

Susan A Carroll

List of Publications by Year in descending order

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80
papers

3,958
citations

101543

36
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118850

62
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81
all docs

81
docs citations

81
times ranked

3455
citing authors

#	ARTICLE	IF	CITATIONS
1	A Review of Well Integrity Based on Field Experience at Carbon Utilization and Storage Sites. International Journal of Greenhouse Gas Control, 2022, 113, 103533.	4.6	12
2	A risk-based approach to evaluating the Area of Review and leakage risks at CO ₂ storage sites. International Journal of Greenhouse Gas Control, 2020, 93, 102884.	4.6	22
3	Impact of Chemical and Mechanical Processes on Leakage from Damaged Wells in CO ₂ Storage Sites. Environmental Science & Technology, 2020, 54, 1196-1203.	10.0	6
4	Real Time 3D Observations of Portland Cement Carbonation at CO ₂ Storage Conditions. Environmental Science & Technology, 2020, 54, 8323-8332.	10.0	21
5	Assessment of geophysical monitoring methods for detection of brine and CO ₂ leakage in drinking water aquifers. International Journal of Greenhouse Gas Control, 2019, 90, 102803.	4.6	26
6	Multiscale modeling of CO ₂ -induced carbonate dissolution: From core to meter scale. International Journal of Greenhouse Gas Control, 2019, 88, 272-289.	4.6	19
7	Downhole pressure and chemical monitoring for CO ₂ and brine leak detection in aquifers above a CO ₂ storage reservoir. International Journal of Greenhouse Gas Control, 2019, 91, 102812.	4.6	15
8	Validation of a reactive transport model for predicting changes in porosity and permeability in carbonate core samples. International Journal of Greenhouse Gas Control, 2019, 90, 102797.	4.6	2
9	Calibration of NMR porosity to estimate permeability in carbonate reservoirs. International Journal of Greenhouse Gas Control, 2019, 87, 19-26.	4.6	13
10	Assessment of two-phase flow on the chemical alteration and sealing of leakage pathways in cemented wellbores. International Journal of Greenhouse Gas Control, 2018, 69, 72-80.	4.6	21
11	Effect of thermal stress on wellbore integrity during CO ₂ injection. International Journal of Greenhouse Gas Control, 2018, 77, 14-26.	4.6	38
12	Development and calibration of a reactive transport model for carbonate reservoir porosity and permeability changes based on CO ₂ core-flood experiments. International Journal of Greenhouse Gas Control, 2017, 57, 73-88.	4.6	35
13	Illite dissolution kinetics from 100 to 280 Å°C and pH 3 to 9. Geochimica Et Cosmochimica Acta, 2017, 209, 9-23.	3.9	22
14	Incorporating reaction-rate dependence in reaction-front models of wellbore-cement/carbonated-brine systems. International Journal of Greenhouse Gas Control, 2017, 59, 160-171.	4.6	30
15	Framing Monitoring Needs to Detect Leakage from Wells to the Overburden. Energy Procedia, 2017, 114, 3628-3635.	1.8	4
16	Assessment of Thermal Stress on Well Integrity as a Function of Size and Material Properties. Energy Procedia, 2017, 114, 5241-5248.	1.8	3
17	Managing Geologic CO ₂ Storage with Pre-injection Brine Production in Tandem Reservoirs. Energy Procedia, 2017, 114, 4757-4764.	1.8	9
18	Risk-based Monitoring Network Design for Geologic Carbon Storage Sites. Energy Procedia, 2017, 114, 4345-4356.	1.8	12

