Elsa A Olivetti

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/9578641/publications.pdf

Version: 2024-02-01

103 papers	5,670 citations	87843 38 h-index	82499 72 g-index
110 all docs	110 docs citations	110 times ranked	6389 citing authors

#	Article	IF	Citations
1	Lithium-Ion Battery Supply Chain Considerations: Analysis of Potential Bottlenecks in Critical Metals. Joule, 2017, 1, 229-243.	11.7	937
2	Materials Synthesis Insights from Scientific Literature via Text Extraction and Machine Learning. Chemistry of Materials, 2017, 29, 9436-9444.	3.2	319
3	Strategies for improving the sustainability of structural metals. Nature, 2019, 575, 64-74.	13.7	301
4	Improving aluminum recycling: A survey of sorting and impurity removal technologies. Resources, Conservation and Recycling, 2012, 58, 79-87.	5.3	256
5	Material efficiency strategies to reducing greenhouse gas emissions associated with buildings, vehicles, and electronicsâ€"a review. Environmental Research Letters, 2019, 14, 043004.	2.2	225
6	Taking the Circularity to the Next Level: A Special Issue on the Circular Economy. Journal of Industrial Ecology, 2017, 21, 476-482.	2.8	223
7	A Machine Learning Approach to Zeolite Synthesis Enabled by Automatic Literature Data Extraction. ACS Central Science, 2019, 5, 892-899.	5.3	176
8	Comparing Life Cycle Energy and Global Warming Potential of Carbon Fiber Composite Recycling Technologies and Waste Management Options. ACS Sustainable Chemistry and Engineering, 2018, 6, 9854-9865.	3.2	155
9	Toward a sustainable materials system. Science, 2018, 360, 1396-1398.	6.0	143
10	Autonomous experimentation systems for materials development: A community perspective. Matter, 2021, 4, 2702-2726.	5.0	143
11	Virtual screening of inorganic materials synthesis parameters with deep learning. Npj Computational Materials, 2017, 3, .	3.5	131
12	Data-driven materials research enabled by natural language processing and information extraction. Applied Physics Reviews, 2020, 7, .	5.5	117
13	Perspectives on Cobalt Supply through 2030 in the Face of Changing Demand. Environmental Science & Technology, 2020, 54, 2985-2993.	4.6	116
14	Machine-learned and codified synthesis parameters of oxide materials. Scientific Data, 2017, 4, 170127.	2.4	115
15	Fouling resistant, high flux nanofiltration membranes from polyacrylonitrile-graft-poly(ethylene) Tj ETQq1 1 0.784314 rgBT /Overlock	4.1	98
16	A priori control of zeolite phase competition and intergrowth with high-throughput simulations. Science, 2021, 374, 308-315.	6.0	90
17	Rubbery Graft Copolymer Electrolytes for Solid-State, Thin-Film Lithium Batteries. Journal of the Electrochemical Society, 2005, 152, A1.	1.3	89
18	Environmental life-cycle assessment. Nature Materials, 2017, 16, 693-697.	13.3	85

