Paul A J Bagot

List of Publications by Year
in descending order

108 papers	4,632 citations	126907 33 h-index	114465 63 g-index
109 all docs	109 docs citations	109 times ranked	5150 citing authors

#	Article	IF	Citations
1	Hydrogen production from formic acid decomposition at room temperature using a Agâ€“Pd coreâ€“shell nanocatalyst. Nature Nanotechnology, 2011, 6, 302-307.	31.5	1,028
2	Direct observation of individual hydrogen atoms at trapping sites in a ferritic steel. Science, 2017, 355, 1196-1199.	12.6	224
3	On the effect of boron on grain boundary character in a new polycrystalline superalloy. Acta Materialia, 2016, 103, 688-699.	7.9	149
4	A novel ultra-high strength maraging steel with balanced ductility and creep resistance achieved by nanoscale Î²-NiAl and Laves phase precipitates. Acta Materialia, 2018, 149, 285-301.	7.9	135
5	Sequential nucleation of phases in a 17-4PH steel: Microstructural characterisation and mechanical properties. Acta Materialia, 2017, 125, 38-49.	7.9	121
6	An Atom Probe Tomography study of site preference and partitioning in a nickel-based superalloy. Acta Materialia, 2017, 125, 156-165.	7.9	113
7	Ion-irradiation-induced clustering in Wâ€“Re and Wâ€“Reâ€“Os alloys: A comparative study using atom probe tomography and nanoindentation measurements. Acta Materialia, 2015, 87, 121-127.	7.9	111
8	Ion-irradiation induced clustering in W-Re-Ta, W-Re and W-Ta alloys: An atom probe tomography and nanoindentation study. Acta Materialia, 2017, 124, 71-78.	7.9	107
9	On the microtwinning mechanism in a single crystal superalloy. Acta Materialia, 2017, 135, 314-329.	7.9	102
10	Characterizing solute hydrogen and hydrides in pure and alloyed titanium at the atomic scale. Acta Materialia, 2018, 150, 273-280.	7.9	81
11	Dynamics of Inelastic Scattering of OH Radicals from Reactive and Inert Liquid Surfaces. Journal of Physical Chemistry C, 2008, 112, 10868-10877.	3.1	74
12	Solute redistribution in the nanocrystalline structure formed in bearing steels. Scripta Materialia, 2013, 69, 630-633.	5.2	62
13	The effect of phase chemistry on the extent of strengthening mechanisms in model Ni-Cr-Al-Ti-Mo based superalloys. Acta Materialia, 2018, 153, 290-302.	7.9	60
14	A New Polycrystalline Co-Ni Superalloy. Jom, 2014, 66, 2495-2501.	1.9	59
15	Structural, electronic, and optical properties of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>m</mml:mi></mml:math>-plane InGaN/GaN quantum wells: Insights from experiment and atomistic theory. Physical Review B, 2015, 92, .	3.2	57
16	Gamma Prime Precipitate Evolution During Aging of a Model Nickel-Based Superalloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 718-728.	2.2	56
17	Precipitation processes in the Beta-Titanium alloy Tiâ€“5Alâ€“5Moâ€“5Vâ€“3Cr. Journal of Alloys and Compounds, 2015, 646, 946-953.	5.5	54
18	3D atom probe study of gas adsorption and reaction on alloy catalyst surfaces I: Instrumentation. Surface Science, 2006, 600, 3028-3035.	1.9	51

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19	Atomic Imaging of Carbon-Supported Pt, Pt/Co, and Ir@Pt Nanocatalysts by Atom-Probe Tomography. ACS Catalysis, 2014, 4, 695-702.	11.2	50
20	Mining information from atom probe data. Ultramicroscopy, 2015, 159, 324-337.	1.9	50
21	Indium clustering in a-plane InGaN quantum wells as evidenced by atom probe tomography. Applied Physics Letters, 2015, 106, .	3.3	46
