

Alicia Valero

List of Publications by Year in descending order

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Version: 2024-02-01

80
papers

1,917
citations

236925

25
h-index

265206

42
g-index

84
all docs

84
docs citations

84
times ranked

1251
citing authors

#	ARTICLE	IF	CITATIONS
1	Strategic mineral resources: Availability and future estimations for the renewable energy sector. Environmental Development, 2022, 41, 100640.	4.1	66
2	Exergy assessment of topsoil fertility. Ecological Modelling, 2022, 464, 109802.	2.5	4
3	The influence of ore grade decline on energy consumption and GhG emissions: The case of gold. Environmental Development, 2022, 41, 100683.	4.1	8
4	Thermodynamic Rarity Assessment of Mobile Phone PCBs: A Physical Criticality Indicator in Times of Shortage. Entropy, 2022, 24, 100.	2.2	2
5	The Energy Cost of Extracting Critical Raw Materials from Tailings: The Case of Coltan. Geosciences (Switzerland), 2022, 12, 214.	2.2	3
6	Looking into the Future. , 2021, , 207-242.		0
7	Exergy-Based Assessment of Polymers Production and Recycling: An Application to the Automotive Sector. Energies, 2021, 14, 363.	3.1	8
8	The Mineral Voracity of Human Beings. , 2021, , 13-32.		0
9	The (Thermodynamic) Value of Scarcity. , 2021, , 67-118.		0
10	On the Availability of Resources on Earth. , 2021, , 33-66.		0
11	Material Limits of the Energy Transition. , 2021, , 147-187.		0
12	Mining energy consumption as a function of ore grade decline: the case of lead and zinc. Journal of Sustainable Mining, 2021, 20, 109-121.	0.2	7
13	Resumen y análisis crítico del informe especial de la Agencia Internacional de la Energía: El Rol de los minerales críticos en la transición hacia energías limpias. Revista De Metalurgia, 2021, 57, e197.	0.5	3
14	Eco-credit system to incentivise the recycling of waste electric and electronic equipment based on a thermodynamic approach. International Journal of Exergy, 2021, 35, 132.	0.4	1
15	What Is This Book About?. , 2021, , 1-12.		0
16	Thermodynamic Assessment of the Loss of Mineral Wealth. , 2021, , 119-146.		0
17	The Hidden Cost of Technologies. , 2021, , 189-205.		0
18	Simulation to Recover Niobium and Tantalum from the Tin Slags of the Old Penouta Mine: A Case Study. Minerals (Basel, Switzerland), 2021, 11, 1123.	2.0	6

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19	Assessing Energy Descent Scenarios for the Ecological Transition in Spain 2020â€“2030. Sustainability, 2021, 13, 11867.	3.2	2
20	A New Approach for Static NOx Measurement in PTI. Sustainability, 2021, 13, 13424.	3.2	5
21	Assessment of strategic raw materials in the automobile sector. Resources, Conservation and Recycling, 2020, 161, 104968.	10.8	37
22	Mineral resources in life cycle impact assessment: part II â€“ recommendations on application-dependent use of existing methods and on future method development needs. International Journal of Life Cycle Assessment, 2020, 25, 798-813.	4.7	84
23	Mineral resources in life cycle impact assessmentâ€”part I: a critical review of existing methods. International Journal of Life Cycle Assessment, 2020, 25, 784-797.	4.7	95
24	Raw material use in a battery electric car â€“ a thermodynamic rarity assessment. Resources, Conservation and Recycling, 2020, 158, 104820.	10.8	24
25	Thermodynamic Rarity and Recyclability of Raw Materials in the Energy Transition: The Need for an In-Spiral Economy. Entropy, 2019, 21, 873.	2.2	20
26	The energy needed to concentrate minerals from common rocks: The case of copper ore. Energy, 2019, 181, 494-503.	8.8	15
27	Producing metals from common rocks: The case of gold. Resources, Conservation and Recycling, 2019, 148, 23-35.	10.8	8
28	Avoided energy cost of producing minerals: The case of iron ore. Energy Reports, 2019, 5, 364-374.	5.1	14
29	How can strategic metals drive the economy? Tungsten and tin production in Spain during periods of war. The Extractive Industries and Society, 2019, 6, 8-14.	1.2	11
30	Downcycling in automobile recycling process: A thermodynamic assessment. Resources, Conservation and Recycling, 2018, 136, 24-32.	10.8	39
31	Unfortunately, the amount of gold on earth is not infinite, a response to Wellmer and Scholz (2017). Resources, Conservation and Recycling, 2018, 133, 155-156.	10.8	2
32	Vehicles and Critical Raw Materials: A Sustainability Assessment Using Thermodynamic Rarity. Journal of Industrial Ecology, 2018, 22, 1005-1015.	5.5	40
33	Thermodynamic Approach to Evaluate the Criticality of Raw Materials and Its Application through a Material Flow Analysis in Europe. Journal of Industrial Ecology, 2018, 22, 839-852.	5.5	30
34	Exergoecology Assessment of Mineral Exports from Latin America: Beyond a Tonnage Perspective. Sustainability, 2018, 10, 723.	3.2	10
35	Sankey and Grassmann Diagrams for Mineral Trade in the EU-28. Green Energy and Technology, 2018, , 103-113.	0.6	1
36	Material bottlenecks in the future development of green technologies. Renewable and Sustainable Energy Reviews, 2018, 93, 178-200.	16.4	202

