner Project, Norwegian North Sea. Energy Procedia, 2014, 63, 3000-3011.	1.8	12
66	Noble gas signatures of high recharge pulses and migrating jet stream in the late Pleistocene over Black Mesa, Arizona, United States. Geology, 2010, 38, 83-86.	4.4	11
67	Review: The projected hydrologic cycle under the scenario of 936Âppm CO2 in 2100. Hydrogeology Journal, 2019, 27, 31-53.	2.1	11
68	Evaluating precipitation products for hydrologic modeling over a large river basin in the Midwestern USA. Hydrological Sciences Journal, 2020, 65, 1221-1238.	2.6	10
69	Numerical modeling of the development of a preferentially leached layer on feldspar surfaces. Environmental Geology, 2009, 57, 1639.	1.2	9
70	CO2 Storage in Deep Saline Aquifers. , 2015, , 299-332.		9
71	Kyanite far from equilibrium dissolution rate at 0â€"22ÂÂ°C and pH of 3.5â€"7.5. Acta Geochimica, 2019, 38, 472-480.	1.7	9
72	Testing hypotheses of albite dissolution mechanisms at near-equilibrium using Si isotope tracers. Geochimica Et Cosmochimica Acta, 2021, 303, 15-37.	3.9	9

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73	Investigation of mineral trapping processes based on coherent front propagation theory: A dawsonite-rich natural CO2 reservoir as an example. International Journal of Greenhouse Gas Control, 2021, 110, 103400.	4.6	8
74	Unidirectional kaolinite dissolution rates at near-equilibrium and near-neutral pH conditions. Applied Clay Science, 2019, 182, 105284.	5.2	7
75	Ba attachment and detachment fluxes to and from barite surfaces in 137Ba-enriched solutions with variable [Ba2+]/[SO42â^'] ratios near solubility equilibrium. Geochimica Et Cosmochimica Acta, 2022, 317, 180-200.	3.9	7
76	Effects of Hydrogeological Heterogeneity on CO2 Migration and Mineral Trapping: 3D Reactive Transport Modeling of Geological CO2 Storage in the Mt. Simon Sandstone, Indiana, USA. Energies, 2022, 15, 2171.	3.1	7
77	Inductive predictions of hydrologic events using a Long Short-Term Memory network and the Soil and Water Assessment Tool. Environmental Modelling and Software, 2022, 152, 105400.	4.5	7
78	Silicon Isotopes as a New Method of Measuring Silicate Mineral Reaction Rates at Ambient Temperature. Procedia Earth and Planetary Science, 2014, 10, 189-193.	0.6	6
79	CO2 Plume Migration and Fate at Sleipner, Norway: Calibration of Numerical Models, Uncertainty Analysis, and Reactive Transport Modelling of CO2 Trapping to 10,000 Years. Energy Procedia, 2017, 114, 2880-2895.	1.8	6
80	Drought in the Twenty-First Century in a Water-Rich Region: Modeling Study of the Wabash River Watershed, USA. Water (Switzerland), 2020, 12, 181.	2.7	6
81	Geochemical Mixing in Peatland Waters: The Role of Organic Acids. Wetlands, 2015, 35, 567-575.	1.5	5
82	A mineral-water-gas interaction model of pCO2 as a function of temperature in sedimentary basins. Chemical Geology, 2020, 558, 119868.	3.3	4
83	Effects of gas saturation and reservoir heterogeneity on thermochemical sulfate reduction reaction in a dolomite reservoir, Puguang gas field, China. Marine and Petroleum Geology, 2022, 135, 105402.	3.3	3
84	New pH sensor for hydrothermal fluids. Geology, 1993, 21, 983.	4.4	2
85	Modeling Surface Adsorption. , 2002, , 133-156.		2
86	A method for Si isotope tracer kinetics experiments: Using Q-ICP-MS to obtain 29Si/28Si ratios in aqueous solutions. Chemical Geology, 2020, 531, 119337.	3.3	2
87	Computer Programs for Geochemical Modeling. , 2002, , 74-91.		1
88	Coupled Reactive Transport Models. , 2002, , 199-229.		1
89	FutureWater Indiana: A science gateway for spatio-temporal modeling of water in Wabash basin with a focus on climate change. , 2020, , .		1
90	Model Concepts. , 2002, , 18-31.		0

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91	Inverse Mass Balance Modeling. , 2002, , 180-198.		0
92	Kinetics Modeling. , 2002, , 230-252.		0
93	Measuring reaction rates at equilibrium with the isotope doping method. E3S Web of Conferences, 2019, 98, 13003.	0.5	0
94	Geochemical Modeling in Environmental and Geological Studies. , 2012, , 209-218.		0