22	Bimetallic Fe-Ni/SiO2 catalysts for furfural hydrogenation: Identification of the interplay between Fe and Ni during deposition-precipitation and thermal treatments. Catalysis Today, 2019, 334, 162-172.	4.4	46
23	New insights into the oxidation mechanisms of a Ferritic-Martensitic steel in high-temperature steam. Acta Materialia, 2020, 194, 522-539.	7.9	46
24	O(³P) Atoms as a Chemical Probe of Surface Ordering in Ionic Liquids. Journal of Physical Chemistry A, 2010, 114, 4896-4904.	2.5	45
25	The formation of ordered clusters in Tiâ€“7Al and Tiâ€“6Alâ€“4V. Acta Materialia, 2016, 112, 141-149.	7.9	44
26	Effect of Nb and Fe on damage evolution in a Zr-alloy during proton and neutron irradiation. Acta Materialia, 2019, 165, 603-614.	7.9	44
27	Characterization of oxidation and reduction of a platinumâ€“rhodium alloy by atom-probe tomography. Catalysis Today, 2011, 175, 552-557.	4.4	41
28	Decoration of voids with rhenium and osmium transmutation products in neutron irradiated single crystal tungsten. Scripta Materialia, 2019, 173, 96-100.	5.2	41
29	Precipitation of the ordered Î± 2 phase in a near- Î± titanium alloy. Scripta Materialia, 2016, 117, 81-85.	5.2	40
30	3D atom probe study of gas adsorption and reaction on alloy catalyst surfaces II: Results on Pt and Ptâ€“Rh. Surface Science, 2007, 601, 2245-2255.	1.9	39
31	Characterization of Oxidation and Reduction of Ptâ€“Ru and Ptâ€“Rhâ€“Ru Alloys by Atom Probe Tomography and Comparison with Ptâ€“Rh. Journal of Physical Chemistry C, 2012, 116, 17633-17640.	3.1	38
32	Thermalâ€“mechanical fatigue behaviour of a new single crystal superalloy: Effects of Si and Re alloying. Acta Materialia, 2015, 95, 456-467.	7.9	38
33	Collision dynamics and reactive uptake of OH radicals at liquid surfaces of atmospheric interest. Physical Chemistry Chemical Physics, 2011, 13, 8457.	2.8	37
34	O(³P) Atoms as a Probe of Surface Ordering in 1-Alkyl-3-methylimidazolium-Based Ionic Liquids. Journal of Physical Chemistry Letters, 2010, 1, 429-433.	4.6	36
35	Nanomagnetic properties of the meteorite cloudy zone. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E11436-E11445.	7.1	36
36	Temperature Dependence of OH Yield, Translational Energy, and Vibrational Branching in the Reaction of O(³P)(g) with Liquid Squalane. Journal of Physical Chemistry C, 2007, 111, 14833-14842.	3.1	34

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37	New frontiers in atom probe tomography: a review of research enabled by cryo and/or vacuum transfer systems. Materials Today Advances, 2020, 7, 100090.	5.2	34
38	Oxidation behaviour of a next generation polycrystalline Mn containing Ni-based superalloy. Scripta Materialia, 2016, 113, 51-54.	5.2	33
39	The effect of oxidation on the subsurface microstructure of a Ti-6Al-4V alloy. Scripta Materialia, 2018, 148, 24-28.	5.2	33
40	3D atom probe study of gaseous adsorption on alloy catalyst surfaces III: Ternary alloys â€“ NO on Ptâ€“Rhâ€“Ru and Ptâ€“Rhâ€“Ir. Surface Science, 2008, 602, 1381-1391.	1.9	31
41	A SANS and APT study of precipitate evolution and strengthening in a maraging steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 702, 414-424.	5.6	31
42	Impurity and texture driven HCP-to-FCC transformations in Ti-X thin films during in situ TEM annealing and FIB milling. Acta Materialia, 2020, 184, 199-210.	7.9	31
43	Reflections on the Analysis of Interfaces and Grain Boundaries by Atom Probe Tomography. Microscopy and Microanalysis, 2020, 26, 247-257.	0.4	30
