

The Environmental Costs and Benefits of Fracking

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Citation Report

#	ARTICLE	IF	CITATIONS
1	The integrity of oil and gas wells. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 10902-10903.	3.3	125
2	Noble gases identify the mechanisms of fugitive gas contamination in drinking-water wells overlying the Marcellus and Barnett Shales. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 14076-14081.	3.3	401
3	Information Collection, Access, and Dissemination to Support Evidence-Based Shale Gas Policies. Energy Technology, 2014, 2, 977-987.	1.8	13
4	Risks and Risk Governance in Unconventional Shale Gas Development. Environmental Science & Technology, 2014, 48, 8289-8297.	4.6	147
5	A review of water and greenhouse gas impacts of unconventional natural gas development in the United States. MRS Energy & Sustainability, 2015, 2, 1.	1.3	8
7	Innovations in the Crude Oil Market: Sentiment, Exploration and Production Methods. SSRN Electronic Journal, 2015, , .	0.4	1
8	How Dallas became frack free: hydrocarbon governance under neoliberalism. Environment and Planning A, 2015, 47, 2591-2608.	2.1	30
9	Filling the Data Gap: What We Know (and Don't Know) about Hydraulic Fracturing and Acidizing in California. ACS Symposium Series, 2015, , 205-220.	0.5	0
10	News & Views. Ground Water, 2015, 53, 19-28.	0.7	8
11	Iodide, Bromide, and Ammonium in Hydraulic Fracturing and Oil and Gas Wastewaters: Environmental Implications. Environmental Science & Technology, 2015, 49, 1955-1963.	4.6	215
12	Hydraulic fracturing—Integrating public participation with an independent review of the risks and benefits. Energy Policy, 2015, 85, 299-308.	4.2	35
13	The Depths of Hydraulic Fracturing and Accompanying Water Use Across the United States. Environmental Science & Technology, 2015, 49, 8969-8976.	4.6	65
14	Ecosystem services lost to oil and gas in North America. Science, 2015, 348, 401-402.	6.0	256
15	Effective Permeabilities of Abandoned Oil and Gas Wells: Analysis of Data from Pennsylvania. Environmental Science & Technology, 2015, 49, 4757-4764.	4.6	43
16	Ripple Effects of the Shale Gas Boom in the U.S.: Shift in the Balance of Energy Resources, Technology Deployment, Climate Policies, Energy Markets, Geopolitics and Policy Development. Electricity Journal, 2015, 28, 17-38.	1.3	6
17	Evaluating a groundwater supply contamination incident attributed to Marcellus Shale gas development. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6325-6330.	3.3	236
18	Water Footprint of Hydraulic Fracturing. Environmental Science and Technology Letters, 2015, 2, 276-280.	3.9	216
19	Assessment of policies to reduce core forest fragmentation from Marcellus shale development in Pennsylvania. Ecological Indicators, 2015, 52, 153-160.	2.6	33

#	ARTICLE	IF	CITATIONS
20	Welfare and Distributional Implications of Shale Gas. Brookings Papers on Economic Activity, 2016, 2015, 71-139.	0.8	30
21	Looking through the prism of shale gas development: Towards a holistic framework for analysis. Energy Research and Social Science, 2016, 20, 63-72.	3.0	26
22	Assessing the intersections between renewable energy, sustainable development and the challenges of environmental justice in Nigeria. Interdisciplinary Environmental Review, 2016, 17, 149.	0.1	0
23	Just fracking: a distributive environmental justice analysis of unconventional gas development in Pennsylvania, USA. Environmental Research Letters, 2016, 11, 025001.	2.2	57
25	Engineering and Evolution of Saccharomyces cerevisiae to Produce Biofuels and Chemicals. Advances in Biochemical Engineering/Biotechnology, 2016, 162, 175-215.	0.6	13
26	Dedicated biomass crops can enhance biodiversity in the arable landscape. GCB Bioenergy, 2016, 8, 1071-1081.	2.5	45
27	Aerial Surveys of Elevated Hydrocarbon Emissions from Oil and Gas Production Sites. Environmental Science & Technology, 2016, 50, 4877-4886.	4.6	105
28	Water Availability for Shale Gas Development in Sichuan Basin, China. Environmental Science & Technology, 2016, 50, 2837-2845.	4.6	56
29	Water Use and Management in the Bakken Shale Oil Play in North Dakota. Environmental Science & Technology, 2016, 50, 3275-3282.	4.6	63
30	Fracking in Tight Shales: What Is It, What Does It Accomplish, and What Are Its Consequences?. Annual Review of Earth and Planetary Sciences, 2016, 44, 321-351.	4.6	38
31	State of knowledge about energy development impacts on North American rangelands: An integrative approach. Journal of Environmental Management, 2016, 180, 1-9.	3.8	18
32	Risk and benefits in a fracking boom: Evidence from Colorado. The Extractive Industries and Society, 2016, 3, 744-753.	0.7	67
33	Observations on risks, the social sciences, and unconventional hydrocarbons. Energy Research and Social Science, 2016, 20, 1-7.	3.0	11
34	Emerging investigators series: using an analytical solution approach to permit high volume groundwater withdrawals. Environmental Science: Water Research and Technology, 2016, 2, 942-952.	1.2	1
35	An Emotional Landscape of Place-based Activism. Humanity & Society, 2016, 40, 401-423.	0.6	5
36	Numerical prediction of the decline of the shale gas production rate with considering the geomechanical effects based on the two-part Hooke's model. Fuel, 2016, 185, 362-369.	3.4	30
37	Hydraulic fracturing offers view of microbial life in the deep terrestrial subsurface. FEMS Microbiology Ecology, 2016, 92, fiw166.	1.3	96
38	Steam blowouts in California Oil and Gas District 4: Comparison of the roles of initial defects versus well aging and implications for well blowouts in geologic carbon storage projects. International Journal of Greenhouse Gas Control, 2016, 51, 36-47.	2.3	3

