

Daniel K Schreiber

List of Publications by Year in descending order

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77
papers

1,869
citations

257450

24
h-index

289244

40
g-index

78
all docs

78
docs citations

78
times ranked

2013
citing authors

#	ARTICLE	IF	CITATIONS
1	Passivation of a corrosion resistant high entropy alloy in non-oxidizing sulfate solutions. <i>Acta Materialia</i> , 2019, 164, 362-376.	7.9	145
2	Behavior of molecules and molecular ions near a field emitter. <i>New Journal of Physics</i> , 2016, 18, 033031.	2.9	130
3	Atomic origins of water-vapour-promoted alloy oxidation. <i>Nature Materials</i> , 2018, 17, 514-518.	27.5	106
4	Contribution of atom-probe tomography to a better understanding of glass alteration mechanisms: Application to a nuclear glass specimen altered 25years in a granitic environment. <i>Chemical Geology</i> , 2013, 349-350, 99-109.	3.3	105
5	Effects of laser energy and wavelength on the analysis of LiFePO ₄ using laser assisted atom probe tomography. <i>Ultramicroscopy</i> , 2015, 148, 57-66.	1.9	64
6	A method for site-specific and cryogenic specimen fabrication of liquid/solid interfaces for atom probe tomography. <i>Ultramicroscopy</i> , 2018, 194, 89-99.	1.9	64
7	Aqueous passivation of multi-principal element alloy Ni ₃₈ Fe ₂₀ Cr ₂₂ Mn ₁₀ Co ₁₀ : Unexpected high Cr enrichment within the passive film. <i>Acta Materialia</i> , 2020, 198, 121-133.	7.9	64
8	Self-accelerated corrosion of nuclear waste forms at material interfaces. <i>Nature Materials</i> , 2020, 19, 310-316.	27.5	61
9	Catalyst Incorporation at Defects during Nanowire Growth. <i>Nano Letters</i> , 2012, 12, 167-171.	9.1	58
10	Controlling the corrosion resistance of multi-principal element alloys. <i>Scripta Materialia</i> , 2020, 188, 96-101.	5.2	58
11	Grain boundary depletion and migration during selective oxidation of Cr in a Ni-5Cr binary alloy exposed to high-temperature hydrogenated water. <i>Scripta Materialia</i> , 2014, 89, 41-44.	5.2	57
12	Examinations of Oxidation and Sulfidation of Grain Boundaries in Alloy 600 Exposed to Simulated Pressurized Water Reactor Primary Water. <i>Microscopy and Microanalysis</i> , 2013, 19, 676-687.	0.4	52
13	Visualizing the iron atom exchange front in the Fe(II)-catalyzed recrystallization of goethite by atom probe tomography. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 2866-2874.	7.1	52
14	Grain boundary selective oxidation and intergranular stress corrosion crack growth of high-purity nickel binary alloys in high-temperature hydrogenated water. <i>Corrosion Science</i> , 2018, 131, 310-323.	6.6	48
15	In-situ transmission electron microscopy study of surface oxidation for Ni-10Cr and Ni-20Cr alloys. <i>Scripta Materialia</i> , 2016, 114, 129-132.	5.2	43
16	Directly correlated transmission electron microscopy and atom probe tomography of grain boundary oxidation in a Ni-Al binary alloy exposed to high-temperature water. <i>Scripta Materialia</i> , 2013, 69, 509-512.	5.2	38
17	In situ atomic scale visualization of surface kinetics driven dynamics of oxide growth on a Ni-Cr surface. <i>Chemical Communications</i> , 2016, 52, 3300-3303.	4.1	38
18	Direct in Situ TEM Observation of Modification of Oxidation by the Injected Vacancies for Ni-4Al Alloy Using a Microfabricated Nanopost. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 17272-17277.	8.0	35

