Thomas E Graedel

List of Publications by Year in Descending Order

267 papers	16,555 citations	74 h-index	120 g-index
288 ext. papers	18,690 ext. citations	8.7 avg, IF	7.1 L-index

#	Paper	IF	Citations
267	Alloy information helps prioritize material criticality lists.. *Nature Communications*, **2022**, 13, 150	17.4	3
266	U.S. Cobalt: A Cycle of Diverse and Important Uses. *Resources, Conservation and Recycling*, **2022**, 184, 106441	11.9	0
265	Uncertain Future of American Lithium: A Perspective until 2050. *Environmental Science & Technology*, **2021**, 55, 16184-16194	10.3	3
264	The role of design in circular economy solutions for critical materials. *One Earth*, **2021**, 4, 353-362	8.1	13
263	United States plastics: Large flows, short lifetimes, and negligible recycling. *Resources, Conservation and Recycling*, **2021**, 167, 105440	11.9	23
262	Buildings as a global carbon sink. *Nature Sustainability*, **2020**, 3, 269-276	22.1	151
261	The Hawaiian Islands: Conceptualizing an Industrial Ecology Holarchic System. *Sustainability*, **2020**, 12, 3104	3.6	4
260	Refining the understanding of China's tungsten dominance with dynamic material cycle analysis. *Resources, Conservation and Recycling*, **2020**, 158, 104829	11.9	9
259	Exploring future copper demand, recycling and associated greenhouse gas emissions in the EU-28. *Global Environmental Change*, **2020**, 63, 102093	10.1	19
258	The rise and fall of American lithium. *Resources, Conservation and Recycling*, **2020**, 162, 105034	11.9	12
257	YSTAFDB, a unified database of material stocks and flows for sustainability science. *Scientific Data*, **2019**, 6, 84	8.2	12
256	Material Flow Analysis from Origin to Evolution. *Environmental Science & Technology*, **2019**, 53, 12188-12196	10.3	49
255	On the Spatial Dimension of the Circular Economy. *Resources*, **2019**, 8, 32	3.7	16
254	Impact of the establishment of US offshore wind power on neodymium flows. *Nature Sustainability*, **2019**, 2, 332-338	22.1	40
253	Comparative analysis of metals use in the United States economy. *Resources, Conservation and Recycling*, **2019**, 145, 448-456	11.9	5
252	Defining the Criticality of Materials. *World Scientific Series in Current Energy Issues*, **2019**, 103-115	0.2	
251	Unified Materials Information System (UMIS): An Integrated Material Stocks and Flows Data Structure. *Journal of Industrial Ecology*, **2019**, 23, 222-240	7.2	11

250	Resource Demand Scenarios for the Major Metals. *Environmental Science & Technology*, **2018**, 52, 2491-2497	10.3	99
249	Global Human Appropriation of Net Primary Production and Associated Resource Decoupling: 2010-2050. *Environmental Science & Technology*, **2018**, 52, 1208-1215	10.3	15
248	Analyzing critical material demand: A revised approach. *Science of the Total Environment*, **2018**, 630, 1143-1148	10.1	10
247	Grand Challenges in Metal Life Cycles. *Natural Resources Research*, **2018**, 27, 181-190	4.9	13
246	Implications of Emerging Vehicle Technologies on Rare Earth Supply and Demand in the United States. *Resources*, **2018**, 7, 9	3.7	38
245	Toward Financially Viable Phytoextraction and Production of Plant-Based Palladium Catalysts. *Environmental Science & Technology*, **2017**, 51, 2992-3000	10.3	24
244	Quantifying the potential for recoverable resources of gallium, germanium and antimony as companion metals in Australia. *Ore Geology Reviews*, **2017**, 82, 148-159	3.2	10
243	How "black swan" disruptions impact minor metals. *Resources Policy*, **2017**, 54, 88-96	7.2	19
242	Assessing the Reliability of Material Flow Analysis Results: The Cases of Rhenium, Gallium, and Germanium in the United States Economy. *Environmental Science & Technology*, **2017**, 51, 11839-11847	10.3	6
241	Anthropogenic nickel supply, demand, and associated energy and water use. *Resources, Conservation and Recycling*, **2017**, 125, 300-307	11.9	46
240	Criticality in Bulk Metallic Glass Constituent Elements. *Jom*, **2017**, 69, 2156-2163	2.1	4
239	Should we mine the deep seafloor?. *Earth's Future*, **2017**, 5, 655-658	7.9	16
238	Copper demand, supply, and associated energy use to 2050. *Global Environmental Change*, **2016**, 39, 305-315	10.1	163
237	Mapping supply chain risk by network analysis of product platforms. *Sustainable Materials and Technologies*, **2016**, 10, 14-22	5.3	27
236	A half-century of global phosphorus flows, stocks, production, consumption, recycling, and environmental impacts. *Global Environmental Change*, **2016**, 36, 139-152	10.1	132
235	Deriving the Metal and Alloy Networks of Modern Technology. *Environmental Science & Technology*, **2016**, 50, 4082-90	10.3	36
234	Industrial Ecology's First Decade **2016**, 3-20		12
233	Metal Criticality Determination for Australia, the US, and the Planet: Comparing 2008 and 2012 Results. *Resources*, **2016**, 5, 29	3.7	19