#	Article	IF	Citations
19	Inorganic Materials Synthesis Planning with Literature-Trained Neural Networks. Journal of Chemical Information and Modeling, 2020, 60, 1194-1201.	2.5	85
20	Opportunities and challenges of text mining in materials research. IScience, 2021, 24, 102155.	1.9	81
21	Design for Recycling. Journal of Industrial Ecology, 2010, 14, 286-308.	2.8	78
22	Materials selection considerations for high entropy alloys. Scripta Materialia, 2017, 138, 145-150.	2.6	76
23	Anisotropic Structure and Transport in Self-Assembled Layered Polymerâ"Clay Nanocomposites. Langmuir, 2007, 23, 8515-8521.	1.6	70
24	Charging sustainable batteries. Nature Sustainability, 2022, 5, 176-178.	11.5	70
25	Doping level and work function control in oxidative chemical vapor deposited poly (3,4-ethylenedioxythiophene). Applied Physics Letters, 2007, 90, 152112.	1.5	67
26	A Methodology for Robust Comparative Life Cycle Assessments Incorporating Uncertainty. Environmental Science & Technology, 2016, 50, 6397-6405.	4.6	58
27	Sustainability through alloy design: Challenges and opportunities. Progress in Materials Science, 2021, 117, 100722.	16.0	58
28	Discovering Relationships between OSDAs and Zeolites through Data Mining and Generative Neural Networks. ACS Central Science, 2021, 7, 858-867.	5.3	57
29	Innovations to decarbonize materials industries. Nature Reviews Materials, 2022, 7, 275-294.	23.3	57
30	Graph similarity drives zeolite diffusionless transformations and intergrowth. Nature Materials, 2019, 18, 1177-1181.	13.3	54
31	Manufacturing variability drives significant environmental and economic impact: The case of carbon fiber reinforced polymer composites in the aerospace industry. Journal of Cleaner Production, 2020, 261, 121087.	4.6	52
32	Solâ"Gel Synthesis of Vanadium Oxide within a Block Copolymer Matrix. Chemistry of Materials, 2006, 18, 2828-2833.	3.2	51
33	End-of-life LCA allocation methods: Open loop recycling impacts on robustness of material selection decisions. , 2009, , .		51
34	Systematic control of the electrical conductivity of poly (3,4-ethylenedioxythiophene) via oxidative chemical vapor deposition (oCVD). Surface and Coatings Technology, 2007, 201, 9406-9412.	2.2	45
35	Manufacturing-focused emissions reductions in footwear production. Journal of Cleaner Production, 2013, 44, 18-29.	4.6	45
36	Text mining for processing conditions of solid-state battery electrolytes. Electrochemistry Communications, 2020, 121, 106860.	2.3	43

#	Article	IF	Citations
37	Beneficial use of boiler ash in alkali-activated bricks. Resources, Conservation and Recycling, 2018, 128, 1-10.	5.3	42
38	Toward Sustainable Material Usage: Evaluating the Importance of Market Motivated Agency in Modeling Material Flows. Environmental Science & Technology, 2011, 45, 4110-4117.	4.6	40
39	Conflict Minerals in the Compute Sector: Estimating Extent of Tin, Tantalum, Tungsten, and Gold Use in ICT Products. Environmental Science & Technology, 2015, 49, 974-981.	4.6	40
40	Fatty acid based prediction models for biodiesel properties incorporating compositional uncertainty. Fuel, 2017, 196, 13-20.	3.4	39
41	Methodology for pH measurement in high alkali cementitious systems. Cement and Concrete Research, 2020, 135, 106122.	4.6	38
42	Exploring the Viability of Probabilistic Under-Specification To Streamline Life Cycle Assessment. Environmental Science & Technology, 2013, 47, 5208-5216.	4.6	36
43	Impact of feedstock diversification on the cost-effectiveness of biodiesel. Applied Energy, 2014, 126, 281-296.	5.1	36
44	Econometric modeling of recycled copper supply. Resources, Conservation and Recycling, 2017, 122, 219-226.	5.3	33
45	Manufacturing scalability implications of materials choice in inorganic solid-state batteries. Joule, 2021, 5, 564-580.	11.7	33
46	The Materials Science Procedural Text Corpus: Annotating Materials Synthesis Procedures with Shallow Semantic Structures. , 2019, , .		33
47	Distilling a Materials Synthesis Ontology. Matter, 2019, 1, 8-12.	5.0	31
48	Advancing Alternative Analysis: Integration of Decision Science. Environmental Health Perspectives, 2017, 125, 066001.	2.8	27
49	Mineralogical and microstructural characterization of biomass ash binder. Cement and Concrete Composites, 2018, 89, 41-51.	4.6	26
50	Environmental and economic implications of U.S. postconsumer plastic waste management. Resources, Conservation and Recycling, 2021, 167, 105391.	5.3	24
51	Economics of End-of-Life Materials Recovery: A Study of Small Appliances and Computer Devices in Portugal. Environmental Science & Technology, 2016, 50, 4854-4862.	4.6	22
52	Chain Conformations at the Surface of a Polydisperse Amphiphilic Comb Copolymer Film. Macromolecules, 2006, 39, 5122-5126.	2.2	21
53	Increasing Secondary and Renewable Material Use: A Chance Constrained Modeling Approach To Manage Feedstock Quality Variation. Environmental Science & Technology, 2011, 45, 4118-4126.	4.6	21
54	Highâ€Resolution Insight into Materials Criticality: Quantifying Risk for Byâ€Product Metals from Primary Production. Journal of Industrial Ecology, 2019, 23, 452-465.	2.8	21