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19	Atom Probe Tomography Interlaboratory Study on Clustering Analysis in Experimental Data Using the Maximum Separation Distance Approach. <i>Microscopy and Microanalysis</i> , 2019, 25, 356-366.	0.4	32
20	Enhanced spin signals due to native oxide formation in Ni ₈₀ Fe ₂₀ /Ag lateral spin valves. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	31
21	Tomographic mapping of the nanoscale water-filled pore structure in corroded borosilicate glass. <i>Npj Materials Degradation</i> , 2020, 4, .	5.8	29
22	Effects of Radiation-Induced Defects on Corrosion. <i>Annual Review of Materials Research</i> , 2021, 51, 293-328.	9.3	27
23	Ab Initio Modeling of Bulk and Intragranular Diffusion in Ni Alloys. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 1618-1623.	4.6	26
24	Resolving Iron(II) Sorption and Oxidative Growth on Hematite (001) Using Atom Probe Tomography. <i>Journal of Physical Chemistry C</i> , 2018, 122, 3903-3914.	3.1	26
25	Built-in Potential in Fe ₂ O ₃ /Cr ₂ O ₃ Superlattices for Improved Photoexcited Carrier Separation. <i>Advanced Materials</i> , 2016, 28, 1616-1622.	21.0	24
26	Vacancies and Vacancy-Mediated Self Diffusion in Cr ₂ O ₃ : A First-Principles Study. <i>Journal of Physical Chemistry C</i> , 2017, 121, 1817-1831.	3.1	24
27	Deciphering atomistic mechanisms of the gas-solid interfacial reaction during alloy oxidation. <i>Science Advances</i> , 2020, 6, eaay8491.	10.3	20
28	Atom probe analysis of electrode materials for Li-ion batteries: challenges and ways forward. <i>Journal of Materials Chemistry A</i> , 2022, 10, 4926-4935.	10.3	20
29	First-Principles Investigation of Native Interstitial Diffusion in Cr ₂ O ₃ . <i>Journal of Physical Chemistry C</i> , 2018, 122, 12984-12993.	3.1	19
30	Effects of optical dopants and laser wavelength on atom probe tomography analyses of borosilicate glasses. <i>Journal of the American Ceramic Society</i> , 2017, 100, 4801-4815.	3.8	18
31	Effect of annealing and applied bias on barrier shape in CoFe/MgO/CoFe tunnel junctions. <i>Physical Review B</i> , 2011, 83, .	3.2	16
32	Element redistributions during early stages of oxidation in a Ni ₃₈ Cr ₂₂ Fe ₂₀ Mn ₁₀ Co ₁₀ multi-principal element alloy. <i>Scripta Materialia</i> , 2021, 194, 113609.	5.2	16
33	Effects of elemental distributions on the behavior of MgO-based magnetic tunnel junctions. <i>Journal of Applied Physics</i> , 2011, 109, 103909.	2.5	15
34	The Application of the OPTICS Algorithm to Cluster Analysis in Atom Probe Tomography Data. <i>Microscopy and Microanalysis</i> , 2019, 25, 338-348.	0.4	15
35	Cryo-based structural characterization and growth model of salt film on metal. <i>Corrosion Science</i> , 2020, 174, 108812.	6.6	15
36	Nanoscale imaging of Li and B in nuclear waste glass, a comparison of ToF-SIMS, NanoSIMS, and APT. <i>Surface and Interface Analysis</i> , 2016, 48, 1392-1401.	1.8	14

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37	Adsorption and diffusion of atomic oxygen and sulfur at pristine and doped Ni surfaces with implications for stress corrosion cracking. <i>Corrosion Science</i> , 2016, 113, 26-30.	6.6	14
38	Rapid assessment of structural and compositional changes during early stages of zirconium alloy oxidation. <i>Npj Materials Degradation</i> , 2020, 4, .	5.8	14
39	Penetrative Internal Oxidation from Alloy 690 Surfaces and Stress Corrosion Crack Walls during Exposure to PWR Primary Water. , 2011, , 331-342.		14
40	Atomic Structural Analysis of Nanowire Defects and Polytypes Enabled Through Cross-Sectional Lattice Imaging. <i>Small</i> , 2012, 8, 1717-1724.	10.0	13
41	Role of Cr-rich carbide precipitates in the intergranular oxidation of Ni-Cr alloys. <i>Scripta Materialia</i> , 2018, 156, 51-54.	5.2	13
42	Investigation of physical and chemical properties for upgraded SAP (SiO ₂ Al ₂ O ₃ P ₂ O ₅) waste form to immobilize radioactive waste salt. <i>Journal of Nuclear Materials</i> , 2019, 515, 382-391.	2.7	13
43	Temperature Dependence of Self-Diffusion in Cr ₂ O ₃ from First Principles. <i>Journal of Physical Chemistry C</i> , 2019, 123, 22139-22150.	3.1	12
44	Correlative STEM-APT characterization of radiation-induced segregation and precipitation of in-service BWR 304 stainless steel. <i>Journal of Nuclear Materials</i> , 2021, 549, 152894.	2.7	12
45	A Round Robin Experiment: Analysis of Solute Clustering from Atom Probe Tomography Data.. <i>Microscopy and Microanalysis</i> , 2016, 22, 666-667.	0.4	11
46	A Method for Directly Correlating Site-Specific Cross-Sectional and Plan-View Transmission Electron Microscopy of Individual Nanostructures. <i>Microscopy and Microanalysis</i> , 2012, 18, 1410-1418.	0.4	10
47	Multiscale model of metal alloy oxidation at grain boundaries. <i>Journal of Chemical Physics</i> , 2015, 142, 214114.	3.0	10
48	Bulk and Short-Circuit Anion Diffusion in Epitaxial Fe ₂ O ₃ Films Quantified Using Buried Isotopic Tracer Layers. <i>Advanced Materials Interfaces</i> , 2021, 8, 2001768.	3.7	10
49	Temperature-dependent selective oxidation processes for Ni-5Cr and Ni-4Al. <i>Corrosion Science</i> , 2018, 139, 309-318.	6.6	9
50	Characterization of Stress Corrosion Cracking Initiation Precursors in Cold-Worked Alloy 690 Using Advanced High-Resolution Microscopy. <i>Corrosion</i> , 2019, 75, 727-736.	1.1	8
51	Background Recovery through the Quantification of Delayed Evaporation Multi-Ion Events in Atom-Probe Data. <i>Microscopy and Microanalysis</i> , 2015, 21, 857-858.	0.4	7
52	Reply to: How much does corrosion of nuclear waste matrices matter. <i>Nature Materials</i> , 2020, 19, 962-963.	27.5	7
53	Radiation-Enhanced Anion Transport in Hematite. <i>Chemistry of Materials</i> , 2021, 33, 2307-2318.	6.7	7
54	Nanoscale microstructure and chemistry of transparent gahnite glass-ceramics revealed by atom probe tomography. <i>Scripta Materialia</i> , 2021, 203, 114110.	5.2	7

