

# Jonathan Patrick Ennis-King

## List of Publications by Year in descending order

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Version: 2024-02-01

63  
papers

4,234  
citations

257450

24  
h-index

168389

53  
g-index

65  
all docs

65  
docs citations

65  
times ranked

2688  
citing authors

#	ARTICLE	IF	CITATIONS
1	CO <sub>2</sub> -H <sub>2</sub> O mixtures in the geological sequestration of CO <sub>2</sub> . I. Assessment and calculation of mutual solubilities from 12 to 100°C and up to 600 bar. <i>Geochimica Et Cosmochimica Acta</i> , 2003, 67, 3015-3031.	3.9	776
2	Geological storage of CO <sub>2</sub> in saline aquifers—A review of the experience from existing storage operations. <i>International Journal of Greenhouse Gas Control</i> , 2010, 4, 659-667.	4.6	488
3	A benchmark study on problems related to CO <sub>2</sub> storage in geologic formations. <i>Computational Geosciences</i> , 2009, 13, 409-434.	2.4	348
4	Role of Convective Mixing in the Long-Term Storage of Carbon Dioxide in Deep Saline Formations. <i>SPE Journal</i> , 2005, 10, 349-356.	3.1	311
5	Convective dissolution of CO <sub>2</sub> in saline aquifers: Progress in modeling and experiments. <i>International Journal of Greenhouse Gas Control</i> , 2015, 40, 238-266.	4.6	232
6	Onset of convection in anisotropic porous media subject to a rapid change in boundary conditions. <i>Physics of Fluids</i> , 2005, 17, 084107.	4.0	225
7	Safe storage and effective monitoring of CO <sub>2</sub> in depleted gas fields. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, E35-41.	7.1	214
8	Coupling of geochemical reactions and convective mixing in the long-term geological storage of carbon dioxide. <i>International Journal of Greenhouse Gas Control</i> , 2007, 1, 86-93.	4.6	145
9	Geomechanical analysis of the Naylor Field, Otway Basin, Australia: Implications for CO <sub>2</sub> injection and storage. <i>International Journal of Greenhouse Gas Control</i> , 2010, 4, 827-839.	4.6	94
10	CO <sub>2</sub> storage in a depleted gas field: An overview of the CO <sub>2</sub> CRC Otway Project and initial results. <i>International Journal of Greenhouse Gas Control</i> , 2011, 5, 922-932.	4.6	93
11	Effect of Vertical Heterogeneity on Long-Term Migration of CO <sub>2</sub> in Saline Formations. <i>Transport in Porous Media</i> , 2010, 82, 31-47.	2.6	79
12	Role of Convective Mixing in the Long-Term Storage of Carbon Dioxide in Deep Saline Formations. , 2003, , .		75
13	Engineering Aspects of Geological Sequestration of Carbon Dioxide. , 2002, , .		71
14	Monitoring of CO <sub>2</sub> storage in a depleted natural gas reservoir: Gas geochemistry from the CO <sub>2</sub> CRC Otway Project, Australia. <i>International Journal of Greenhouse Gas Control</i> , 2011, 5, 1039-1054.	4.6	71
15	In-situ hydrogen wettability characterisation for underground hydrogen storage. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 13062-13075.	7.1	66
16	CO <sub>2</sub> storage in saline aquifers —Current state of scientific knowledge. <i>Energy Procedia</i> , 2009, 1, 3197-3204.	1.8	61
17	Overview of the CO <sub>2</sub> CRC Otway Residual Saturation And Dissolution Test. <i>Energy Procedia</i> , 2013, 37, 6140-6148.	1.8	53
18	Nondestructive Method of Constructing Three-Dimensional Gradient Index Models for Crystalline Lenses: I. Theory and Experiment. <i>Optometry and Vision Science</i> , 1988, 65, 481-491.	1.2	51