#	ARTICLE	IF	CITATIONS
39	Microbial Biotechnology 2020; microbiology of fossil fuel resources. Microbial Biotechnology, 2016, 9, 626-634.	2.0	34
40	Effect of Surfactant Adsorption on the Wettability Alteration of Gas-Bearing Shales. Environmental Engineering Science, 2016, 33, 766-777.	0.8	37
41	Identification and characterization of high methane-emitting abandoned oil and gas wells. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 13636-13641.	3.3	143
42	Energy Technology, Politics, and Interpretative Frames: Shale Gas Fracking in Eastern Europe. Global Environmental Politics, 2016, 16, 50-69.	1.7	30
44	National Media Coverage of Hydraulic Fracturing in the United States: Evaluation Using Human and Automated Coding Techniques. Risk, Hazards and Crisis in Public Policy, 2016, 7, 114-128.	1.4	7
46	Unconventional shale gas development: challenges for environmental policy and EA practice. Impact Assessment and Project Appraisal, 2016, 34, 97-109.	1.0	8
47	Is There Scientific Evidence to Support the Selection of Hydraulic Fracturing Rules?. , 2016, , .		4
48	Managing Environmental Challenges During the First Exploration Well for Shale Gas in Denmark. , 2016, , .		1
49	A review of the issues and treatment options for wastewater from shale gas extraction by hydraulic fracturing. Fuel, 2016, 182, 292-303.	3.4	303
50	An optimization framework for the integration of water management and shale gas supply chain design. Computers and Chemical Engineering, 2016, 92, 230-255.	2.0	84
51	Shale Gas: A Review of the Economic, Environmental, and Social Sustainability. Energy Technology, 2016, 4, 772-792.	1.8	93
52	Salinity of deep groundwater in California: Water quantity, quality, and protection. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7768-7773.	3.3	74
53	Conservatism vs. conservationism: differential influences of social identities on beliefs about fracking. Environmental Communication, 2016, 10, 322-336.	1.2	25
54	Transition to sustainability with natural gas from fracking. Sustainable Energy Technologies and Assessments, 2016, 14, 26-34.	1.7	15
55	Deciphering the true life cycle environmental impacts and costs of the mega-scale shale gas-to-olefins projects in the United States. Energy and Environmental Science, 2016, 9, 820-840.	15.6	62
56	High volume hydraulic fracturing operations: potential impacts on surface water and human health. International Journal of Environmental Health Research, 2016, 26, 361-380.	1.3	15
57	The role of transnational companies in oil imports in the United States: Reviewing after the fracking boom. The Extractive Industries and Society, 2017, 4, 78-94.	0.7	2
58	Life cycle assessment of greenhouse gas emissions and water-energy optimization for shale gas supply chain planning based on multi-level approach: Case study in Barnett, Marcellus, Fayetteville, and Haynesville shales. Energy Conversion and Management, 2017, 134, 382-398.	4.4	196

#	ARTICLE	IF	CITATIONS
59	Unconventional Oil and Gas Spills: Risks, Mitigation Priorities, and State Reporting Requirements. <i>Environmental Science & Technology</i> , 2017, 51, 2563-2573.	4.6	106
60	Barriers to sharing water quality data: experiences from the Shale Network. <i>Journal of Environmental Planning and Management</i> , 2017, 60, 2103-2121.	2.4	5
61	Comparative analysis of hydraulic fracturing wastewater practices in unconventional shale development: Water sourcing, treatment and disposal practices. <i>Canadian Water Resources Journal</i> , 2017, 42, 105-121.	0.5	73
62	Land-use and ecosystem services costs of unconventional <scp>US</scp> oil and gas development. <i>Frontiers in Ecology and the Environment</i> , 2017, 15, 237-242.	1.9	38
63	Experience curve for natural gas production by hydraulic fracturing. <i>Energy Policy</i> , 2017, 105, 263-268.	4.2	39
64	The local employment impacts of fracking: A national study. <i>Resources and Energy Economics</i> , 2017, 49, 62-85.	1.1	68
65	An overview on exploration and environmental impact of unconventional gas sources and treatment options for produced water. <i>Journal of Environmental Management</i> , 2017, 200, 511-529.	3.8	75
67	Water Use in the Oil and Gas Industries: An Evaluation of Best Practices for Communicating with Scientists, Policymakers, and the Public. , 2017, , .		1
68	The geochemistry of naturally occurring methane and saline groundwater in an area of unconventional shale gas development. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 208, 302-334.	1.6	121
69	Public parks usage near hydraulic fracturing operations. <i>Journal of Outdoor Recreation and Tourism</i> , 2017, 18, 75-80.	1.3	10
70	Costs, benefits, and the malleability of public support for "Fracking" <i>Energy Policy</i> , 2017, 105, 407-417.	4.2	37
71	Public health implications of environmental noise associated with unconventional oil and gas development. <i>Science of the Total Environment</i> , 2017, 580, 448-456.	3.9	62
72	Production Methods in Shale Oil Reservoirs. , 2017, , 285-319.		6
73	The impacts of fracking on the environment: A total environmental study paradigm. <i>Science of the Total Environment</i> , 2017, 580, 953-957.	3.9	69
74	Modeling Changes to Streamflow, Sediment, and Nutrient Loading from Land Use Changes Due to Potential Natural Gas Development. <i>Journal of the American Water Resources Association</i> , 2017, 53, 1293-1312.	1.0	5
75	An analysis of chemicals and other constituents found in produced water from hydraulically fractured wells in California and the challenges for wastewater management. <i>Journal of Environmental Management</i> , 2017, 204, 502-509.	3.8	35
76	Global wetland contribution to 2000-2012 atmospheric methane growth rate dynamics. <i>Environmental Research Letters</i> , 2017, 12, 094013.	2.2	129
77	Natural resource ownership, financial gains, and governance: The case of unconventional gas development in the UK and the US. <i>Energy Policy</i> , 2017, 111, 281-296.	4.2	10

