

Gordon R Holcomb

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8876829/publications.pdf>

Version: 2024-02-01

64
papers

1,617
citations

304602

22
h-index

315616

38
g-index

65
all docs

65
docs citations

65
times ranked

1146
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of Alloy Composition and Exposure Conditions on the Selective Oxidation Behavior of Ferritic Fe-Cr and Fe-Cr-X Alloys. Oxidation of Metals, 2010, 74, 319-340.	1.0	165
2	Oxidation of CoCrFeMnNi High Entropy Alloys. Jom, 2015, 67, 2326-2339.	0.9	148
3	The effect of manganese additions on the reactive evaporation of chromium in Ni-Cr alloys. Scripta Materialia, 2006, 54, 1821-1825.	2.6	121
4	Corrosion prevention and remediation strategies for reinforced concrete coastal bridges. Cement and Concrete Composites, 2002, 24, 101-117.	4.6	91
5	Oxidation of hafnium carbide and hafnium carbide with additions of tantalum and praseodymium. Oxidation of Metals, 1991, 36, 423-437.	1.0	86
6	Oxidation of alloys for energy applications in supercritical CO ₂ and H ₂ O. Corrosion Science, 2016, 109, 22-35.	3.0	78
7	Calculation of Reactive-evaporation Rates of Chromia. Oxidation of Metals, 2008, 69, 163-180.	1.0	67
8	Steam Oxidation and Chromia Evaporation in Ultrasupercritical Steam Boilers and Turbines. Journal of the Electrochemical Society, 2009, 156, C292.	1.3	57
9	Water Vapor Effects on the Oxidation Behavior of Fe-Cr and Ni-Cr Alloys in Atmospheres Relevant to Oxy-fuel Combustion. Oxidation of Metals, 2012, 78, 221-237.	1.0	57
10	High-Temperature Oxidation of Commercial Alloys in Supercritical CO ₂ and Related Power Cycle Environments. Jom, 2018, 70, 1527-1534.	0.9	48
11	High temperature optical sensing of gas and temperature using Au-nanoparticle incorporated oxides. Sensors and Actuators B: Chemical, 2014, 202, 489-499.	4.0	47
12	Effect of SO ₂ on oxidation of metallic materials in CO ₂ /H ₂ O rich gases relevant to oxyfuel environments. Materials and Corrosion - Werkstoffe Und Korrosion, 2014, 65, 121-131.	0.8	41
13	Dual-Environment Effects on the Oxidation of Metallic Interconnects. Journal of Materials Engineering and Performance, 2006, 15, 404-409.	1.2	36
14	The role of metal vacancies during high-temperature oxidation of alloys. Npj Materials Degradation, 2018, 2, .	2.6	35
15	High Pressure Steam Oxidation of Alloys for Advanced Ultra-Supercritical Conditions. Oxidation of Metals, 2014, 82, 271-295.	1.0	32
16	High temperature oxidation of Ni alloys in CO ₂ containing impurities. Corrosion Science, 2019, 157, 20-30.	3.0	32
17	Application of a counter-current gaseous diffusion model to the oxidation of hafnium carbide at 1200 to 1530i;½C. Oxidation of Metals, 1993, 40, 109-118.	1.0	30
18	Structural Evolution of a Ni Alloy Surface During High-Temperature Oxidation. Oxidation of Metals, 2018, 90, 27-42.	1.0	30

#	ARTICLE	IF	CITATIONS
19	Effect of Surface Finish on High-Temperature Oxidation of Steels in CO ₂ , Supercritical CO ₂ , and Air. <i>Oxidation of Metals</i> , 2019, 92, 525-540.	1.0	30
20	The Effects of Water Vapor and Hydrogen on the High-Temperature Oxidation of Alloys. <i>Oxidation of Metals</i> , 2013, 79, 461-472.	1.0	29
21	Determination of the Initiation and Propagation Mechanism of Fireside Corrosion. <i>Oxidation of Metals</i> , 2015, 84, 353-381.	1.0	25
22	High temperature oxidation of steels in CO ₂ containing impurities. <i>Corrosion Science</i> , 2020, 164, 108316.	3.0	23
23	Thermal Sprayed Titanium Anode for Cathodic Protection of Reinforced Concrete Bridges. <i>Journal of Thermal Spray Technology</i> , 1999, 8, 133-145.	1.6	22
24	Mechanistic insights into the oxidation behavior of Ni alloys in high-temperature CO ₂ . <i>Corrosion Science</i> , 2017, 125, 77-86.	3.0	22
25	Effect of Manganese Addition on Reactive Evaporation of Chromium in Ni-Cr Alloys. <i>Journal of Materials Engineering and Performance</i> , 2006, 15, 394-398.	1.2	21
26	Fireside Corrosion in Oxy-fuel Combustion of Coal. <i>Oxidation of Metals</i> , 2013, 80, 599-610.	1.0	20
27	High-temperature stability of silver nanoparticles geometrically confined in the nanoscale pore channels of anodized aluminum oxide for SERS in harsh environments. <i>RSC Advances</i> , 2016, 6, 86930-86937.	1.7	15
28	Temperature-Dependence of Corrosion of Ni-Based Superalloys in Hot CO ₂ -Rich Gases Containing SO ₂ Impurities. <i>Jom</i> , 2020, 72, 1822-1829.	0.9	13
29	High-temperature-oxidation-induced ordered structure in Inconel 939 superalloy exposed to oxy-combustion environments. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 566, 134-142.	2.6	12
30	A review of the thermal expansion of magnetite. <i>Materials at High Temperatures</i> , 2019, 36, 232-239.	0.5	12
31	The solubility of alumina in liquid iron. <i>Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science</i> , 1992, 23, 789-790.	0.5	11
32	Bond Strength of Electrochemically Aged Arc-Sprayed Zinc Coatings on Concrete. <i>Corrosion</i> , 1997, 53, 399-411.	0.5	11
33	Fireside Corrosion in Oxy-Fuel Combustion of Coal. <i>ECS Transactions</i> , 2012, 41, 73-84.	0.3	11
34	On the Relation Between Oxide Ridge Evolution and Alloy Surface Grain Boundary Disorientation in Fe-22 wt % Cr Alloys. <i>Journal of the Electrochemical Society</i> , 2010, 157, B655.	1.3	10
35	Boiler corrosion and monitoring. <i>Materials at High Temperatures</i> , 2013, 30, 271-286.	0.5	9
36	Countercurrent Gaseous Diffusion Model of Oxidation Through a Porous Coating. <i>Corrosion</i> , 1996, 52, 531-539.	0.5	8