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37	Global material requirements for the energy transition. An exergy flow analysis of decarbonisation pathways. <i>Energy</i> , 2018, 159, 1175-1184.	8.8	78
38	The cost of mineral depletion in Latin America: An exergoecology view. <i>Resources Policy</i> , 2018, 59, 117-124.	9.6	19
39	Assessing the exergy degradation of the natural capital: From Szargut's updated reference environment to the new thermoecological-cost methodology. <i>Energy</i> , 2018, 163, 1140-1149.	8.8	14
40	Thermodynamic Methods to Evaluate Resources. <i>Green Energy and Technology</i> , 2017, , 131-165.	0.6	2
41	Assessing maximum production peak and resource availability of non-fuel mineral resources: Analyzing the influence of extractable global resources. <i>Resources, Conservation and Recycling</i> , 2017, 125, 208-217.	10.8	79
42	Environmental Impacts of Promoting New Public Transport Systems in Urban Mobility: A Case Study. <i>Journal of Sustainable Development of Energy, Water and Environment Systems</i> , 2017, 5, 377-395.	1.9	7
43	Integrating the Thermo-ecological and Exergy Replacement Costs to Assess Mineral Processing. <i>Green Energy and Technology</i> , 2017, , 337-352.	0.6	1
44	Resources. Production. Depletion. <i>Green Energy and Technology</i> , 2017, , 7-36.	0.6	2
45	The Thermodynamic Rarity Concept for the Evaluation of Mineral Resources. <i>Green Energy and Technology</i> , 2017, , 203-232.	0.6	1
46	Decreasing Ore Grades in Global Metallic Mining: A Theoretical Issue or a Global Reality?. <i>Resources</i> , 2016, 5, 36.	3.5	193
47	Material flow analysis for Europe: An exergoecological approach. <i>Ecological Indicators</i> , 2016, 60, 603-610.	6.3	32
48	Physical Assessment of the Mineral Capital of a Nation: The Case of an Importing and an Exporting Country. <i>Resources</i> , 2015, 4, 857-870.	3.5	11
49	An exergoecological analysis of the mineral economy in Spain. <i>Energy</i> , 2015, 88, 2-8.	8.8	11
50	Thermodynamic Rarity and the Loss of Mineral Wealth. <i>Energies</i> , 2015, 8, 821-836.	3.1	20
51	Colombian mineral resources: An analysis from a Thermodynamic Second Law perspective. <i>Resources Policy</i> , 2015, 45, 23-28.	9.6	16
52	Exergy cost allocation of by-products in the mining and metallurgical industry. <i>Resources, Conservation and Recycling</i> , 2015, 102, 128-142.	10.8	25
53	Using thermodynamics to improve the resource efficiency indicator GDP/DMC. <i>Resources, Conservation and Recycling</i> , 2015, 94, 110-117.	10.8	27
54	Thermo-ecological and exergy replacement costs of nickel processing. <i>Energy</i> , 2014, 72, 103-114.	8.8	8