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78	Multi-hazard risk pathway scenarios associated with unconventional gas development: Identification and challenges for their assessment. <i>Energy Procedia</i> , 2017, 125, 116-125.	1.8	5
79	Characterization of nanopore morphology of shale and its effects on gas permeability. <i>Journal of Natural Gas Science and Engineering</i> , 2017, 47, 83-90.	2.1	28
80	Technology and Engineering of the Water-Energy Nexus. <i>Annual Review of Environment and Resources</i> , 2017, 42, 407-437.	5.6	25
81	Communication Science for Science Communication: Water Management for Oil and Natural Gas Extraction. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2017, 143, .	1.3	1
82	Reflections on a boom: Perceptions of energy development impacts in the Bakken oil patch inform environmental science & policy priorities. <i>Science of the Total Environment</i> , 2017, 599-600, 1993-2018.	3.9	13
83	Mining industry and sustainable development: time for change. <i>Food and Energy Security</i> , 2017, 6, 61-77.	2.0	243
84	Information exchange under uncertainty: The case of unconventional gas development in the United Kingdom. <i>Land Use Policy</i> , 2017, 67, 200-211.	2.5	35
85	Quantitative, colorimetric paper probe for hydrogen sulfide gas. <i>Sensors and Actuators B: Chemical</i> , 2017, 253, 846-851.	4.0	48
86	Debating Unconventional Energy: Social, Political, and Economic Implications. <i>Annual Review of Environment and Resources</i> , 2017, 42, 241-266.	5.6	33
87	Do biofilm communities respond to the chemical signatures of fracking? A test involving streams in North-central Arkansas. <i>BMC Microbiology</i> , 2017, 17, 29.	1.3	19
88	Quantity of flowback and produced waters from unconventional oil and gas exploration. <i>Science of the Total Environment</i> , 2017, 574, 314-321.	3.9	230
89	Unconventional oil and gas development and risk of childhood leukemia: Assessing the evidence. <i>Science of the Total Environment</i> , 2017, 576, 138-147.	3.9	76
91	Proximity to Development and Public Support for Hydraulic Fracturing. <i>SSRN Electronic Journal</i> , 2017, , .	0.4	1
92	Toward Consistent Methodology to Quantify Populations in Proximity to Oil and Gas Development: A National Spatial Analysis and Review. <i>Environmental Health Perspectives</i> , 2017, 125, 086004.	2.8	87
93	Natural Resource Ownership, Financial Gains, and Governance: The Case of Unconventional Gas Development in the UK and the US. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
94	Societal Implications of Unconventional Oil and Gas Development. <i>Advances in Chemical Pollution, Environmental Management and Protection</i> , 2017, , 167-192.	0.3	0
95	Fracking, Farming, and Water. <i>SSRN Electronic Journal</i> , 0, , .	0.4	3
96	The Nexus of Energy and Water Quality. , 2017, , .		1

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97	Reducing fugitive methane emissions from the North American oil and gas sector: a proposed science-policy framework. <i>Climate Policy</i> , 2018, 18, 1133-1151.	2.6	18
98	Monitoring of unconventional oil and gas extraction and its policy implications: A case study from South Africa. <i>Energy Policy</i> , 2018, 118, 109-120.	4.2	5
99	Groundwater quality hazards of methane leakage from hydrocarbon wells: A review of observational and numerical studies and four testable hypotheses. <i>Wiley Interdisciplinary Reviews: Water</i> , 2018, 5, e1283.	2.8	31
100	The Effect of Geographic Proximity to Unconventional Oil and Gas Development on Public Support for Hydraulic Fracturing. <i>Risk Analysis</i> , 2018, 38, 1871-1890.	1.5	55
101	Identifying the risks and opportunities of unconventional oil and gas extraction using the strategic environmental assessment. <i>Current Opinion in Environmental Science and Health</i> , 2018, 3, 33-39.	2.1	12
102	Evaluating Environmental Governance along Cross-Border Electricity Supply Chains with Policy-Informed Life Cycle Assessment: The California-Mexico Energy Exchange. <i>Environmental Science & Technology</i> , 2018, 52, 5048-5061.	4.6	4
103	Response of Aquatic Bacterial Communities to Hydraulic Fracturing in Northwestern Pennsylvania: A Five-Year Study. <i>Scientific Reports</i> , 2018, 8, 5683.	1.6	29
104	A Comparison of the Impacts of Wind Energy and Unconventional Gas Development on Land-use and Ecosystem Services: An Example from the Anadarko Basin of Oklahoma, USA. <i>Environmental Management</i> , 2018, 61, 796-804.	1.2	13
105	Pre-drill Groundwater Geochemistry in the Karoo Basin, South Africa. <i>Ground Water</i> , 2018, 56, 187-203.	0.7	20
106	Numerical Modeling of Methane Leakage from a Faulty Natural Gas Well into Fractured Tight Formations. <i>Ground Water</i> , 2018, 56, 163-175.	0.7	25
107	Opportunities and Trade-offs among BECCS and the Food, Water, Energy, Biodiversity, and Social Systems Nexus at Regional Scales. <i>BioScience</i> , 2018, 68, 100-111.	2.2	53
108	Newly Developed, Highly Automated Apparatus for Rapid Evaluation of Stimulation Fluid Additives. , 2018, , .		1
109	Impact of an historic underground gas well blowout on the current methane chemistry in a shallow groundwater system. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 296-301.	3.3	35
110	Characterising the vertical separation of shale-gas source rocks and aquifers across England and Wales (UK). <i>Hydrogeology Journal</i> , 2018, 26, 1975-1987.	0.9	9
111	Agenda-Setting at the Energy-Water Nexus: Constructing and Maintaining a Policy Monopoly in U.S. Hydraulic Fracturing Regulation. <i>Review of Policy Research</i> , 2018, 35, 439-465.	2.8	11
112	Framed for Compromise? The Role of Bill Framing in State Legislative Behavior on Natural Gas Policy. <i>Policy Studies Journal</i> , 2018, 46, 598-628.	3.2	8
113	Induced Seismicity. <i>Annual Review of Earth and Planetary Sciences</i> , 2018, 46, 149-174.	4.6	154
114	Understanding and mitigating impacts of unconventional oil and gas development on land-use and ecosystem services in the U.S.. <i>Current Opinion in Environmental Science and Health</i> , 2018, 3, 19-26.	2.1	21