232	Six Years of Criticality Assessments: What Have We Learned So Far?. *Journal of Industrial Ecology*, **2016**, 20, 692-699	7.2	84
231	Criticality of Seven Specialty Metals. *Journal of Industrial Ecology*, **2016**, 20, 837-853	7.2	26
230	Structural Investigation of Aluminum in the U.S. Economy using Network Analysis. *Environmental Science & Technology*, **2016**, 50, 4091-101	10.3	30
229	Building the Material Flow Networks of Aluminum in the 2007 U.S. Economy. *Environmental Science & Technology*, **2016**, 50, 3905-12	10.3	36
228	Metal Dissipation and Inefficient Recycling Intensify Climate Forcing. *Environmental Science & Technology*, **2016**, 50, 11394-11402	10.3	39
227	Criticality of the Rare Earth Elements. *Journal of Industrial Ecology*, **2015**, 19, 1044-1054	7.2	120
226	By-product metals are technologically essential but have problematic supply. *Science Advances*, **2015**, 1, e1400180	14.3	162
225	Criticality of metals and metalloids. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 4257-62	11.5	351
224	Solar cell metals and their hosts: A tale of oversupply and undersupply. *Applied Energy*, **2015**, 158, 167-177	10.7	44
223	The criticality of metals: a perspective for geologists. *Geological Society Special Publication*, **2015**, 393, 291-302	1.7	9
222	On the materials basis of modern society. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 6295-300	11.5	265
221	Criticality of the Geological Zinc, Tin, and Lead Family. *Journal of Industrial Ecology*, **2015**, 19, 628-644	7.2	53
220	Industrial Ecology **2015**, 843-853		4
219	In-use product stocks link manufactured capital to natural capital. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 6265-70	11.5	86
218	Industrial Ecology: The role of manufactured capital in sustainability. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 6260-4	11.5	78
217	The criticality of four nuclear energy metals. *Resources, Conservation and Recycling*, **2015**, 95, 193-201	11.9	31
216	The potential for mining trace elements from phosphate rock. *Journal of Cleaner Production*, **2015**, 91, 337-346	10.3	61
215	Lost by Design. *Environmental Science & Technology*, **2015**, 49, 9443-51	10.3	112