#	Article	IF	Citations
55	Emission impacts of Chinaâ€™s solid waste import ban and COVID-19 in the copper supply chain. Nature Communications, 2021, 12, 3753.	5.8	21
56	Database, Features, and Machine Learning Model to Identify Thermally Driven Metalâ€“Insulator Transition Compounds. Chemistry of Materials, 2021, 33, 5591-5605.	3.2	20
57	Streamlining the Life Cycle Assessment of Buildings by Structured Underâ€Specification and Probabilistic Triage. Journal of Industrial Ecology, 2019, 23, 268-279.	2.8	15
58	Economics of materials in mobile phone preprocessing, focus on non-printed circuit board materials. Waste Management, 2019, 87, 78-85.	3.7	14
59	Dissolution of olivines from steel and copper slags in basic solution. Cement and Concrete Research, 2020, 133, 106065.	4.6	13
60	Assessing recycling, displacement, and environmental impacts using an economicsâ€informed material system model. Journal of Industrial Ecology, 2022, 26, 1010-1024.	2.8	13
61	Designing for Manufacturing Scalability in Clean Energy Research. Joule, 2018, 2, 1642-1647.	11.7	12
62	Consequential effects of increased use of recycled fiber in the United States pulp and paper industry. Journal of Cleaner Production, 2019, 241, 118133.	4.6	12
63	Aluminum alloy compositions and properties extracted from a corpus of scientific manuscripts and US patents. Scientific Data, 2022, 9, 128.	2.4	12
64	Planning strategies to address operational and price uncertainty in biodiesel production. Applied Energy, 2019, 238, 1573-1581.	5.1	11
65	Analysis of cost-environmental trade-offs in biodiesel production incorporating waste feedstocks: A multi-objective programming approach. Journal of Cleaner Production, 2019, 216, 64-73.	4.6	11
66	Electrochemical Characterization of Vanadium Oxide Nanostructured Electrode. Journal of the Electrochemical Society, 2008, 155, A488.	1.3	10
67	Impact of Policy on Greenhouse Gas Emissions and Economics of Biodiesel Production. Environmental Science & Technology, 2014, 48, 7642-7650.	4.6	9
68	Understanding dynamic availability risk of critical materials: The role and evolution of market analysis and modeling. MRS Energy & Sustainability, 2015, 2, 1.	1.3	9
69	Integrated planning for design and production in two-stage recycling operations. European Journal of Operational Research, 2019, 273, 535-547.	3.5	9
70	Streamlined life cycle assessment: A case study on tablets and integrated circuits. Journal of Cleaner Production, 2018, 200, 819-826.	4.6	8
71	Reactivity of industrial wastes as measured through ICPâ€OES: A case study on siliceous Indian biomass ash. Journal of the American Ceramic Society, 2019, 102, 7678-7688.	1.9	7
72	Modeling the economic and environmental performance of recycling systems. , 2008, , .		6