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115	Energy-Environmental Implications Of Shale Gas Exploration In Parana Hydrological Basin, Brazil. Renewable and Sustainable Energy Reviews, 2018, 90, 56-69.	8.2	16
116	Hydraulic Fracturing. Journal of Planning Literature, 2018, 33, 155-170.	2.2	6
117	The Dash for Gas. Journalism Studies, 2018, 19, 182-208.	1.2	20
118	A review of the public health impacts of unconventional natural gas development. Environmental Geochemistry and Health, 2018, 40, 1-57.	1.8	39
119	The impact of shale gas on the costs of climate policy. Climate Policy, 2018, 18, 442-458.	2.6	1
120	Fracking equity: A spatial justice analysis prototype. Land Use Policy, 2018, 70, 10-15.	2.5	15
121	Synthetic Biology – Metabolic Engineering. Advances in Biochemical Engineering/Biotechnology, 2018, , .	0.6	4
122	Definitions and dimensions of energy security: a literature review. Wiley Interdisciplinary Reviews: Energy and Environment, 2018, 7, e268.	1.9	86
123	Tight oil market dynamics: Benchmarks, breakeven points, and inelasticities. Energy Economics, 2018, 70, 70-83.	5.6	47
124	Release of Particulate Iron Sulfide during Shale-Fluid Interaction. Environmental Science & Technology, 2018, 52, 638-643.	4.6	27
125	A detailed risk assessment of shale gas development on headwater streams in the Pennsylvania portion of the Upper Susquehanna River Basin, U.S.A.. Science of the Total Environment, 2018, 610-611, 154-166.	3.9	26
126	Scientists – Nonscientist Teams Explore Methane Sources in Streams Near Oil/Gas Development. Journal of Contemporary Water Research and Education, 2018, 164, 80-111.	0.7	4
127	Firm-Level Financial Resources and Environmental Spills. SSRN Electronic Journal, 0, , .	0.4	0
128	IMPACT OF THE BAKKEN/THREE FORKS UNCONVENTIONAL OIL AND GAS DEVELOPMENT ON NATURAL HABITATS IN NORTH DAKOTA. Land Degradation and Development, 2018, 30, 524.	1.8	9
129	Vadose Zone Gas Migration and Surface Effluxes after a Controlled Natural Gas Release into an Unconfined Shallow Aquifer. Vadose Zone Journal, 2018, 17, 1-16.	1.3	35
130	Governing Unconventional Oil and Gas Extraction: The Case of Pennsylvania. Review of Policy Research, 2019, 36, 75-98.	2.8	3
131	Environmental Impact Assessments and Hydraulic Fracturing: Lessons from Two U.S. States. Case Studies in the Environment, 2018, 2, 1-11.	0.4	1
132	Space technologies for monitoring health and environmental impact of hydraulic fracturing. Lancet Planetary Health, The, 2018, 2, e469-e470.	5.1	2

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133	Ensuring health and environmental protection in hydraulic fracturing: A focus on British Columbia and Alberta, Canada. <i>The Extractive Industries and Society</i> , 2018, 5, 581-595.	0.7	6
134	“Just report the science” How scientists frame their engagement in contested debates over fracking in the Barnett Shale. <i>Energy Research and Social Science</i> , 2018, 45, 67-74.	3.0	8
135	Oil’s Rural Reach: Social Licence in Saskatchewan’s Oil-Producing Communities. <i>Canadian Journal of Communication</i> , 2018, 43, 53-74.	0.1	8
136	When rivers go to court: The Anthropocene in organization studies through the lens of Jacques Rancière. <i>Organization</i> , 2018, 25, 517-532.	2.8	19
137	The importance of and need for rapid hydrologic assessments in <sc>L</sc>atin <sc>A</sc>merica. <i>Hydrological Processes</i> , 2018, 32, 2441-2451.	1.1	23
138	Disclosing water-energy-economics nexus in shale gas development. <i>Applied Energy</i> , 2018, 225, 710-731.	5.1	15
139	Rethink potential risks of toxic emissions from natural gas and oil mining. <i>Environmental Pollution</i> , 2018, 240, 848-857.	3.7	11
140	Interaction of Hydrocarbons with Clays under Reservoir Conditions: In Situ Infrared and Nuclear Magnetic Resonance Spectroscopy and X-ray Diffraction for Expandable Clays with Variably Wet Supercritical Methane. <i>ACS Earth and Space Chemistry</i> , 2018, 2, 640-652.	1.2	30
141	A combined ultrafiltration–reverse osmosis process for external reuse of Weiyuan shale gas flowback and produced water. <i>Environmental Science: Water Research and Technology</i> , 2018, 4, 942-955.	1.2	39
142	Bacterial Biomarkers of Marcellus Shale Activity in Pennsylvania. <i>Frontiers in Microbiology</i> , 2018, 9, 1697.	1.5	11
143	Fracking and risky behaviors: Evidence from Pennsylvania. <i>Economics and Human Biology</i> , 2018, 31, 69-82.	0.7	16
144	The intensification of the water footprint of hydraulic fracturing. <i>Science Advances</i> , 2018, 4, eaar5982.	4.7	159
145	Environmental Knowledge Cartographies: Evaluating Competing Discourses in U.S. Hydraulic Fracturing Rule-Making. <i>Annals of the American Association of Geographers</i> , 2019, 109, 1941-1960.	1.5	11
146	A method for screening groundwater vulnerability from subsurface hydrocarbon extraction practices. <i>Journal of Environmental Management</i> , 2019, 249, 109349.	3.8	11
147	Characterizing and modeling environmental emergency of unconventional oil and gas spills in the USA: Life-year versus spill factors. <i>Journal of Cleaner Production</i> , 2019, 237, 117794.	4.6	1
148	Many voices in the room: A national survey experiment on how framing changes views toward fracking in the United States. <i>Energy Research and Social Science</i> , 2019, 56, 101213.	3.0	10
149	Combining domain filling with a self-organizing map to analyze multi-species hydrocarbon signatures on a regional scale. <i>Environmental Monitoring and Assessment</i> , 2019, 191, 337.	1.3	7
150	Hydraulic fracturing considerations: Insights from analogue models, and its viability in Colombia. <i>Earth Sciences Research Journal</i> , 2019, 23, 5-15.	0.4	1