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19	Influence of Chemical, Mechanical, and Transport Processes on Wellbore Leakage from Geologic CO ₂ Storage Reservoirs. <i>Accounts of Chemical Research</i> , 2017, 50, 1829-1837.	15.6	39
20	Muscovite dissolution kinetics as a function of pH at elevated temperature. <i>Chemical Geology</i> , 2017, 466, 149-158.	3.3	27
21	Application of the Aquifer Impact Model to support decisions at a CO ₂ sequestration site. , 2017, 7, 1020-1034.		1
22	Managing geologic CO ₂ storage with pre-injection brine production: a strategy evaluated with a model of CO ₂ injection at SnÄhvit. <i>Energy and Environmental Science</i> , 2016, 9, 1504-1512.	30.8	50
23	Merits of pressure and geochemical data as indicators of CO ₂ /brine leakage into a heterogeneous, sedimentary aquifer. <i>International Journal of Greenhouse Gas Control</i> , 2016, 52, 237-249.	4.6	14
24	Applicability of aquifer impact models to support decisions at CO ₂ sequestration sites. <i>International Journal of Greenhouse Gas Control</i> , 2016, 52, 319-330.	4.6	33
25	Pre-injection brine production in CO ₂ storage reservoirs: An approach to augment the development, operation, and performance of CCS while generating water. <i>International Journal of Greenhouse Gas Control</i> , 2016, 54, 499-512.	4.6	35
26	Review: Role of chemistry, mechanics, and transport on well integrity in CO ₂ storage environments. <i>International Journal of Greenhouse Gas Control</i> , 2016, 49, 149-160.	4.6	141
27	Non-invasive measurement of proppant pack deformation. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2016, 87, 39-47.	5.8	2
28	Chlorite dissolution kinetics at pH 3â€“10 and temperature to 275 Â°C. <i>Chemical Geology</i> , 2016, 421, 55-64.	3.3	16
29	Fabrication and Transport of Double Emulsion Microcapsules for Applications in Unconventional Resources. , 2015, , .		2
30	Rates of mineral dissolution under CO ₂ storage conditions. <i>Chemical Geology</i> , 2015, 399, 134-144.	3.3	91
31	Key factors for determining groundwater impacts due to leakage from geologic carbon sequestration reservoirs. <i>International Journal of Greenhouse Gas Control</i> , 2014, 29, 153-168.	4.6	107
32	Reduced Order Models for Prediction of Groundwater Quality Impacts from CO ₂ and Brine Leakage. <i>Energy Procedia</i> , 2014, 63, 4875-4883.	1.8	8
33	The Role of Wellbore Remediation on the Evolution of Groundwater Quality from CO ₂ and Brine Leakage. <i>Energy Procedia</i> , 2014, 63, 4799-4806.	1.8	4
34	Experimental calibration of a numerical model describing the alteration of cement/caprock interfaces by carbonated brine. <i>International Journal of Greenhouse Gas Control</i> , 2014, 22, 176-188.	4.6	62
35	Determination of Diffusion Profiles in Altered Wellbore Cement Using X-ray Computed Tomography Methods. <i>Environmental Science & Technology</i> , 2014, 48, 7094-7100.	10.0	17
36	Mechanical and hydraulic coupling in cementâ€“caprock interfaces exposed to carbonated brine. <i>International Journal of Greenhouse Gas Control</i> , 2014, 25, 109-120.	4.6	59

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37	Experiments and modeling of variably permeable carbonate reservoir samples in contact with CO ₂ -acidified brines. Energy Procedia, 2014, 63, 3126-3137.	1.8	10
38	Quantification of Key Long-term Risks at CO ₂ Sequestration Sites: Latest Results from US DOE's National Risk Assessment Partnership (NRAP) Project. Energy Procedia, 2014, 63, 4816-4823.	1.8	29
39	Calibration of NMR well logs from carbonate reservoirs with laboratory NMR measurements and ¹³ C NMR. Energy Procedia, 2014, 63, 3089-3096.	1.8	3
40	Fracture-scale model of immiscible fluid flow. Physical Review E, 2013, 87, 013012.	2.1	9
41	Permeability of Wellbore-Cement Fractures Following Degradation by Carbonated Brine. Rock Mechanics and Rock Engineering, 2013, 46, 455-464.	5.4	73
42	CO ₂ -induced dissolution of low permeability carbonates. Part I: Characterization and experiments. Advances in Water Resources, 2013, 62, 370-387.	3.8	148
43	Kinetics of chlorite dissolution at elevated temperatures and CO ₂ conditions. Chemical Geology, 2013, 347, 1-8.	3.3	56
44	Value of information methodology for assessing the ability of electrical resistivity to detect CO ₂ /brine leakage into a shallow aquifer. International Journal of Greenhouse Gas Control, 2013, 18, 101-113.	4.6	24
45	Development of scaling parameters to describe CO ₂ -rock interactions within Weyburn-Midale carbonate flow units. International Journal of Greenhouse Gas Control, 2013, 16, S185-S193.	4.6	63
46	Chemical and Mechanical Properties of Wellbore Cement Altered by CO ₂ -Rich Brine Using a Multianalytical Approach. Environmental Science & Technology, 2013, 47, 1745-1752.	10.0	87
47	CO ₂ -induced dissolution of low permeability carbonates. Part II: Numerical modeling of experiments. Advances in Water Resources, 2013, 62, 388-408.	3.8	111
48	Evaporite Caprock Integrity: An Experimental Study of Reactive Mineralogy and Pore-Scale Heterogeneity during Brine-CO ₂ Exposure. Environmental Science & Technology, 2013, 47, 262-268.	10.0	91
49	Trace Metal Source Terms in Carbon Sequestration Environments. Environmental Science & Technology, 2013, 47, 322-329.	10.0	46
50	Reactivity of Mount Simon Sandstone and the Eau Claire Shale Under CO ₂ Storage Conditions. Environmental Science & Technology, 2013, 47, 252-261.	10.0	102
51	Direct electrolytic dissolution of silicate minerals for air CO ₂ mitigation and carbon-negative H ₂ production. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 10095-10100.	7.1	61
52	Probing the Surface Structure of Divalent Transition Metals Using Surface Specific Solid-State NMR Spectroscopy. Environmental Science & Technology, 2012, 46, 2806-2812.	10.0	10
53	The formation of metastable aluminosilicates in the Al-Si-H ₂ O system: Results from solution chemistry and solid-state NMR spectroscopy. Geochimica Et Cosmochimica Acta, 2011, 75, 6080-6093.	3.9	10
54	Experimental Study of Cement - Sandstone/Shale - Brine - CO ₂ Interactions. Geochemical Transactions, 2011, 12, 9.	0.7	65