44	How Penetrable Are Thioalkyl Self-Assembled Monolayers?. Journal of Physical Chemistry Letters, 2010, 1, 1917-1921.	4.6	29
45	An in-situ approach for preparing atom probe tomography specimens by xenon plasma-focussed ion beam. Ultramicroscopy, 2019, 202, 121-127.	1.9	29
46	Characterization of Oxidation and Reduction of a Palladiumâ€“Rhodium Alloy by Atom-Probe Tomography. Journal of Physical Chemistry C, 2012, 116, 4760-4766.	3.1	28
47	Advances in atom probe tomography instrumentation: Implications for materials research. MRS Bulletin, 2016, 41, 40-45.	3.5	28
48	Atomic-scale Studies of Uranium Oxidation and Corrosion by Water Vapour. Scientific Reports, 2016, 6, 25618.	3.3	28
49	Influence of Molecular and Supramolecular Structure on the Gasâ^'Liquid Interfacial Reactivity of Hydrocarbon Liquids with O(³P) Atoms. Journal of Physical Chemistry C, 2008, 112, 1524-1532.	3.1	27
50	Dynamics of the Reaction of O(³P) Atoms with Alkylthiol Self-assembled Monolayers. Journal of Physical Chemistry A, 2009, 113, 4320-4329.	2.5	27
51	In-service materials support for safety critical applications â€“ A case study of a high strength Ti-alloy using advanced experimental and modelling techniques. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 599, 166-173.	5.6	27
52	Atom probe tomography analysis of the reference zircon gj-1: An interlaboratory study. Chemical Geology, 2018, 495, 27-35.	3.3	27
53	Oxidation and Surface Segregation Behavior of a Ptâ€“Pdâ€“Rh Alloy Catalyst. Journal of Physical Chemistry C, 2014, 118, 26130-26138.	3.1	26
54	Reactive Scattering as a Chemically Specific Analytical Probe of Liquid Surfaces. Journal of Physical Chemistry Letters, 2011, 2, 12-18.	4.6	25

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55	Practical Issues for Atom Probe Tomography Analysis of III-Nitride Semiconductor Materials. Microscopy and Microanalysis, 2015, 21, 544-556.	0.4	25
56	Observing hydrogen in steel using cryogenic atom probe tomography: A simplified approach. International Journal of Hydrogen Energy, 2019, 44, 32280-32291.	7.1	25
57	Fundamental surface science studies of automobile exhaust catalysis. Materials Science and Technology, 2004, 20, 679-694.	1.6	24
58	The atomic structure of polar and non-polar InGaN quantum wells and the green gap problem. Ultramicroscopy, 2017, 176, 93-98.	1.9	24
59	Element segregation and Î±2 formation in primary Î± of a near-Î± Ti-alloy. Materials Characterization, 2020, 164, 110327.	4.4	24
60	Dynamics of interfacial reactions between O(³P) atoms and long-chain liquid hydrocarbons. Physica Scripta, 2007, 76, C42-C47.	2.5	23
61	The microstructure of non-polar a-plane (112Â¯0) InGaN quantum wells. Journal of Applied Physics, 2016, 119, .	2.5	22
62	Characterization of Phase Chemistry and Partitioning in a Family of High-Strength Nickel-Based Superalloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 2302-2310.	2.2	22
63	Insights into microstructural interfaces in aerospace alloys characterised by atom probe tomography. Materials Science and Technology, 2016, 32, 232-241.	1.6	20
64	Impact of local electrostatic field rearrangement on field ionization. Journal Physics D: Applied Physics, 2018, 51, 105601.	2.8	20
65	The effect of boron on oxide scale formation in a new polycrystalline superalloy. Scripta Materialia, 2017, 127, 156-159.	5.2	19