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151	The threat of energy diversification to a bioregion: a landscape-level analysis of current and future impacts on the US Chihuahuan Desert. <i>Regional Environmental Change</i> , 2019, 19, 1949-1962.	1.4	12
152	Context matters: Fracking attitudes, knowledge and trust in three communities in Alberta, Canada. <i>The Extractive Industries and Society</i> , 2019, 6, 1325-1332.	0.7	8
155	Fracking, Coal, and Air Quality. <i>Journal of the Association of Environmental and Resource Economists</i> , 2019, 6, 1001-1037.	1.0	19
156	A New Mechanism for Enhanced Oil Recovery by CO2 in Shale Oil Reservoirs. , 2019, , .		4
158	Production and Depletion. , 2019, , 345-374.		0
159	Stress, Pore Pressure, Fractures and Faults. , 2019, , 181-230.		0
160	Horizontal Drilling and Multi-Stage Hydraulic Fracturing. , 2019, , 233-262.		1
161	Geochemical conditions conducive for retention of trace elements and radionuclides during shaleâ€œfluid interactions. <i>Environmental Sciences: Processes and Impacts</i> , 2019, 21, 1764-1776.	1.7	7
162	The impact of stakeholder engagement on local policy decision making. <i>Policy Sciences</i> , 2019, 52, 549-571.	1.5	10
165	Composition, Fabric, Elastic Properties and Anisotropy. , 2019, , 31-64.		2
166	Strength and Ductility. , 2019, , 65-90.		1
167	Frictional Properties. , 2019, , 91-114.		0
168	Pore Networks and Pore Fluids. , 2019, , 115-148.		0
169	Flow and Sorption. , 2019, , 149-180.		0
170	Reservoir Seismology. , 2019, , 263-300.		0
171	Induced Shear Slip during Hydraulic Fracturing. , 2019, , 301-321.		0
172	Geomechanics and Stimulation Optimization. , 2019, , 322-344.		1
173	Environmental Impacts and Induced Seismicity. , 2019, , 377-405.		1

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174	Managing the Risk of Injection-Induced Seismicity. , 2019, , 406-441.		0
175	Analyzing the feasibility of fracking in the U.S. using macro level life cycle cost analysis and assessment approaches – A foundational study. Sustainable Production and Consumption, 2019, 20, 375-388.	5.7	11
176	Characterization and implications of solids associated with hydraulic fracturing flowback and produced water from the Duvernay Formation, Alberta, Canada. Environmental Sciences: Processes and Impacts, 2019, 21, 242-255.	1.7	26
177	Fracking in the UK: expanding the application of an environmental justice frame. Local Environment, 2019, 24, 295-309.	1.1	9
178	Uncertainty, learning, and local opposition to hydraulic fracturing. Resources and Energy Economics, 2019, 55, 102-123.	1.1	2
179	Feasibility evaluation of the treatment and recycling of shale gas produced water: a case study of the first shale gas field in the Eastern Sichuan Basin, China. Environmental Science: Water Research and Technology, 2019, 5, 358-369.	1.2	9
180	Investigating Hydraulic Fracturing Complexity in Naturally Fractured Rock Masses Using Fully Coupled Multiscale Numerical Modeling. Rock Mechanics and Rock Engineering, 2019, 52, 5137-5160.	2.6	176
181	The importance of the democratic and multidirectional exchange of values between scientists, STEM educators, and historically underrepresented members of the community. Journal of Responsible Innovation, 2019, 6, 248-254.	2.3	1
182	Deep groundwater quality in the southwestern United States. Environmental Research Letters, 2019, 14, 034004.	2.2	18
183	Determinants of earthquake damage liability assignment in Oklahoma: A Bayesian Tobit censored approach. Energy Policy, 2019, 131, 422-433.	4.2	18
184	An Improved Understanding About CO2 EOR and CO2 Storage in Liquid-Rich Shale Reservoirs. , 2019, , .		14
185	Maryland is not for Shale: Scientific and public anxieties of predicting health impacts of fracking. The Extractive Industries and Society, 2019, 6, 463-470.	0.7	8
186	Shale gas transmission and housing prices. Resources and Energy Economics, 2019, 57, 36-50.	1.1	10
187	Empirical environmental justice research in hydrocarbon extraction areas: Examining current approaches outside the U.S. using a Mexican case study. Applied Geography, 2019, 107, 63-71.	1.7	4
188	Plant-based materials and transitioning to a circular economy. Sustainable Production and Consumption, 2019, 19, 194-215.	5.7	149
189	Asserting the climate benefits of the coal-to-gas shift across temporal and spatial scales. Nature Climate Change, 2019, 9, 389-396.	8.1	85
190	Co-treatment of shale-gas produced water and municipal wastewater: Removal of nitrogen in a moving-bed biofilm reactor. Chemical Engineering Research and Design, 2019, 126, 269-277.	2.7	18
191	Biobased Surfactants: Overview and Industrial State of the Art. , 2019, , 3-38.		36