214	Improved alternatives for estimating in-use material stocks. *Environmental Science & Technology*, **2015**, 49, 3048-55	10.3	27
213	Employing Considerations of Criticality in Product Design. *Jom*, **2014**, 66, 2360-2366	2.1	27
212	Dysprosium, the balance problem, and wind power technology. *Applied Energy*, **2014**, 136, 548-559	10.7	55
211	Sustainability for the nation: resource connections and governance linkages. *Environmental Science & Technology*, **2014**, 48, 7197-9	10.3	1
210	Criticality of iron and its principal alloying elements. *Environmental Science & Technology*, **2014**, 48, 4171-7	10.3	71
209	Life cycle carbon benefits of aerospace alloy recycling. *Journal of Cleaner Production*, **2014**, 80, 38-45	10.3	31
208	Quantifying the Recoverable Resources of Companion Metals: A Preliminary Study of Australian Mineral Resources. *Resources*, **2014**, 3, 657-671	3.7	9
207	Recycling in Context **2014**, 17-26		4
206	Phytoextraction as a tool for green chemistry. *Green Processing and Synthesis*, **2014**, 3,	3.9	9
205	Quantifying the recoverable resources of by-product metals: The case of cobalt. *Ore Geology Reviews*, **2013**, 55, 87-98	3.2	92
204	Dynamic analysis of the global metals flows and stocks in electricity generation technologies. *Journal of Cleaner Production*, **2013**, 59, 260-273	10.3	128
203	Global anthropogenic selenium cycles for 1940–2010. *Resources, Conservation and Recycling*, **2013**, 73, 17-22	11.9	34
202	Uncovering the end uses of the rare earth elements. *Science of the Total Environment*, **2013**, 461-462, 781-4	10.2	80
201	The omnivorous diet of modern technology. *Resources, Conservation and Recycling*, **2013**, 74, 1-7	11.9	75
200	Global anthropogenic tellurium cycles for 1940–2010. *Resources, Conservation and Recycling*, **2013**, 76, 21-26	11.9	39
199	Metal resources, use and Criticality **2013**, 1-19		7
198	Exploring the Global Journey of Nickel with Markov Chain Models. *Journal of Industrial Ecology*, **2012**, 16, 334-342	7.2	33
197	Criticality of the geological copper family. *Environmental Science & Technology*, **2012**, 46, 1071-8	10.3	124

196	Challenges in metal recycling. *Science*, **2012**, 337, 690-5	33.3	443
195	Tracking the metal of the goblins: cobalt's cycle of use. *Environmental Science & Technology*, **2012**, 46, 1079-86	10.3	69
194	Anthropogenic cycles of the elements: a critical review. *Environmental Science & Technology*, **2012**, 46, 8574-86	10.3	169
193	Dynamic analysis of aluminum stocks and flows in the United States: 1900-2009. *Ecological Economics*, **2012**, 81, 92-102	5.6	94
192	Methodology of metal criticality determination. *Environmental Science & Technology*, **2012**, 46, 1063-70	10.3	367
191	Will metal scarcity impede routine industrial use?. *MRS Bulletin*, **2012**, 37, 325-331	3.2	40
190	Criticality of non-fuel minerals: a review of major approaches and analyses. *Environmental Science & Technology*, **2011**, 45, 7620-30	10.3	260
189	Global in-use stocks of the rare Earth elements: a first estimate. *Environmental Science & Technology*, **2011**, 45, 4096-101	10.3	280
188	What Do We Know About Metal Recycling Rates?. *Journal of Industrial Ecology*, **2011**, 15, 355-366	7.2	377
187	Global Rare Earth In-Use Stocks in NdFeB Permanent Magnets. *Journal of Industrial Ecology*, **2011**, 15, 836-843	7.2	139
186	Regional development or resource preservation? A perspective from Japanese appliance exports. *Ecological Economics*, **2011**, 70, 788-797	5.6	22
185	On the Future Availability of the Energy Metals. *Annual Review of Materials Research*, **2011**, 41, 323-335	12.8	110
184	Uncovering the global life cycles of the rare earth elements. *Scientific Reports*, **2011**, 1, 145	4.9	68
183	Metal spectra as indicators of development. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 20905-10	11.5	66
182	Global stainless steel cycle exemplifies China's rise to metal dominance. *Environmental Science & Technology*, **2010**, 44, 3940-6	10.3	49
181	Aluminum in-use stocks in China: a bottom-up study. *Journal of Material Cycles and Waste Management*, **2010**, 12, 66-82	3.4	18
180	Lead In-Use Stock. *Journal of Industrial Ecology*, **2009**, 13, 112-126	7.2	41
179	Losses to the environment from the multilevel cycle of anthropogenic lead. *Environmental Pollution* , **2009**, 157, 2670-7	9.3	30