66	Automobile exhaust catalysis at the atomic scale: atom-probe investigations on platinum alloys. Surface and Interface Analysis, 2007, 39, 172-177.	1.8	18
67	Imaging of radiation damage using complementary field ion microscopy and atom probe tomography. Ultramicroscopy, 2015, 159, 387-394.	1.9	18
68	Continuous and discontinuous precipitation in Fe-1 at.%Cr-1 at.%Mo alloy upon nitriding; crystal structure and composition of ternary nitrides. Philosophical Magazine, 2016, 96, 1509-1537.	1.6	18
69	Nanoscale Stoichiometric Analysis of a High-Temperature Superconductor by Atom Probe Tomography. Microscopy and Microanalysis, 2017, 23, 414-424.	0.4	18
70	Comparing the Consistency of Atom Probe Tomography Measurements of Small-Scale Segregation and Clustering Between the LEAP 3000 and LEAP 5000 Instruments. Microscopy and Microanalysis, 2017, 23, 227-237.	0.4	18
71	Characterizing nanoscale precipitation in a titanium alloy by laser-assisted atom probe tomography. Materials Characterization, 2018, 141, 129-138.	4.4	17
72	Understanding irradiation-induced nanoprecipitation in zirconium alloys using parallel TEM and APT. Journal of Nuclear Materials, 2018, 510, 460-471.	2.7	17

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73	Interaction of transmutation products with precipitates, dislocations and grain boundaries in neutron irradiated W. Materialia, 2022, 22, 101370.	2.7	17
74	Atomic engineering of platinum alloy surfaces. Ultramicroscopy, 2013, 132, 205-211.	1.9	16
75	An integrated high temperature environmental cell for atom probe tomography studies of gas-surface reactions: Instrumentation and results. Ultramicroscopy, 2014, 141, 16-21.	1.9	16
76	Automated Atom-By-Atom Three-Dimensional (3D) Reconstruction of Field Ion Microscopy Data. Microscopy and Microanalysis, 2017, 23, 255-268.	0.4	16
77	Effect of the milling atmosphere on the microstructure and mechanical properties of a ODS Fe-14Cr model alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 671, 264-274.	5.6	15
78	Isothermal omega formation and evolution in the Beta-Ti alloy Ti-5Al-5Mo-5V-3Cr. Philosophical Magazine Letters, 2016, 96, 416-424.	1.2	15
79	Radiation-induced segregation in W-Re: from kinetic Monte Carlo simulations to atom probe tomography experiments. European Physical Journal B, 2019, 92, 1.	1.5	15
80	The Effects of Chemistry Variations in New Nickel-Based Superalloys for Industrial Gas Turbine Applications. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 4902-4921.	2.2	15
81	Quantifying the effect of oxygen on micro-mechanical properties of a near-alpha titanium alloy. Journal of Materials Research, 2021, 36, 2529-2544.	2.6	15
82	The Kinetics of Primary Alpha Plate Growth in Titanium Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 131-141.	2.2	14
83	The effect of composition variations on the response of steels subjected to high fluence neutron irradiation. Materialia, 2020, 11, 100717.	2.7	14
84	Structural and compositional analysis of (InGa)(AsSb)/GaAs/GaP Stranskiâ€“Krastanov quantum dots. Light: Science and Applications, 2021, 10, 125.	16.6	14
85	On the Effect of Environmental Exposure on Dwell Fatigue Performance of a Fine-Grained Nickel-Based Superalloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 3908-3922.	2.2	13
86	A study of the interaction of oxygen with the Î±2 phase in the model alloy Tiâ€“7wt%Al. Scripta Materialia, 2020, 185, 111-116.	5.2	13