#	ARTICLE	IF	CITATIONS
192	Temporal and spatial trends of conventional and unconventional oil and gas waste management in Pennsylvania, 1991â€“2017. <i>Science of the Total Environment</i> , 2019, 674, 623-636.	3.9	12
193	Price Regulation and Environmental Externalities: Evidence from Methane Leaks. <i>Journal of the Association of Environmental and Resource Economists</i> , 2019, 6, 73-109.	1.0	14
194	Imbibition of Mixed-Charge Surfactant Fluids in Shale Fractures. <i>Energy & Fuels</i> , 2019, 33, 2839-2847.	2.5	21
195	Origin of silica, paleoenvironment, and organic matter enrichment in the Lower Paleozoic Niutitang and Longmaxi formations of the northwestern Upper Yangtze Plate: Significance for hydrocarbon exploration. <i>Marine and Petroleum Geology</i> , 2019, 103, 404-421.	1.5	39
196	Biases in the Literature on Direct Wildlife Mortality from Energy Development. <i>BioScience</i> , 2019, 69, 348-359.	2.2	10
197	Local Perceptions of Hydraulic Fracturing Ahead of Exploratory Drilling in Eastern South Africa. <i>Environmental Management</i> , 2019, 63, 338-351.	1.2	8
198	Raising the stakes: the effects of the environmental movement, industry, and statesâ€™ institutional and material environments on the regulation of fracking. <i>Socio-Economic Review</i> , 2019, 17, 7-35.	2.0	2
199	Potential increase in oil and gas well leakage due to earthquakes. <i>Environmental Research Communications</i> , 2019, 1, 121004.	0.9	9
200	Uncertainty and trustworthiness in discussions of fracking: Exploring the views of academic scientists and local governmental representatives. <i>The Extractive Industries and Society</i> , 2019, 6, 1113-1121.	0.7	3
202	Are we there yet? The long walk towards the development of efficient symbiotic associations between nitrogen-fixing bacteria and non-leguminous crops. <i>BMC Biology</i> , 2019, 17, 99.	1.7	114
203	Advancing Scientific Understanding of the Global Methane Budget in Support of the Paris Agreement. <i>Global Biogeochemical Cycles</i> , 2019, 33, 1475-1512.	1.9	73
204	The Unknown Risks of Fracking. , 2019, , .		2
205	A Critical Review of State-of-the-Art and Emerging Approaches to Identify Fracking-Derived Gases and Associated Contaminants in Aquifers. <i>Environmental Science & Technology</i> , 2019, 53, 1063-1077.	4.6	56
206	Can shareholder advocacy shape energy governance? The case of the US antifracking movement. <i>Review of International Political Economy</i> , 2019, 26, 104-133.	3.2	17
207	The water-energy-food nexus of unconventional oil and gas extraction in the Vaca Muerta Play, Argentina. <i>Journal of Cleaner Production</i> , 2019, 207, 743-750.	4.6	29
208	Impact of upstream oil extraction and environmental public health: A review of the evidence. <i>Science of the Total Environment</i> , 2019, 657, 187-199.	3.9	120
209	Algal treatment of wastewater generated during oil and gas production using hydraulic fracturing technology. <i>Environmental Technology (United Kingdom)</i> , 2019, 40, 1027-1034.	1.2	14
210	Utilising Principles of Earth Jurisprudence to Prevent Environmental Harm: Applying a Case Study of Unconventional Hydraulic Fracturing for Shale Gas in the United Kingdom. <i>Critical Criminology</i> , 2020, 28, 501-516.	0.8	7

#	ARTICLE	IF	CITATIONS
211	NIMBYs and partisans: how material interests and partisanship shape public response to shale gas development. <i>Environmental Politics</i> , 2020, 29, 390-413.	3.4	7
213	Toward a method for the rapid collection of public concerns and benefits of emerging energy technologies. <i>Journal of Risk Research</i> , 2020, 23, 35-46.	1.4	3
214	Expected wastewater volumes associated with unconventional oil and gas exploitation in South Africa and the management thereof. <i>Bulletin of Engineering Geology and the Environment</i> , 2020, 79, 711-728.	1.6	4
215	The Shale Boom and Family Structure: Oil and Gas Employment Growth Relationship to Marriage, Divorce, and Cohabitation. <i>Rural Sociology</i> , 2020, 85, 623-657.	1.1	1
216	Fracking, farming, and water. <i>Energy Policy</i> , 2020, 146, 111799.	4.2	6
217	Development of Shale Gas in China and Treatment Options for Wastewater Produced from the Exploitation: Sustainability Lessons from the United States. <i>Journal of Environmental Engineering, ASCE</i> , 2020, 146, .	0.7	13
218	Seasonal and Diurnal Variations in the Relationships between Urban Form and the Urban Heat Island Effect. <i>Energies</i> , 2020, 13, 5909.	1.6	9
219	Disparities in PM _{2.5} air pollution in the United States. <i>Science</i> , 2020, 369, 575-578.	6.0	194
220	A 21st Century Low-Carbon Transition in U.S. Electric Power: Extent, Contributing Factors, and Implications. <i>Review of Policy Research</i> , 2020, 37, 412-438.	2.8	5
221	Energy Development and Production in the Great Plains: Implications and Mitigation Opportunities. <i>Rangeland Ecology and Management</i> , 2021, 78, 257-272.	1.1	17
222	Impact of in-situ gas liberation for enhanced oil recovery and CO ₂ storage in liquid-rich shale reservoirs. <i>Energy Sources, Part A: Recovery, Utilization and Environmental Effects</i> , 0, , 1-21.	1.2	11
223	Growing <i>Picochlorum oklahomensis</i> in Hydraulic Fracturing Wastewater Supplemented with Animal Wastewater. <i>Water, Air, and Soil Pollution</i> , 2020, 231, 1.	1.1	7
224	Problem Uncertainty, Institutional Insularity, and Modes of Learning in Canadian Provincial Hydraulic Fracturing Regulation. <i>Review of Policy Research</i> , 2020, 37, 765-796.	2.8	5
225	Disclosing Influence: Hydraulic fracturing, interest groups, and state policy processes in the United States. <i>Energy Research and Social Science</i> , 2020, 70, 101734.	3.0	1
226	Environmental Justice Dimensions of Oil and Gas Flaring in South Texas: Disproportionate Exposure among Hispanic communities. <i>Environmental Science & Technology</i> , 2020, 54, 6289-6298.	4.6	36
227	Potential for Reclamation of Abandoned Gas Wells to Restore Ecosystem Services in the Fayetteville Shale of Arkansas. <i>Environmental Management</i> , 2020, 66, 180-190.	1.2	13
228	Oil and gas production and spontaneous preterm birth in the San Joaquin Valley, CA. <i>Environmental Epidemiology</i> , 2020, 4, e099.	1.4	26
229	Trump's America first energy policy, contingency and the reconfiguration of the global energy order. <i>Energy Policy</i> , 2020, 140, 111435.	4.2	26