178	The Hidden Trade of Metals in the United States. *Journal of Industrial Ecology*, **2008**, 12, 739-753	7.2	18
177	Anthropogenic nickel cycle: insights into use, trade, and recycling. *Environmental Science & Technology*, **2008**, 42, 3394-400	10.3	151
176	In-use stocks of metals: status and implications. *Environmental Science & Technology*, **2008**, 42, 7038-45	10.3	156
175	Illuminating tungsten's life cycle in the United States: 1975-2000. *Environmental Science & Technology*, **2008**, 42, 3835-42	10.3	25
174	Anthropogenic metal cycles in China. *Journal of Material Cycles and Waste Management*, **2008**, 10, 188-197	3.4	29
173	The multilevel cycle of anthropogenic lead. *Resources, Conservation and Recycling*, **2008**, 52, 1058-1064	11.9	38
172	The multilevel cycle of anthropogenic lead. *Resources, Conservation and Recycling*, **2008**, 52, 1050-1057	11.9	53
171	Aluminium in-use stocks in the state of Connecticut. *Resources, Conservation and Recycling*, **2008**, 52, 1271-1282	11.9	31
170	The energy benefit of stainless steel recycling. *Energy Policy*, **2008**, 36, 181-192	7.2	109
169	Multilevel Anthropogenic Cycles of Copper and Zinc: A Comparative Statistical Analysis. *Journal of Industrial Ecology*, **2008**, 10, 89-110	7.2	7
168	Explanatory Variables for per Capita Stocks and Flows of Copper and Zinc. *Journal of Industrial Ecology*, **2008**, 10, 111-132	7.2	20
167	Dining at the periodic table: metals concentrations as they relate to recycling. *Environmental Science & Technology*, **2007**, 41, 1759-65	10.3	99
166	Forging the anthropogenic iron cycle. *Environmental Science & Technology*, **2007**, 41, 5120-9	10.3	215
165	Silver emissions and their environmental impacts: a multilevel assessment. *Environmental Science & Technology*, **2007**, 41, 6283-9	10.3	123
164	Earth's anthrobiogeochemical copper cycle. *Global Biogeochemical Cycles*, **2007**, 21, n/a-n/a	5.9	33
163	Metal capital sustaining a North American city: Iron and copper in New Haven, CT. *Resources, Conservation and Recycling*, **2007**, 49, 406-420	11.9	36
162	Bottom-Up Study of in-use nickel stocks in New Haven, CT. *Resources, Conservation and Recycling*, **2007**, 50, 58-70	11.9	28
161	On the sustainability of metal supplies: A response to Tilton and Lagos. *Resources Policy*, **2007**, 32, 24-28	7.2	42

160	Spatial characterisation of multi-level in-use copper and zinc stocks in Australia. *Journal of Cleaner Production*, **2007**, 15, 849-861	10.3	71
159	Copper and zinc recycling in Australia: potential quantities and policy options. *Journal of Cleaner Production*, **2007**, 15, 862-877	10.3	24
158	Technological Use Histories for Solder Metals **2006**,		2
157	Exploring the engine of anthropogenic iron cycles. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 16111-6	11.5	189
156	Making Metals Count: Applications of Material Flow Analysis. *Environmental Engineering Science*, **2006**, 23, 493-506	2	20
155	Metal stocks and sustainability. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 1209-14	11.5	435
154	Copper mines above and below the ground. *Environmental Science & Technology*, **2006**, 40, 3135-41	10.3	64
153	The contemporary anthropogenic chromium cycle. *Environmental Science & Technology*, **2006**, 40, 7060-9	10.3	159
152	The contemporary materials cycle for radioactive 137Cs in the United States. *Health Physics*, **2006**, 90, 521-32	2.3	3
151	The contemporary European silver cycle. *Resources, Conservation and Recycling*, **2006**, 46, 27-43	11.9	31
150	The contemporary Latin America and the Caribbean zinc cycle: One year stocks and flows. *Resources, Conservation and Recycling*, **2006**, 47, 82-100	11.9	13
149	Quantitative guidelines for urban sustainability. *Technology in Society*, **2006**, 28, 45-61	6.3	30
148	Case studies in quantitative urban sustainability. *Technology in Society*, **2006**, 28, 105-123	6.3	6
147	The contemporary Asian silver cycle: 1-year stocks and flows. *Journal of Material Cycles and Waste Management*, **2005**, 7, 93-103	3.4	17
146	Contemporary anthropogenic silver cycle: a multilevel analysis. *Environmental Science & Technology*, **2005**, 39, 4655-65	10.3	93
145	The Multilevel Cycle of Anthropogenic Zinc. *Journal of Industrial Ecology*, **2005**, 9, 67-90	7.2	94
144	Exploratory Data Analysis of the Multilevel Anthropogenic Zinc Cycle. *Journal of Industrial Ecology*, **2005**, 9, 91-108	7.2	8
143	Twentieth century copper stocks and flows in North America: A dynamic analysis. *Ecological Economics*, **2005**, 54, 37-51	5.6	154