87	A model for oxidation-driven surface segregation and transport on Pt-alloys studied by atom probe tomography. Surface Science, 2011, 605, 1544-1549.	1.9	12
88	A combined approach for deposition and characterization of atomically engineered catalyst nanoparticles. Journal of Lithic Studies, 2015, 1, 125-131.	0.5	12
89	Characterization of Ordering in A-Site Deficient Perovskite Ca_{1â€“x}La_{2x/3}TiO₃ Using STEM/EELS. Inorganic Chemistry, 2016, 55, 9937-9948.	4.0	12
90	Validity of Vegardâ€™s rule for Al1â^'xInxN (0.08â€‰â€‰<â€‰â€‰xâ€‰â€‰<â€‰â€‰0.28) thin films grown on GaN templates. Physics D: Applied Physics, 2017, 50, 205107.	2.8	10

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91	A Gas-Phase Reaction Cell for Modern Atom Probe Systems. Microscopy and Microanalysis, 2019, 25, 410-417.	0.4	10
92	Xenon plasma focussed ion beam preparation of an Al-6XXX alloy sample for atom probe tomography including analysis of an Î±-Al(Fe,Mn)Si dispersoid. Materials Characterization, 2021, 178, 111194.	4.4	10
93	Extending continuum models for atom probe simulation. Materials Characterization, 2018, 146, 299-306.	4.4	9
94	In-Service Oxidation and Microstructural Evolution of a Nickel Superalloy in a FormulaÂ1 Car Exhaust. Oxidation of Metals, 2018, 89, 375-394.	2.1	8
95	The effect of hydrogen on the early stages of oxidation of a magnesium alloy. Corrosion Science, 2020, 165, 108391.	6.6	8
96	Atom Probe Tomography of Auâ€“Cu Bimetallic Nanoparticles Synthesized by Inert Gas Condensation. Journal of Physical Chemistry C, 2019, 123, 26481-26489.	3.1	7
97	Using alpha hulls to automatically and reproducibly detect edge clusters in atom probe tomography datasets. Materials Characterization, 2020, 160, 110078.	4.4	7
98	Atom Probe Analysis of Ex Situ Gas-Charged Stable Hydrides. Microscopy and Microanalysis, 2017, 23, 307-313.	0.4	6
99	Insight into the impact of atomic- and nano-scale indium distributions on the optical properties of InGaN/GaN quantum well structures grown on m-plane freestanding GaN substrates. Journal of Applied Physics, 2019, 125, 225704.	2.5	5
100	Developing Atom Probe Tomography of Phyllosilicates in Preparation for Extraâ€Terrestrial Sample Return. Geostandards and Geoanalytical Research, 2021, 45, 427-441.	3.1	5
101	A new class of alumina-forming superalloy for 3D printing. Additive Manufacturing, 2022, 52, 102608.	3.0	5
102	Atom Probe Tomography of a Cu-Doped TiNiSn Thermoelectric Material: Nanoscale Structure and Optimization of Analysis Conditions. Microscopy and Microanalysis, 2022, 28, 1340-1347.	0.4	3
103	Developing Atom Probe Tomography to Characterize Sr-Loaded Bioactive Glass for Bone Scaffolding. Microscopy and Microanalysis, 0, , 1-11.	0.4	2
104	Atom-Probe Tomography: Detection Efficiency and Resolution of Nanometer-Scale Precipitates in a Ti-5553 Alloy. Microscopy and Microanalysis, 2016, 22, 702-703.	0.4	1
105	Combined APT, TEM and SAXS Characterisation of Nanometre-Scale Precipitates in Titanium Alloys. Microscopy and Microanalysis, 2019, 25, 2516-2517.	0.4	1
106	Application of Atom Probe Tomography to Nitride Semiconductors. Microscopy and Microanalysis, 2017, 23, 666-667.	0.4	0
107	Novel Synthesis and Multi-technique Characterisation of Au-Cu Nanoparticles. Microscopy and Microanalysis, 2019, 25, 2526-2527.	0.4	0
108	PosgenPy: An Automated and Reproducible Approach to Assessing the Validity of Cluster Search Parameters in Atom Probe Tomography Datasets. Microscopy and Microanalysis, 0, , 1-10.	0.4	0