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55	Wellbore integrity in carbon sequestration environments: 1. Experimental study of Cement-Sandstone/Shale-Brine-CO ₂ . Energy Procedia, 2011, 4, 5186-5194.	1.8	13
56	Wellbore integrity at the Krechba Carbon Storage Site, In Salah, Algeria: 2. Reactive transport modeling of geochemical interactions near the Cement-Formation interface. Energy Procedia, 2011, 4, 5195-5202.	1.8	13
57	Water Challenges for Geologic Carbon Capture and Sequestration. Environmental Management, 2010, 45, 651-661.	2.7	64
58	Transformation of meta-stable calcium silicate hydrates to tobermorite: reaction kinetics and molecular structure from XRD and NMR spectroscopy. Geochemical Transactions, 2009, 10, 1.	0.7	120
59	Geochemical detection of carbon dioxide in dilute aquifers. Geochemical Transactions, 2009, 10, 4.	0.7	77
60	Transport and detection of carbon dioxide in dilute aquifers. Energy Procedia, 2009, 1, 2111-2118.	1.8	24
61	Surface complexation model for strontium sorption to amorphous silica and goethite. Geochemical Transactions, 2008, 9, 2.	0.7	45
62	Effect of solution saturation state and temperature on diopside dissolution. Geochemical Transactions, 2007, 8, 3.	0.7	34
63	Boiling Temperature and Reversed Deliquescence Relative Humidity Measurements for Mineral Assemblages in the NaCl + NaNO ₃ + KNO ₃ + Ca(NO ₃) ₂ + H ₂ O System. Journal of Solution Chemistry, 2006, 35, 1187-1215.	1.2	2
64	Dependence of labradorite dissolution kinetics on CO ₂ (aq), Al(aq), and temperature. Chemical Geology, 2005, 217, 213-225.	3.3	138
65	X-ray absorption spectroscopic study of Fe reference compounds for the analysis of natural sediments. American Mineralogist, 2004, 89, 572-585.	1.9	210
66	Evaporative Evolution of Carbonate-Rich Brines from Synthetic Topopah Spring Tuff Pore Water, Yucca Mountain, NV. Materials Research Society Symposia Proceedings, 2004, 824, 481.	0.1	0
67	Cesium migration in Hanford sediment: a multisite cation exchange model based on laboratory transport experiments. Journal of Contaminant Hydrology, 2003, 67, 219-246.	3.3	136
68	Evaluation of silica-water surface chemistry using NMR spectroscopy. Geochimica Et Cosmochimica Acta, 2002, 66, 913-926.	3.9	70
69	Speciation and fate of trace metals in estuarine sediments under reduced and oxidized conditions, Seaplane Lagoon, Alameda Naval Air Station (USA). Geochemical Transactions, 2002, 3, 1.	0.7	47
70	X-Ray Absorption Spectroscopy of Strontium(II) Coordination. Journal of Colloid and Interface Science, 2000, 222, 198-212.	9.4	141
71	X-Ray Absorption Spectroscopy of Strontium(II) Coordination. Journal of Colloid and Interface Science, 2000, 222, 184-197.	9.4	84
72	Metal Speciation and Bioavailability in Contaminated Estuary Sediments, Alameda Naval Air Station, California. Environmental Science & Technology, 2000, 34, 3665-3673.	10.0	82

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73	Experimental investigation of cement, Topopah Spring tuff, and water interactions at 200°C. <i>Applied Geochemistry</i> , 1998, 13, 571-579.	3.0	3
74	Amorphous silica precipitation (60 to 120°C): comparison of laboratory and field rates. <i>Geochimica Et Cosmochimica Acta</i> , 1998, 62, 1379-1396.	3.9	110
75	Rock-Water Interactions Controlling Zinc, Cadmium, and Lead Concentrations in Surface Waters and Sediments, U.S. Tri-State Mining District. 1. Molecular Identification Using X-ray Absorption Spectroscopy. <i>Environmental Science & Technology</i> , 1998, 32, 943-955.	10.0	124
76	Rock-Water Interactions Controlling Zinc, Cadmium, and Lead Concentrations in Surface Waters and Sediments, U.S. Tri-State Mining District. 2. Geochemical Interpretation. <i>Environmental Science & Technology</i> , 1998, 32, 956-965.	10.0	93
77	Direct effects of CO ₂ and temperature on silicate weathering: Possible implications for climate control. <i>Geochimica Et Cosmochimica Acta</i> , 1994, 58, 1853-1856.	3.9	212
78	Precipitation of Nd-Ca carbonate solid solution at 25°C. <i>Geochimica Et Cosmochimica Acta</i> , 1993, 57, 3383-3393.	3.9	17
79	Interactions of U(VI), Nd, and Th(IV) at the Calcite-Solution Interface. <i>Radiochimica Acta</i> , 1992, 58-59, 245-252.	1.2	50
80	Mineral-Solution Interactions in the U(VI)-CO ₂ -H ₂ O System. <i>Radiochimica Acta</i> , 1991, 52-53, 187-194.	1.2	33