142	Industrial Ecology **2004**, 373-382		2
141	ELEMENTAL CYCLES: A Status Report on Human or Natural Dominance. *Annual Review of Environment and Resources*, **2004**, 29, 69-107	17.2	107
140	The contemporary Oceania zinc cycle: one-year stocks and flows. *Journal of Material Cycles and Waste Management*, **2004**, 6, 125	3.4	6
139	Industrial ecology: a teenager progress. *Technology in Society*, **2004**, 26, 433-445	6.3	40
138	Where is all the zinc going: The stocks and flows project, Part 2. *Jom*, **2004**, 56, 24-29	2.1	14
137	The contemporary Latin American and Caribbean copper cycle: 1 year stocks and flows. *Resources, Conservation and Recycling*, **2004**, 41, 23-46	11.9	28
136	Multilevel cycle of anthropogenic copper. *Environmental Science & Technology*, **2004**, 38, 1242-52	10.3	207
135	Exploratory data analysis of the multilevel anthropogenic copper cycle. *Environmental Science & Technology*, **2004**, 38, 1253-61	10.3	38
134	Greening the Service Industries. *Service Industries Journal*, **2003**, 23, 48-64	5.7	5
133	The copper cycles of European countries. *Regional Environmental Change*, **2003**, 3, 119-127	4.3	7
132	The contemporary copper cycle of Asia. *Journal of Material Cycles and Waste Management*, **2003**, 5, 143-156	3.4	30
131	The contemporary European zinc cycle: 1-year stocks and flows. *Resources, Conservation and Recycling*, **2003**, 39, 137-160	11.9	47
130	The characterization of technological zinc cycles. *Resources, Conservation and Recycling*, **2003**, 39, 107-135	11.9	69
129	Research issues in sustainable consumption: toward an analytical framework for materials and the environment. *Environmental Science & Technology*, **2003**, 37, 5383-8	10.3	21
128	The contemporary European copper cycle: waste management subsystem. *Ecological Economics*, **2002**, 42, 43-57	5.6	136
127	The contemporary European copper cycle: The characterization of technological copper cycles. *Ecological Economics*, **2002**, 42, 9-26	5.6	97
126	The contemporary European copper cycle: statistical entropy analysis. *Ecological Economics*, **2002**, 42, 59-72	5.6	74
125	The contemporary European copper cycle: 1 year stocks and flows. *Ecological Economics*, **2002**, 42, 27-42	5.6	92

124	Life cycle and matrix analyses for re-refined Oil in Japan. *International Journal of Life Cycle Assessment*, **2002**, 7, 95-102	4.6	9
123	Improving the overall environmental performance of existing telecommunications facilities. *International Journal of Life Cycle Assessment*, **2002**, 7, 219-224	4.6	13
122	Where has all the copper gone: The stocks and flows project, part 1. *Jom*, **2002**, 54, 21-26	2.1	44
121	Material substitution: a resource supply perspective. *Resources, Conservation and Recycling*, **2002**, 34, 107-115	11.9	15
120	Hierarchical metrics for sustainability. *Environmental Quality Management*, **2002**, 12, 21-30	0.8	24
119	Industrial Ecosystems as Food Webs. *Journal of Industrial Ecology*, **2002**, 6, 29-38	7.2	90
118	Getting serious about sustainability. *Environmental Science & Technology*, **2002**, 36, 523-9	10.3	65
117	Quantitative sustainability in a college or university setting. *International Journal of Sustainability in Higher Education*, **2002**, 3, 346-358	3.9	17
116	Green chemistry as systems science. *Pure and Applied Chemistry*, **2001**, 73, 1243-1246	2.1	10
115	Improving the overall environmental performance of existing power generating facilities. *IEEE Transactions on Energy Conversion*, **2001**, 16, 234-238	5.4	1
114	Mechanisms for the Atmospheric Corrosion of Carbonate Stone. *Journal of the Electrochemical Society*, **2000**, 147, 1006	3.9	22
113	Corrosion Mechanisms for Nickel Exposed to the Atmosphere. *Journal of the Electrochemical Society*, **2000**, 147, 1010	3.9	13
112	Peer reviewed: the evolution of industrial ecology. *Environmental Science & Technology*, **2000**, 34, 28A-31A	10.3	26
111	□onditioned Air□ Evaluating an Environmentally Preferable Service. *Environmental Science & Technology*, **2000**, 34, 541-545	10.3	17
110	Composite global emissions of reactive chlorine from anthropogenic and natural sources: Reactive Chlorine Emissions Inventory. *Journal of Geophysical Research*, **1999**, 104, 8429-8440		272
109	Global emissions of hydrogen chloride and chloromethane from coal combustion, incineration and industrial activities: Reactive Chlorine Emissions Inventory. *Journal of Geophysical Research*, **1999**, 104, 8391-8403		130
108	Preface [to special section on Reactive Chlorine Emissions Inventory (RCEI)]. *Journal of Geophysical Research*, **1999**, 104, 8331-8332		17
107	Anthropogenic emissions of trichloromethane (chloroform, CHCl3) and chlorodifluoromethane (HCFC-22): Reactive Chlorine Emissions Inventory. *Journal of Geophysical Research*, **1999**, 104, 8405-8415		52