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19	Site characterisation of a basin-scale CO <sub>2</sub> geological storage system: Gippsland Basin, southeast Australia. <i>Environmental Geology</i> , 2008, 54, 1583-1606.	1.2	51
20	Numerical Modeling of Pressure and Temperature Profiles Including Phase Transitions in Carbon Dioxide Wells. , 2008, , .		49
21	Single-well experimental design for studying residual trapping of supercritical carbon dioxide. <i>International Journal of Greenhouse Gas Control</i> , 2011, 5, 88-98.	4.6	48
22	Residual CO <sub>2</sub> saturation estimate using noble gas tracers in a single-well field test: The CO <sub>2</sub> CRC Otway project. <i>International Journal of Greenhouse Gas Control</i> , 2014, 26, 9-21.	4.6	43
23	Steady dissolution rate due to convective mixing in anisotropic porous media. <i>Advances in Water Resources</i> , 2014, 73, 65-73.	3.8	40
24	The Instability of Unsteady Boundary Layers in Porous Media. , 2008, , 85-110.		36
25	Illuminating the geology: Post-injection reservoir characterisation of the CO <sub>2</sub> CRC Otway site. <i>International Journal of Greenhouse Gas Control</i> , 2019, 86, 146-157.	4.6	30
26	CO <sub>2</sub> dissolution in the presence of background flow of deep saline aquifers. <i>Water Resources Research</i> , 2015, 51, 2595-2615.	4.2	28
27	Compression of a polymer chain by a small obstacle: The effect of fluctuations on the escape transition. <i>Physical Review E</i> , 1999, 60, 6906-6918.	2.1	25
28	PorousFlow: a multiphysics simulation code for coupled problems in porous media. <i>Journal of Open Source Software</i> , 2020, 5, 2176.	4.6	25
29	Feasibility of CO <sub>2</sub> plume detection using 4D seismic: CO <sub>2</sub> CRC Otway Project case study "Part 1: Rock-physics modeling. <i>Geophysics</i> , 2015, 80, B95-B104.	2.6	24
30	Validating Subsurface Monitoring as an Alternative Option to Surface M&V - The CO <sub>2</sub> CRC's Otway Stage 3 Injection. <i>Energy Procedia</i> , 2017, 114, 3374-3384.	1.8	23
31	Fault modelling and geomechanical integrity associated with the CO <sub>2</sub> CRC Otway 2C injection experiment. <i>International Journal of Greenhouse Gas Control</i> , 2014, 30, 72-85.	4.6	22
32	Injection strategies for large-scale CO <sub>2</sub> storage sites. <i>Energy Procedia</i> , 2011, 4, 4267-4274.	1.8	21
33	Determining Residual CO <sub>2</sub> Saturation Through a Dissolution Test-results from the CO <sub>2</sub> CRC Otway Project. <i>Energy Procedia</i> , 2013, 37, 5379-5386.	1.8	21
34	Steady Flux Regime During Convective Mixing in Three-Dimensional Heterogeneous Porous Media. <i>Fluids</i> , 2018, 3, 58.	1.7	21
35	Interactions between Surfaces in the Presence of Ideal Adsorbing Block Copolymers. <i>Journal of Physical Chemistry B</i> , 1999, 103, 2248-2255.	2.6	20
36	The role of heterogeneity in CO <sub>2</sub> storage in a depleted gas field: History matching of simulation models to field data for the CO <sub>2</sub> CRC Otway Project, Australia. <i>Energy Procedia</i> , 2011, 4, 3494-3501.	1.8	20