#	ARTICLE	IF	CITATIONS
37	Carburization susceptibility of chromia-forming alloys in high-temperature CO ₂ . Corrosion Science, 2022, 206, 110488.	3.0	8
38	Prevention of Chloride-induced Corrosion Damage to Bridges.. ISIJ International, 2002, 42, 1376-1385.	0.6	7
39	Environmental Factors Affecting the Atmospheric Corrosion of Copper. , 0, , 245-245-20.		7
40	Calculation of pH for High-Temperature Sulfate Solutions at High Ionic Strengths. Corrosion, 1992, 48, 35-41.	0.5	6
41	In Situ Electrochemical Corrosion Measurements of Carbon Steel in Supercritical CO ₂ Using a Membrane-Coated Electrochemical Probe. ECS Transactions, 2013, 45, 39-50.	0.3	6
42	Factors Influencing the Stability of Au-Incorporated Metal-Oxide Supported Thin Films for Optical Gas Sensing. Journal of the Electrochemical Society, 2017, 164, B159-B167.	1.3	6
43	High-temperature oxidation of transient-liquid phase bonded Ni-based alloys in 1 bar and 250 bar carbon dioxide. Materials at High Temperatures, 2020, 37, 445-461.	0.5	6
44	Precipitation Runoff From Lead. , 0, , 265-265-10.		6
45	Humectant Use in the Cathodic Protection of Reinforced Concrete. Corrosion, 2000, 56, 1140-1157.	0.5	5
46	An Electron Microscopy Investigation of the Transient Stage Oxidation Products in an Fe-22Cr Alloy with Ce and La Additions Exposed to Dry Air at 1073ÅK (800ÅÅ°C). Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 121-137.	1.1	5
47	Subsurface characterization of an oxidation-induced phase transformation and twinning in nickel-based superalloy exposed to oxy-combustion environments. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 550, 243-253.	2.6	5
48	Steam oxidation of fossil power plant materials: collaborative research to enable advanced steam power cycles. Materials at High Temperatures, 2013, 30, 261-270.	0.5	5
49	Fireside Corrosion of Alumina-Forming Austenitic (AFA) Stainless Steels. Oxidation of Metals, 2017, 87, 575-602.	1.0	5
50	Effect of 730ÅÅ°C Supercritical Fluid Exposure on the Fatigue Threshold of Ni-Based Superalloy Haynes 282. Journal of Materials Engineering and Performance, 2019, 28, 4335-4347.	1.2	5
51	Effects of Temperature Gradients and Heat Fluxes on High-Temperature Oxidation. Oxidation of Metals, 2008, 69, 181-192.	1.0	4
52	Steam Oxidation of Advanced Steam Turbine Alloys. Materials Science Forum, 0, 595-598, 299-306.	0.3	4
53	Hydrogen transport during steam oxidation of iron and nickel alloys. Materials at High Temperatures, 2019, , 1-17.	0.5	4
54	Pin-on-Disk Corrosion-Wear Test. Journal of Testing and Evaluation, 1998, 26, 352-357.	0.4	4

#	ARTICLE	IF	CITATIONS
55	Nickel sulfide hollow whisker formation. <i>Materials Characterization</i> , 1997, 38, 67-73.	1.9	3
56	Hot corrosion in a temperature gradient. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2000, 51, 564-569.	0.8	2
57	Failure analysis of an HCl gas cylinder valve. <i>Engineering Failure Analysis</i> , 2000, 7, 403-409.	1.8	2
58	Fundamental Studies on the Transient Stages of Scale Growth in Fe-22 wt.% Cr Alloys. <i>Defect and Diffusion Forum</i> , 2009, 283-286, 425-431.	0.4	2
59	Simulated fireside corrosion of T91 in oxy-combustion systems with an emphasis on coal/biomass environments. <i>Materials at High Temperatures</i> , 2019, 36, 437-446.	0.5	2
60	Surface and Electrochemical Behavior of HSLA Steel in Supercritical CO ₂ -H ₂ O Environment. <i>ECS Transactions</i> , 2012, 41, 61-70.	0.3	1
61	Measurement of Cr Evaporation at 760 Â°C for Several Nickel Based Alloys at Moderate Velocities. <i>ECS Transactions</i> , 2017, 75, 43-55.	0.3	1
62	Volatilization Behavior of Supported Au Nanoparticle Arrays under H ₂ at High Temperature. <i>Journal of Physical Chemistry C</i> , 2020, 124, 9506-9511.	1.5	1
63	The Effect of Nickel Alloy Chromium Content in Indirect-Fired CO ₂ Power Cycle Environments. <i>ECS Meeting Abstracts</i> , 2018, , .	0.0	0
64	Alloy Corrosion in Direct-Fired CO ₂ Power Cycle Environments. <i>ECS Meeting Abstracts</i> , 2018, , .	0.0	0