#	Article	IF	Citations
73	The use of feedback in lab energy conservation: fume hoods at MIT. International Journal of Sustainability in Higher Education, 2010, 11, 217-235.	1.6	6
74	Value of information analysis for life cycle assessment: Uncertain emissions in the green manufacturing of electronic tablets. Journal of Cleaner Production, 2018, 197, 1540-1545.	4.6	6
75	Design parameters and environmental impact of printed wiring board manufacture. Journal of Cleaner Production, 2019, 238, 117807.	4.6	6
76	Leaching characteristics of biomass ash-based binder in neutral and acidic media. Cement and Concrete Composites, 2019, 100, 92-98.	4.6	6
77	Operational Strategies for Increasing Secondary Materials in Metals Production Under Uncertainty. Journal of Sustainable Metallurgy, 2017, 3, 350-361.	1.1	5
78	Literature mining for alternative cementitious precursors and dissolution rate modeling of glassy phases. Journal of the American Ceramic Society, 2021, 104, 3042-3057.	1.9	5
79	Development of structural descriptors to predict dissolution rate of volcanic glasses: Molecular dynamic simulations. Journal of the American Ceramic Society, 2022, 105, 2575-2594.	1.9	4
80	Data Mining Toward Increased Use of Aluminum Dross. Journal of Sustainable Metallurgy, 2015, 1, 53-64.	1.1	3
81	Life cycle assessment of CO ₂ conversion and storage in metalâ€“CO ₂ electrochemical cells. Journal of Industrial Ecology, 0, , .	2.8	3
82	Modeling the impact of product portfolio on the economic and environmental performance of recycling systems. , 2009, , .		2
83	Data and methodological needs to assess uncertainty in the carbon footprint of ICT products. , 2010, , .		2
84	Energy concerns in information and communication technology and the potential for photonics integration. , 2010, , .		2
85	Cobalt Criticality and Availability in the Wake of Increased Electric Vehicle Demand: A Short-Term Scenario Analysis. Minerals, Metals and Materials Series, 2019, , 355-357.	0.3	2
86	REWAS 2022: Developing Tomorrowâ€™s Technical Cycles. Journal of Sustainable Metallurgy, 2021, 7, 406-411.	1.1	2
87	A Multiobjective Model for Biodiesel Blends Minimizing Cost and Greenhouse Gas Emissions. Lecture Notes in Computer Science, 2014, , 653-666.	1.0	2
88	Industrial Symbiosis Among Small and Medium Scale Enterprises: Case of Muzaffarnagar, India. , 2016, , 173-177.		2
89	Factors to Consider When Designing Aluminium Alloys for Increased Scrap Usage. Minerals, Metals and Materials Series, 2022, , 465-473.	0.3	2
90	Learning the crystal structure genome for property classification. Physical Review Research, 2022, 4, .	1.3	2

#	Article	IF	Citations
91	Life cycle analysis of plastics for packaging: PVC and PET. , 2010, , .		1
92	The Sustainability Consortium update: Type III product declaration development for laptops. , 2011, , .		1
93	Reactivity of Crystalline Slags in Alkaline Solution. Minerals, Metals and Materials Series, 2019, , 177-187.	0.3	1
94	Original equipment manufacturer end-of-life equipment collection metrics. , 2008, , .		0
95	Improving aluminum recycling through investigations of thermodynamic effects in remelting. , 2010, , .		0
96	Environmental assessment of information technology products using a triage approach. , 2011, , .		0
97	What's your number?: Navigating the shifting landscape of ICT carbon footprint labels and standards. , 2012, , .		0
98	An overview of the Photonics Systems Manufacturing Consortium - A participant in the americal institute for manufacturing-integrated photonics institute. , 2016, , .		0
99	Environmental impact of high density interconnect printed boards as a function of design parameters. , 2017, , .		0
100	Concurrent Development of RIM Parts. Advanced Concurrent Engineering, 2011, , 345-352.	0.2	0
101	Utilizing Economic Value, Resource Availability, and Environmental Impact Metrics to Improve the WEEE and Battery Directives and Promote Alignment with the European Commission Circular Economy Strategy. , 2016, , 289-295.		0
102	The Value of Integrated Production Planning for Two-Stage Aluminum Recycling Operations. , 2016, , 231-233.		0
103	The Role of Manufacturing Variability on Environmental Impact. Minerals, Metals and Materials Series, 2019, , 19-32.	0.3	0