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37	An open-source multiphysics simulation code for coupled problems in porous media. Computers and Geosciences, 2021, 154, 104820.	4.2	20
38	Semi-analytical solutions for nonisothermal fluid injection including heat loss from the reservoir: Part 1. Saturation and temperature. Advances in Water Resources, 2014, 73, 227-241.	3.8	19
39	Using oxygen isotopes to quantitatively assess residual CO <sub>2</sub> saturation during the CO <sub>2</sub> CRC Otway Stage 2B Extension residual saturation test. International Journal of Greenhouse Gas Control, 2016, 52, 73-83.	4.6	16
40	Effect of Vertical Heterogeneity on Long-Term Migration of CO <sub>2</sub> in Saline Formations. Energy Procedia, 2009, 1, 1823-1830.	1.8	15
41	Observations of Thermal and Pressure Transients in Carbon Dioxide Wells. , 2010, , .		14
42	Residual Trapping Beneath Impermeable Barriers During Buoyant Migration of $\text{CO}_2$ . Transport in Porous Media, 2013, 98, 505-524.	2.6	14
43	Evaluating the Performance of Soil Flux Surveys and Inversion Methods for Quantification of CO <sub>2</sub> Leakage. Energy Procedia, 2017, 114, 3679-3694.	1.8	14
44	Code Intercomparison Builds Confidence in Numerical Models for Geologic Disposal of CO <sub>2</sub> . , 2003, , 463-468.		14
45	Vertical Permeability Distribution of Reservoirs with Impermeable Barriers. Transport in Porous Media, 2010, 83, 525-539.	2.6	12
46	Field measurement of residual carbon dioxide saturation using reactive ester tracers. Chemical Geology, 2015, 399, 20-29.	3.3	12
47	Attractive Osmotic Pressure in an Electric Double Layer with Grafted Polyelectrolytes. Journal of Physical Chemistry B, 1998, 102, 2149-2164.	2.6	11
48	Semi-analytical solutions for nonisothermal fluid injection including heat loss from the reservoir: Part 2. Pressure and stress. Advances in Water Resources, 2014, 73, 242-253.	3.8	8
49	The CO <sub>2</sub> CRC Otway shallow CO <sub>2</sub> controlled release experiment: Preparation for Phase 2. Energy Procedia, 2018, 154, 145-150.	1.8	7
50	Long-term numerical simulation of a portfolio of possible sites for geological storage of carbon dioxide in Australia. , 2005, , 711-719.		7
51	Interpretation of Above Zone and Storage Zone Pressure Responses to Carbon Dioxide Injection in the 2016 CO <sub>2</sub> CRC Field Test. Energy Procedia, 2017, 114, 5671-5679.	1.8	6
52	Estimating CO <sub>2</sub> residual trapping from a single-well test: Experimental design calculations. Energy Procedia, 2011, 4, 5044-5049.	1.8	5
53	Spatial grid correction for short-term numerical simulation results of carbon dioxide dissolution in saline aquifers. Computational Geosciences, 2012, 16, 1153-1161.	2.4	5
54	Magnitude and Duration of Temperature Changes in Geological Storage of Carbon Dioxide. Energy Procedia, 2013, 37, 4465-4472.	1.8	5

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55	Stepping into the Same River Twice: Field Evidence for the Repeatability of a CO <sub>2</sub> Injection Test. Energy Procedia, 2017, 114, 2760-2771.	1.8	5
56	Drilling an Array of Monitoring Wells for a CCS Experiment: Lessons From Otway Stage 3. SSRN Electronic Journal, 0, , .	0.4	5
57	Community Code for Simulating Co <sub>2</sub> Storage: Modelling Multiphase Flow with Coupled Geomechanics and Geochemistry Using the Open-Source Multiphysics Framework Moose. SSRN Electronic Journal, 0, , .	0.4	5
58	Application of gravity currents to the migration of CO <sub>2</sub> in heterogeneous saline formations. Energy Procedia, 2009, 1, 3331-3338.	1.8	3
59	An improved perturbed hard-sphere equation of state. Fluid Phase Equilibria, 2009, 284, 118-128.	2.5	3
60	Estimating Breakthrough Time During Buoyant Migration of CO <sub>2</sub> in a Reservoir Containing Impermeable Barriers. Transport in Porous Media, 2015, 107, 281-298.	2.6	3
61	Monitoring Wellbore Fluid Displacement in the Perforation Interval Using Multiple Downhole Pressure and Temperature Gauges. , 2016, , .		2
62	Geomechanical response due to nonisothermal fluid injection into a reservoir. Advances in Water Resources, 2021, 153, 103942.	3.8	2
63	Prediction of the seismic time-lapse signal of CO <sub>2</sub> /CH <sub>4</sub> injection into a depleted gas reservoir - Otway Project. ASEG Extended Abstracts, 2012, 2012, 1-4.	0.1	1