Gordon R Holcomb

List of Publications by Year
in descending order

64	1,617	304602	315616
papers	citations	22 h-index	38 g-index

65	65	65	1146
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Carburization susceptibility of chromia-forming alloys in high-temperature CO2. Corrosion Science, 2022, 206, 110488.	3.0	8
2	High temperature oxidation of steels in CO2 containing impurities. Corrosion Science, 2020, 164, 108316.	3.0	23
3	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
4	Temperature-Dependence of Corrosion of Ni-Based Superalloys in Hot CO2-Rich Gases Containing SO2 Impurities. Jom, 2020, 72, 1822-1829.	0.9	13
5	Volatilization Behavior of Supported Au Nanoparticle Arrays under H₂ at High Temperature. Journal of Physical Chemistry C, 2020, 124, 9506-9511.	1.5	1
6	Effect of 730ÂÂ°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
7	Effect of Surface Finish on High-Temperature Oxidation of Steels in CO2, Supercritical CO2, and Air. Oxidation of Metals, 2019, 92, 525-540.	1.0	30
8	Simulated fireside corrosion of T91 in oxy-combustion systems with an emphasis on coal/biomass environments. Materials at High Temperatures, 2019, 36, 437-446.	0.5	2
9	High temperature oxidation of Ni alloys in CO2 containing impurities. Corrosion Science, 2019, 157, 20-30.	3.0	32
10	Hydrogen transport during steam oxidation of iron and nickel alloys. Materials at High Temperatures, 2019, , 1-17.	0.5	4
11	A review of the thermal expansion of magnetite. Materials at High Temperatures, 2019, 36, 232-239.	0.5	12
12	Structural Evolution of a Ni Alloy Surface During High-Temperature Oxidation. Oxidation of Metals, 2018, 90, 27-42.	1.0	30
13	The role of metal vacancies during high-temperature oxidation of alloys. Npj Materials Degradation, 2018, 2, .	2.6	35
14	High-Temperature Oxidation of Commercial Alloys in Supercritical CO2 and Related Power Cycle Environments. Jom, 2018, 70, 1527-1534.	0.9	48
15	The Effect of Nickel Alloy Chromium Content in Indirect-Fired CO2 Power Cycle Environments. ECS Meeting Abstracts, 2018, , .	0.0	0
16	Alloy Corrosion in Direct-Fired CO2 Power Cycle Environments. ECS Meeting Abstracts, 2018, , .	0.0	0
17	Measurement of Cr Evaporation at 760 Â°C for Several Nickel Based Alloys at Moderate Velocities. ECS Transactions, 2017, 75, 43-55.	0.3	1
18	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

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19	Fireside Corrosion of Alumina-Forming Austenitic (AFA) Stainless Steels. Oxidation of Metals, 2017, 87, 575-602.	1.0	5
20	Mechanistic insights into the oxidation behavior of Ni alloys in high-temperature CO2. Corrosion Science, 2017, 125, 77-86.	3.0	22
21	Oxidation of alloys for energy applications in supercritical CO2 and H2O. Corrosion Science, 2016, 109, 22-35.	3.0	78
22	High-temperature stability of silver nanoparticles geometrically confined in the nanoscale pore channels of anodized aluminum oxide for SERS in harsh environments. RSC Advances, 2016, 6, 86930-86937.	1.7	15
23	Oxidation of CoCrFeMnNi High Entropy Alloys. Jom, 2015, 67, 2326-2339.	0.9	148
24	Determination of the Initiation and Propagation Mechanism of Fireside Corrosion. Oxidation of Metals, 2015, 84, 353-381.	1.0	25
25	High Pressure Steam Oxidation of Alloys for Advanced Ultra-Supercritical Conditions. Oxidation of Metals, 2014, 82, 271-295.	1.0	32
26	Effect of <scp>SO</scp>₂ on oxidation of metallic materials in <scp>CO</scp>₂/<scp>H</scp>₂<scp>O</scp>â€rich gases relevant to oxyfuel environments. Materials and Corrosion - Werkstoffe Und Korrosion, 2014, 65, 121-131.	0.8	41
27	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
28	Fireside Corrosion in Oxy-fuel Combustion of Coal. Oxidation of Metals, 2013, 80, 599-610.	1.0	20
29	The Effects of Water Vapor and Hydrogen on the High-Temperature Oxidation of Alloys. Oxidation of Metals, 2013, 79, 461-472.	1.0	29
30	High-temperature-oxidation-induced ordered structure in Inconel 939 superalloy exposed to oxy-combustion environments. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 566, 134-142.	2.6	12
31	Boiler corrosion and monitoring. Materials at High Temperatures, 2013, 30, 271-286.	0.5	9
32	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
33	In Situ Electrochemical Corrosion Measurements of Carbon Steel in Supercritical CO₂ Using a Membrane-Coated Electrochemical Probe. ECS Transactions, 2013, 45, 39-50.	0.3	6
34	Surface and Electrochemical Behavior of HSLA Steel in Supercritical CO2-H2O Environment. ECS Transactions, 2012, 41, 61-70.	0.3	1
35	Fireside Corrosion in Oxy-Fuel Combustion of Coal. ECS Transactions, 2012, 41, 73-84.	0.3	11
36	Water Vapor Effects on the Oxidation Behavior of Feâ€“Cr and Niâ€“Cr Alloys in Atmospheres Relevant to Oxy-fuel Combustion. Oxidation of Metals, 2012, 78, 221-237.	1.0	57