106	Response to Comments by Paul P. Craig. *Journal of Industrial Ecology*, **1998**, 2, 31-33	7.2	2
105	Life-Cycle Assessment in the Service Industries. *Journal of Industrial Ecology*, **1997**, 1, 57-70	7.2	33
104	Global gridded inventories of anthropogenic emissions of sulfur and nitrogen. *Journal of Geophysical Research*, **1996**, 101, 29239-29253		410
103	Gildes model studies of aqueous chemistry. I. Formulation and potential applications of the multi-regime model. *Corrosion Science*, **1996**, 38, 2153-2180	6.8	58
102	Gildes model studies of aqueous chemistry. II. The corrosion of zinc in gaseous exposure chambers. *Corrosion Science*, **1996**, 38, 2181-2199	6.8	32
101	Gildes model studies of aqueous chemistry. III. Initial SO2-induced atmospheric corrosion of copper. *Corrosion Science*, **1996**, 38, 2201-2224	6.8	35
100	ON THE CONCEPT OF INDUSTRIAL ECOLOGY. *Annual Review of Environment and Resources*, **1996**, 21, 69-98		124
99	The Budget and Cycle of Earth's Natural Chlorine. *Pure and Applied Chemistry*, **1996**, 68, 1689-1697	2.1	75
98	Global emissions inventories of acid-related compounds. *Water, Air, and Soil Pollution*, **1995**, 85, 25-36	2.6	21
97	Tropospheric budget of reactive chlorine. *Global Biogeochemical Cycles*, **1995**, 9, 47-77	5.9	243
96	Matrix Approaches to Abridged Life Cycle Assessment. *Environmental Science & Technology*, **1995**, 29, 134A-139A	10.3	92
95	. *At&T Technical Journal*, **1995**, 74, 17-25		17
94	Global emissions inventories to aid atmospheric modelers. *Eos*, **1994**, 75, 585	1.5	9
93	Global Emissions and Models of Photochemically Active Compounds **1994**, 223-247		47
92	A compilation of inventories of emissions to the atmosphere. *Global Biogeochemical Cycles*, **1993**, 7, 1-26	5.9	95
91	The Kuwait Environment and Its Effects on Electronic Materials and Components. *Journal of the Electrochemical Society*, **1992**, 139, 2058-2066	3.9	6
90	Industrial ecology: concepts and approaches. *Proceedings of the National Academy of Sciences of the United States of America*, **1992**, 89, 793-7	11.5	205
89	Corrosion Mechanisms for Silver Exposed to the Atmosphere. *Journal of the Electrochemical Society*, **1992**, 139, 1963-1970	3.9	254