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55	NanoSIMS imaging alteration layers of a leached SON68 glass via a FIB-made wedged crater. <i>Surface and Interface Analysis</i> , 2014, 46, 233-237.	1.8	6
56	Vacancy ordering during selective oxidation of $\hat{\text{I}}^2\text{-NiAl}$. <i>Materialia</i> , 2020, 12, 100783.	2.7	6
57	Mechanistic insights into selective oxidation and corrosion of multi-principal element alloys from high resolution and in situ microscopy. <i>Materialia</i> , 2021, 18, 101148.	2.7	6
58	Comparative structural investigations of nuclear waste glass alteration layers and sol-gel synthesized aerogels. <i>Npj Materials Degradation</i> , 2020, 4, .	5.8	5
59	Alpha Shape Analysis (ASA) Framework for Post- Clustering Property Determination in Atom Probe Tomographic Data. <i>Microscopy and Microanalysis</i> , 2021, 27, 297-317.	0.4	5
60	Analysis of compositional uniformity in $\text{Al}_x\text{Ga}_{1-x}\text{N}$ thin films using atom probe tomography and electron microscopy. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2016, 34, .	2.1	5
61	The effect of Cr alloying on defect migration at Ni grain boundaries. <i>Journal of Materials Science</i> , 2022, 57, 10499-10516.	3.7	5
62	Radiation Enhanced Anion Diffusion in Chromia. <i>Journal of Physical Chemistry C</i> , 2021, 125, 27820-27827.	3.1	5
63	Revealing the complexity of high temperature oxide formation in a 38Ni-21Cr-20Fe-13Ru-6Mo-2W (at. %) multi-principal element alloy. <i>Scripta Materialia</i> , 2022, 210, 114419.	5.2	4
64	On the dissolution of a borosilicate glass with the use of isotopic tracing “ Insights into the mechanism for the long-term dissolution rate. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 318, 213-229.	3.9	4
65	Adatom-Driven Oxygen Intermixing during the Deposition of Oxide Thin Films by Molecular Beam Epitaxy. <i>Nano Letters</i> , 2022, 22, 4963-4969.	9.1	4
66	Modeling selective intergranular oxidation of binary alloys. <i>Journal of Chemical Physics</i> , 2015, 142, 014704.	3.0	3
67	Mechanisms of Particle Coarsening and Phase Transformation in Oxide Dispersion Strengthened Steels During Friction Stir Welding. <i>Microscopy and Microanalysis</i> , 2016, 22, 676-677.	0.4	3
68	Predicting the temperature dependence of self-diffusion behavior in Ni-Cr alloys via molecular dynamics. <i>Materials Today Communications</i> , 2021, 26, 101982.	1.9	3
69	Electron Microscopy Characterizations and Atom Probe Tomography of Intergranular Attack in Alloy 600 Exposed to PWR Primary Water. , 2011, , 1503-1517.		3
70	Community-Driven Methods for Open and Reproducible Software Tools for Analyzing Datasets from Atom Probe Microscopy. <i>Microscopy and Microanalysis</i> , 2021, , 1-16.	0.4	2
71	Understanding the High-Temperature Mechanical Properties of A710 (HSLA-80) Steel With Use of Complementary Atom Probe Tomography and Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2014, 20, 954-955.	0.4	1
72	Exploring New Science Domains with Atom Probe Tomography Enabled by an Environmental Transfer Hub. <i>Microscopy and Microanalysis</i> , 2019, 25, 276-277.	0.4	1

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73	Advanced FIB-based Preparation of Cryogenically-prepared Specimens for APT Analysis. Microscopy and Microanalysis, 2019, 25, 878-879.	0.4	1
74	Fast Atomic Diffusion: Bulk and Short-Circuit Anion Diffusion in Epitaxial Fe ₂ O ₃ Films Quantified Using Buried Isotopic Tracer Layers (Adv. Mater.)	0.4	0
75	Electron Microscopy Analysis of Grain Boundary Corrosion in Ni-Cr Binary Alloys Exposed to High Temperature Hydrogenated Water. Microscopy and Microanalysis, 2015, 21, 1175-1176.	0.4	0
76	Role of Grain Boundary Cr ₅ B ₃ Precipitates on Intergranular Attack in Alloy 600. Minerals, Metals and Materials Series, 2019, , 359-374.	0.4	0
77	Role of Grain Boundary Cr ₅ B ₃ Precipitates on Intergranular Attack in Alloy 600. Minerals, Metals and Materials Series, 2018, , 359-374.	0.4	0