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37	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
38	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 1073ÂK (800ÂÂ°C). Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 121-137.	1.1	5
39	Effect of Alloy Composition and Exposure Conditions on the Selective Oxidation Behavior of Ferritic Feâ€“Cr and Feâ€“Crâ€“X Alloys. Oxidation of Metals, 2010, 74, 319-340.	1.0	165
40	On the Relation Between Oxide Ridge Evolution and Alloy Surface Grain Boundary Disorientation in Feâ€“22 wt % Cr Alloys. Journal of the Electrochemical Society, 2010, 157, B655.	1.3	10
41	Steam Oxidation and Chromia Evaporation in Ultrasupercritical Steam Boilers and Turbines. Journal of the Electrochemical Society, 2009, 156, C292.	1.3	57
42	Fundamental Studies on the Transient Stages of Scale Growth in Fe-22 wt.% Cr Alloys. Defect and Diffusion Forum, 2009, 283-286, 425-431.	0.4	2
43	Calculation of Reactive-evaporation Rates of Chromia. Oxidation of Metals, 2008, 69, 163-180.	1.0	67
44	Effects of Temperature Gradients and Heat Fluxes on High-Temperature Oxidation. Oxidation of Metals, 2008, 69, 181-192.	1.0	4
45	Effect of Manganese Addition on Reactive Evaporation of Chromium in Ni-Cr Alloys. Journal of Materials Engineering and Performance, 2006, 15, 394-398.	1.2	21
46	Dual-Environment Effects on the Oxidation of Metallic Interconnects. Journal of Materials Engineering and Performance, 2006, 15, 404-409.	1.2	36
47	The effect of manganese additions on the reactive evaporation of chromium in Niâ€“Cr alloys. Scripta Materialia, 2006, 54, 1821-1825.	2.6	121
48	Prevention of Chloride-induced Corrosion Damage to Bridges.. ISIJ International, 2002, 42, 1376-1385.	0.6	7
49	Corrosion prevention and remediation strategies for reinforced concrete coastal bridges. Cement and Concrete Composites, 2002, 24, 101-117.	4.6	91
50	Humectant Use in the Cathodic Protection of Reinforced Concrete. Corrosion, 2000, 56, 1140-1157.	0.5	5
51	Hot corrosion in a temperature gradient. Materials and Corrosion - Werkstoffe Und Korrosion, 2000, 51, 564-569.	0.8	2
52	Failure analysis of an HCl gas cylinder valve. Engineering Failure Analysis, 2000, 7, 403-409.	1.8	2
53	Thermal Sprayed Titanium Anode for Cathodic Protection of Reinforced Concrete Bridges. Journal of Thermal Spray Technology, 1999, 8, 133-145.	1.6	22
54	Pin-on-Disk Corrosion-Wear Test. Journal of Testing and Evaluation, 1998, 26, 352-357.	0.4	4

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55	Bond Strength of Electrochemically Aged Arc-Sprayed Zinc Coatings on Concrete. Corrosion, 1997, 53, 399-411.	0.5	11
56	Nickel sulfide hollow whisker formation. Materials Characterization, 1997, 38, 67-73.	1.9	3
57	Countercurrent Gaseous Diffusion Model of Oxidation Through a Porous Coating. Corrosion, 1996, 52, 531-539.	0.5	8
58	Application of a counter-current gaseous diffusion model to the oxidation of hafnium carbide at 1200 to 1530ï¿½C. Oxidation of Metals, 1993, 40, 109-118.	1.0	30
59	Calculation of pH for High-Temperature Sulfate Solutions at High Ionic Strengths. Corrosion, 1992, 48, 35-41.	0.5	6
60	The solubility of alumina in liquid iron. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1992, 23, 789-790.	0.5	11
61	Oxidation of hafnium carbide and hafnium carbide with additions of tantalum and praseodymium. Oxidation of Metals, 1991, 36, 423-437.	1.0	86
62	Steam Oxidation of Advanced Steam Turbine Alloys. Materials Science Forum, 0, 595-598, 299-306.	0.3	4
63	Environmental Factors Affecting the Atmospheric Corrosion of Copper. , 0, , 245-245-20.		7
64	Precipitation Runoff From Lead. , 0, , 265-265-10.		6