88	Early solar mass loss: A potential solution to the weak sun paradox. *Geophysical Research Letters*, **1991**, 18, 1881-1884	4.9	27
87	Genetic activity profiles in the testing and evaluation of chemical mixtures. *Teratogenesis, Carcinogenesis, and Mutagenesis*, **1990**, 10, 147-64		6
86	Chemical insights into the interactions of the atmosphere with metals. *Marine Chemistry*, **1990**, 30, 123-146	3.7	5
85	The impact of environmental issues on materials and processes. *At&T Technical Journal*, **1990**, 69, 129-140		2
84	Corrosion Mechanisms for Iron and Low Alloy Steels Exposed to the Atmosphere. *Journal of the Electrochemical Society*, **1990**, 137, 2385-2394	3.9	107
83	Regional and Global Impacts on the Biosphere. *Environment*, **1989**, 31, 8-41	2.8	4
82	Corrosion Mechanisms for Zinc Exposed to the Atmosphere. *Journal of the Electrochemical Society*, **1989**, 136, 193C-203C	3.9	211
81	Regional and global impacts on the biosphere. *IEEE Power Engineering Review*, **1989**, 9, 10-14		
80	Corrosion Mechanisms for Aluminum Exposed to the Atmosphere. *Journal of the Electrochemical Society*, **1989**, 136, 204C-212C	3.9	111
79	. *Tellus, Series B: Chemical and Physical Meteorology*, **1988**, 40B, 335-339	3.3	44
78	Statistical analysis of Salmonella test data and comparison to results of animal cancer tests. *Mutation Research - Genetic Toxicology Testing and Biomonitoring of Environmental Or Occupational Exposure*, **1988**, 205, 183-95		44
77	Panel 4: Chemistry at the air-sea interface. *Applied Geochemistry*, **1988**, 3, 37-48	3.5	2
76	On the Involvement of H 2 O 2 and SO 2 in the Atmospheric Corrosion of Steel. *Journal of the Electrochemical Society*, **1988**, 135, 1035-1036	3.9	4
75	The Stability of Metals in the Atmosphere: New Chemical Insights to Old Problems. *Materials Research Society Symposia Proceedings*, **1988**, 125, 95		2
74	Microstructure and behavior of laser-mixed Cr/Ni films on Cu alloys. *Journal of Materials Research*, **1987**, 2, 35-45	2.5	2
73	The Atmospheric Sulfidation of Copper Single Crystals. *Journal of the Electrochemical Society*, **1987**, 134, 1632-1635	3.9	24
72	Copper patinas formed in the atmosphere□ Introduction. *Corrosion Science*, **1987**, 27, 639-657	6.8	177
71	The characterization of patina components by X-ray diffraction and evolved gas analysis. *Corrosion Science*, **1987**, 27, 669-684	6.8	76

70	The reaction of simulated rain with copper, copper patina, and some copper compounds. *Corrosion Science*, **1987**, 27, 703-719	6.8	56
69	Copper patinas formed in the atmosphere□. A qualitative assessment of mechanisms. *Corrosion Science*, **1987**, 27, 721-740	6.8	110
68	Copper patinas formed in the atmosphere□I. A semi-quantitative assessment of rates and constraints in the greater New York metropolitan area. *Corrosion Science*, **1987**, 27, 741-769	6.8	54
67	The Nitrogen Chemistry in Interstellar Clouds. *Symposium - International Astronomical Union*, **1987**, 120, 305-310		
66	The Nitrogen Chemistry in Interstellar Clouds **1987**, 305-310		3
65	Corrosion-Related Aspects of the Chemistry and Frequency of Occurrence of Precipitation. *Journal of the Electrochemical Society*, **1986**, 133, 2476-2482	3.9	17
64	Potential Corrosion of Metals by Atmospheric Organic Acids. *Journal of the Electrochemical Society*, **1986**, 133, 452-453	3.9	19
63	Degradation of materials in the atmosphere. *Environmental Science & Technology*, **1986**, 20, 1093-1100	10.3	54
62	Speciation, photosensitivity, and reactions of transition metal ions in atmospheric droplets. *Journal of Geophysical Research*, **1986**, 91, 5189		122
61	Kinetic model studies of atmospheric droplet chemistry: 2. Homogeneous transition metal chemistry in raindrops. *Journal of Geophysical Research*, **1986**, 91, 5205		186
60	Influence of transition metal complexes on atmospheric droplet acidity. *Nature*, **1985**, 317, 240-242	50.4	95
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