#	ARTICLE	IF	CITATIONS
230	Experimental Investigation of Drilling Lateral Boreholes in Chalk Rocks with High-Pressure Jets. <i>International Journal of Geomechanics</i> , 2020, 20, .	1.3	19
231	Unconventional oil and gas development and health outcomes: A scoping review of the epidemiological research. <i>Environmental Research</i> , 2020, 182, 109124.	3.7	52
232	Human-Induced Seismicity: Risk perceptions in the State of Oklahoma. <i>The Extractive Industries and Society</i> , 2020, 7, 119-126.	0.7	12
233	Fit-for-purpose treatment goals for produced waters in shale oil and gas fields. <i>Water Research</i> , 2020, 173, 115467.	5.3	71
234	“Google fracking”: The online information ecology of the English shale gas debate. <i>Energy Research and Social Science</i> , 2020, 64, 101427.	3.0	4
235	Evolution and Future Needs of Food Chemistry in a Changing World. <i>Journal of Agricultural and Food Chemistry</i> , 2020, 68, 12956-12971.	2.4	7
236	Sulfate precipitation in produced water from Marcellus Shale for the control of naturally occurring radioactive material. <i>Water Research</i> , 2020, 177, 115765.	5.3	11
237	Reported Methane Emissions from Active Oil and Gas Wells in Pennsylvania, 2014–2018. <i>Environmental Science & Technology</i> , 2020, 54, 5783-5789.	4.6	23
238	Numerical Investigation of Wellbore Methane Leakage From a Dual-Porosity Reservoir and Subsequent Transport in Groundwater. <i>Water Resources Research</i> , 2021, 57, e2019WR026991.	1.7	5
239	Novel laboratory investigation of huff-n-puff gas injection for shale oils under realistic reservoir conditions. <i>Fuel</i> , 2021, 284, 118950.	3.4	43
240	Investigating fracture propagation characteristics in shale using sc-CO ₂ and water with the aid of X-ray Computed Tomography. <i>Journal of Natural Gas Science and Engineering</i> , 2021, 92, 103736.	2.1	18
241	Geochemical element mobilisation by interaction of Bowland shale with acidic fluids. <i>Fuel</i> , 2021, 289, 119914.	3.4	8
242	Land-use intensity of official mineral extraction in the Amazon region: Linking economic and spatial data. <i>Land Degradation and Development</i> , 2021, 32, 1706-1717.	1.8	11
243	<i>Environmental Geology</i> , 2021, , 660-668.		1
244	The Economic Consequences of Local Gas Leaks: Evidence from Massachusetts Housing Market. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
245	Orphaned oil and gas well stimulus “Maximizing economic and environmental benefits. <i>Elementa</i> , 2021, 9, .	1.1	11
246	The role of supercritical carbon dioxide for recovery of shale gas and sequestration in gas shale reservoirs. <i>Energy and Environmental Science</i> , 2021, 14, 4203-4227.	15.6	84
247	Mercado energético pos-SARS-CoV-2: relación estructural de sus factores críticos. <i>Estudios Gerenciales</i> , 0, , 94-103.	0.5	0

#	ARTICLE	IF	CITATIONS
248	Oilonomics: Making sense of the impact of hydrocarbon production on socio-economics. , 2021, , .		0
249	Maximizing the Economic Benefits of Hydraulic Fracturing while Mitigating the Risk to Human Health in Colorado. Journal of Science Policy & Governance, 2021, 18, .	0.1	0
250	Freshwater salinization syndrome: from emerging global problem to managing risks. Biogeochemistry, 2021, 154, 255-292.	1.7	87
251	Human-induced or natural hazard? Factors influencing perceptions of actions to be taken in response to induced seismicity. International Journal of Disaster Risk Reduction, 2021, 57, 102186.	1.8	4
252	Developing a fuzzy logic-based risk assessment for groundwater contamination from well integrity failure during hydraulic fracturing. Science of the Total Environment, 2021, 769, 145051.	3.9	7
253	Contrasting Public and Scientific Assessments of Fracking. Sustainability, 2021, 13, 6650.	1.6	9
254	Swelling layered minerals applications: A solid state NMR overview. Progress in Nuclear Magnetic Resonance Spectroscopy, 2021, 124-125, 99-128.	3.9	7
255	Fossil or bioenergy? Global fuel market trends. Renewable and Sustainable Energy Reviews, 2021, 143, 110905.	8.2	64
256	Effect of subsidies and regulatory exemptions on 2020â€“2030 oil and gas production and profits in the United States. Environmental Research Letters, 2021, 16, 084023.	2.2	6
257	The social correlates of flood risk: variation along the US ruralâ€“urban continuum. Population and Environment, 2021, 43, 232-256.	1.3	11
258	A review of issues, characteristics, and management for wastewater due to hydraulic fracturing in the U.S.. Journal of Petroleum Science and Engineering, 2021, 202, 108536.	2.1	22
259	Variation of public discourse about the impacts of fracking with geographic scale and proximity to proposed development. Nature Energy, 2021, 6, 961-969.	19.8	13
260	Recycled text and risk communication in natural gas pipeline environmental impact assessments. Energy Policy, 2021, 156, 112379.	4.2	4
261	Citizen perceptions of fracking-related earthquakes: Exploring the roles of institutional failures and resource loss in Oklahoma, United States. Energy Research and Social Science, 2021, 80, 102235.	3.0	11
262	Facile preparation of antifouling nanofiltration membrane by grafting zwitterions for reuse of shale gas wastewater. Separation and Purification Technology, 2021, 276, 119310.	3.9	24
263	Upstream oil and gas production and ambient air pollution in California. Science of the Total Environment, 2022, 806, 150298.	3.9	23
264	Recasting the Treadmills of Production and Destruction. Sociology of Development (Oakland, Calif), 2021, 7, 52-76.	0.6	6
269	Belief Conflicts and Coalition Structures Driving Subnational Policy Responses: The Case of Swiss Regulation of Unconventional Gas Development. , 2016, , 201-237.		3