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55	How to account for mineral depletion. The exergy and economic mineral balance of Spain as a case study. <i>Ecological Indicators</i> , 2014, 46, 548-559.	6.3	19
56	Hydropower's Contribution to the Environmental Integrity of the Embryonic Chinese Carbon Market. <i>Journal of Environmental Accounting and Management</i> , 2014, 2, 91-103.	0.5	1
57	Exergy accounting applied to metallurgical systems: The case of nickel processing. <i>Energy</i> , 2013, 62, 37-45.	8.8	28
58	Exergoecology as a tool for ecological modelling. The case of the US food production chain. <i>Ecological Modelling</i> , 2013, 255, 21-28.	2.5	12
59	Thermoeconomic tools for the analysis of eco-industrial parks. <i>Energy</i> , 2013, 62, 62-72.	8.8	42
60	From Grave to Cradle. <i>Journal of Industrial Ecology</i> , 2013, 17, 43-52.	5.5	31
61	GLOBAL GOLD MINING: Is technological learning overcoming the declining in ore grades?. <i>Journal of Environmental Accounting and Management</i> , 2013, 1, 85-101.	0.5	11
62	Exergy Replacement Cost of Mineral Resources. <i>Journal of Environmental Accounting and Management</i> , 2013, 1, 147-158.	0.5	24
63	Exergy of comminution and the Thanatia Earth's model. <i>Energy</i> , 2012, 44, 1085-1093.	8.8	24
64	What are the clean reserves of fossil fuels?. <i>Resources, Conservation and Recycling</i> , 2012, 68, 126-131.	10.8	24
65	The thermodynamic properties of the upper continental crust: Exergy, Gibbs free energy and enthalpy. <i>Energy</i> , 2012, 41, 121-127.	8.8	20
66	A prediction of the exergy loss of the world's mineral reserves in the 21st century. <i>Energy</i> , 2011, 36, 1848-1854.	8.8	38
67	The crepuscular planet. A model for the exhausted atmosphere and hydrosphere. <i>Energy</i> , 2011, 36, 3745-3753.	8.8	41
68	The crepuscular planet. A model for the exhausted continental crust. <i>Energy</i> , 2011, 36, 694-707.	8.8	50
69	Exergoecology: A thermodynamic approach for accounting the Earth's mineral capital. The case of bauxite's aluminium and limestone's lime chains. <i>Energy</i> , 2010, 35, 229-238.	8.8	29
70	Physical geonomics: Combining the exergy and Hubbert peak analysis for predicting mineral resources depletion. <i>Resources, Conservation and Recycling</i> , 2010, 54, 1074-1083.	10.8	66
71	Environmental costs of a river watershed within the European water framework directive: Results from physical hydromonics. <i>Energy</i> , 2010, 35, 1008-1016.	8.8	14
72	Inventory of the exergy resources on earth including its mineral capital. <i>Energy</i> , 2010, 35, 989-995.	8.8	39

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73	Application of Thermoconomics to Industrial Ecology. Entropy, 2010, 12, 591-612.	2.2	49
74	Physical Hydronomics: Application of the exergy analysis to the assessment of environmental costs of water bodies. The case of the inland basins of Catalonia. Energy, 2009, 34, 2101-2107.	8.8	18
75	Evolution of the decrease in mineral exergy throughout the 20th century. The case of copper in the US. Energy, 2008, 33, 107-115.	8.8	27
76	Exergy and the Hubbert Peak: Assessment of the Scarcity of Minerals on Earth. , 2008, , .		2
77	Exergy as an Indicator for Resources Scarcity: The Exergy Loss of Australian Mineral Capital " A Case Study. , 2006, , 301.		0
78	Exergy Evaluation of the Mineral Capital on Earth: Influence of the Reference Environment. , 2005, , 235.		1
79	Toward Material Efficient Vehicles: Ecodesign Recommendations Based on Metal Sustainability Assessments. SAE International Journal of Materials and Manufacturing, 0, 11, 213-228.	0.3	10
80	Accounting for Mineral Depletion Under the UN-SEEA Framework. , 0, , .		0