#	ARTICLE	IF	CITATIONS
270	Assessments and Aspirations. , 2016, , 239-264.		4
271	Analysis of non-methane hydrocarbon data from a monitoring station affected by oil and gas development in the Eagle Ford shale, Texas. Elementa, 2016, 4, .	1.1	25
272	Source apportionment of non-methane hydrocarbons, NOx and H2S data from a central monitoring station in the Eagle Ford shale, Texas. Elementa, 2018, 6, .	1.1	12
273	The Global Methane Budget 2000â€“2017. Earth System Science Data, 2020, 12, 1561-1623.	3.7	1,199
274	The global methane budget 2000â€“2012. Earth System Science Data, 2016, 8, 697-751.	3.7	824
275	Is Abundant Natural Gas a Bridge to a Low-carbon Future or a Dead-end?. Energy Journal, 2019, 40, 1-26.	0.9	34
276	A Multicriteria Assessment Approach to the Energy Trilemma. Energy Journal, 2019, 40, .	0.9	9
277	Huff-n-Puff Technology for Enhanced Oil Recovery in Shale/Tight Oil Reservoirs: Progress, Gaps, and Perspectives. Energy & Fuels, 2021, 35, 17279-17333.	2.5	41
281	A Cost Benefit Analysis of Shale Gas Well Bonding Systems in Pennsylvania. SSRN Electronic Journal, 0, , .	0.4	0
282	Fracking en el AcuÃ±fero Transfronterizo Edwards-Trinity-El Burro: implicaciones y daÃ±os ambientales transfronterizos. Investigaciones GeogrÃ¡ficas, 2018, , .	0.0	2
284	Implications of Hydraulic Fracturing of Unconventional Oil and Gas Resources in Mexico. Water Science and Technology Library, 2020, , 99-123.	0.2	0
285	The U.S. Fracking Boom: Impact on Oil Prices. Energy Journal, 2019, 40, .	0.9	13
286	Unconventional Oil and Gas: Interactions with and Implications for Groundwater. Water Security in A New World, 2020, , 267-290.	0.1	0
287	A Bridge to Where? Tracing the Bridge Fuel Metaphor in the Canadian Media Sphere. Frontiers in Communication, 2020, 5, .	0.6	1
289	The perspective of enhanced geothermal energy integration with concentrated solar power and thermal energy storage. Energy Storage, 2022, 4, e303.	2.3	11
290	Activity and Water Footprint of Unconventional Energy Production under Hydroclimate Variation in Colorado. ACS ES&T Water, 2021, 1, 281-290.	2.3	2
291	Energy Market in the Post-COVID-19 World. Advances in Finance, Accounting, and Economics, 2022, , 75-93.	0.3	0
292	Oil and Gas. , 2022, , 17-57.		0

#	ARTICLE	IF	CITATIONS
293	Fault-Related Fluid Flow Implications for Unconventional Hydrocarbon Development, Beetaloo Sub-Basin (Northern Territory, Australia). <i>Geosciences (Switzerland)</i> , 2022, 12, 37.	1.0	3
294	Developing and enforcing fracking regulations to protect groundwater resources. <i>Npj Clean Water</i> , 2022, 5, .	3.1	4
296	Spatiotemporal Analysis for the Effect of Fracking on Stroke in the United States. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
297	Membrane-based treatment of petroleum wastewater. , 2022, , 103-122.		1
298	Oilonomics: Making sense of the impact of hydrocarbon production on socio-economics. , 2022, , .		0
299	Enhanced geothermal systems (EGS) a key component of a renewable energy-only grid. <i>Arabian Journal of Geosciences</i> , 2022, 15, 1.	0.6	5
300	â€Gas-Patch dads': experiences at the nexus of work, family, and community contexts. <i>Community, Work and Family</i> , 0, , 1-17.	1.5	0
301	Produced Water Treatment and Utilization: Challenges and Future Directions. , 2022, , .		3
309	Using weather radar to help minimize wind energy impacts on nocturnally migrating birds. <i>Conservation Letters</i> , 2022, 15, .	2.8	9
310	Interrelationship study of the impacts of hydraulic fracturing on the environment and socioeconomic activities: a novel approach to finding sustainable solutions. <i>Environmental Science Advances</i> , 2022, 1, 305-319.	1.0	2
311	Granular activated carbon (GAC) fixed bed adsorption combined with ultrafiltration for shale gas wastewater internal reuse. <i>Environmental Research</i> , 2022, 212, 113486.	3.7	4
313	Environmental foundations of oil and gas production in the Russian Federation. <i>IOP Conference Series: Earth and Environmental Science</i> , 2022, 1070, 012034.	0.2	0
314	Enhanced Water Resources Risk from Collocation of Disposal Wells and Legacy Oil and Gas Exploration and Production Regions in Texas. <i>Journal of the American Water Resources Association</i> , 0, , .	1.0	1
315	Spatiotemporal Correlation Analysis of Hydraulic Fracturing and Stroke in the United States. <i>International Journal of Environmental Research and Public Health</i> , 2022, 19, 10817.	1.2	3
316	Methods and benefits of measuring non-hydrocarbon gases from surface casing vents. <i>International Journal of Environmental Science and Technology</i> , 0, , .	1.8	1
317	Documented Orphaned Oil and Gas Wells Across the United States. <i>Environmental Science & Technology</i> , 2022, 56, 14228-14236.	4.6	16
318	A systematic quantitative review of the perceived environmental and natural resource-related impacts of unconventional oil and gas development. <i>The Extractive Industries and Society</i> , 2022, 12, 101176.	0.7	1
319	Modeling Household Earthquake Hazard Adjustment Intentions: An Extension of the Protection Motivation Theory. <i>Natural Hazards Review</i> , 2023, 24, .	0.8	6

#	ARTICLE	IF	CITATIONS
320	Towards efficient water management in large-scale shale gas fields of China. Journal of Water Reuse and Desalination, 2022, 12, 451-459.	1.2	0
321	Policy conflicts in shale development in China and the United States. Review of Policy Research, 2023, 40, 589-605.	2.8	1
322	Laboratory study of the factors affecting hydraulic fracturing effect for inter-salt oil shale layers, Qianjiang Depression, China. Petroleum Science, 2023, 20, 1690-1706.	2.4	1
323	Hybrid Machine Learning-Mathematical Programming Approach for Optimizing Gas Production and Water Management in Shale Gas Fields. ACS Sustainable Chemistry and Engineering, 2023, 11, 6043-6056.	3.2	2
324	A critical review of natural gas emissions certification in the United States. Environmental Research Letters, 2023, 18, 023002.	2.2	3
325	Produced Water Management and Utilization: Challenges and Future Directions. SPE Production and Operations, 2023, , 1-16.	0.4	1
326	Novel systematic approach for produced water volume quantification applicable for beneficial reuse. Environmental Science Advances, 2023, 2, 508-528.	1.0	1
327	Reducing oil and gas well leakage: a review of leakage drivers, methane detection and repair options. Environmental Research: Infrastructure and Sustainability, 2023, 3, 012002.	0.9	5
336	Hydraulic Fracturing Induced Fault Reactivation. , 2023, , 207-235.		0
348	Environmental challenges of natural gas extraction and production technologies. , 2024, , 75-101.		0