Daniel E Perea

List of Publications by Year
in descending order

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87 papers	5,121 citations	147801 31 h-index	85541 71 g-index
87 all docs	87 docs citations	87 times ranked	7212 citing authors

#	Article	IF	Citations
1	High-resolution detection of Au catalyst atoms in Si nanowires. Nature Nanotechnology, 2008, 3, 168-173.	31.5	575
2	Preparation of Single-Walled Carbon Nanotube Reinforced Polystyrene and Polyurethane Nanofibers and Membranes by Electrospinning. Nano Letters, 2004, 4, 459-464.	9.1	502
3	Direct measurement of dopant distribution in an individual vapourâ€“liquidâ€“solid nanowire. Nature Nanotechnology, 2009, 4, 315-319.	31.5	379
4	Synthesis and Characterization of Water Soluble Single-Walled Carbon Nanotube Graft Copolymers. Journal of the American Chemical Society, 2005, 127, 8197-8203.	13.7	325
5	Efficient conversion of low-concentration nitrate sources into ammonia on a Ru-dispersed Cu nanowire electrocatalyst. Nature Nanotechnology, 2022, 17, 759-767.	31.5	318
6	Comparison of Analytical Techniques for Purity Evaluation of Single-Walled Carbon Nanotubes. Journal of the American Chemical Society, 2005, 127, 3439-3448.	13.7	309
7	Demonstration of an Electrochemical Liquid Cell for Operando Transmission Electron Microscopy Observation of the Lithiation/Delithiation Behavior of Si Nanowire Battery Anodes. Nano Letters, 2013, 13, 6106-6112.	9.1	265
8	Three-Dimensional Nanoscale Composition Mapping of Semiconductor Nanowires. Nano Letters, 2006, 6, 181-185.	9.1	214
9	Determining the location and nearest neighbours of aluminium in zeolites with atom probe tomography. Nature Communications, 2015, 6, 7589.	12.8	139
10	Alternative catalysts for VSS growth of silicon and germanium nanowires. Journal of Materials Chemistry, 2009, 19, 849.	6.7	136
11	Electronic Origin for the Phase Transition from Amorphous Li_xSi to Crystalline Li₁₅Si₄. ACS Nano, 2013, 7, 6303-6309.	14.6	135
12	Three-dimensional nanoscale characterisation of materials by atom probe tomography. International Materials Reviews, 2018, 63, 68-101.	19.3	119
13	Relative Influence of Surface States and Bulk Impurities on the Electrical Properties of Ge Nanowires. Nano Letters, 2009, 9, 3268-3274.	9.1	115
14	Nonuniform Nanowire Doping Profiles Revealed by Quantitative Scanning Photocurrent Microscopy. Advanced Materials, 2009, 21, 3067-3072.	21.0	113
15	Bending-Induced Symmetry Breaking of Lithiation in Germanium Nanowires. Nano Letters, 2014, 14, 4622-4627.	9.1	92
16	Controlling Heterojunction Abruptness in VLS-Grown Semiconductor Nanowires via in situ Catalyst Alloying. Nano Letters, 2011, 11, 3117-3122.	9.1	91
17	Overall Water Splitting with Room-Temperature Synthesized NiFe Oxyfluoride Nanoporous Films. ACS Catalysis, 2017, 7, 8406-8412.	11.2	91
18	Nanometer-Scale Chemistry of a Calcite Biomineralization Template: Implications for Skeletal Composition and Nucleation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12934-12939.	7.1	78

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19	Effects of laser energy and wavelength on the analysis of LiFePO4 using laser assisted atom probe tomography. Ultramicroscopy, 2015, 148, 57-66.	1.9	64
20	A method for site-specific and cryogenic specimen fabrication of liquid/solid interfaces for atom probe tomography. Ultramicroscopy, 2018, 194, 89-99.	1.9	64
21	Tomographic analysis of dilute impurities in semiconductor nanostructures. Journal of Solid State Chemistry, 2008, 181, 1642-1649.	2.9	62
22	Atom Probe Tomographic Mapping Directly Reveals the Atomic Distribution of Phosphorus in Resin Embedded Ferritin. Scientific Reports, 2016, 6, 22321.	3.3	56
23	Identification of an Intrinsic Source of Doping Inhomogeneity in Vaporâ€“Liquidâ€“Solid-Grown Nanowires. Nano Letters, 2013, 13, 199-206.	9.1	54
24	Visualizing the iron atom exchange front in the Fe(II)-catalyzed recrystallization of goethite by atom probe tomography. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 2866-2874.	7.1	52
25	Electron-Rich Driven Electrochemical Solid-State Amorphization in Liâ€“Si Alloys. Nano Letters, 2013, 13, 4511-4516.	9.1	51
26	Composition analysis of single semiconductor nanowires using pulsed-laser atom probe tomography. Applied Physics A: Materials Science and Processing, 2006, 85, 271-275.	2.3	47
27	An environmental transfer hub for multimodal atom probe tomography. Advanced Structural and Chemical Imaging, 2017, 3, 12.	4.0	47
28	Correlating dopant distributions and electrical properties of boron-doped silicon nanowires. Applied Physics Letters, 2009, 95, .	3.3	44
29	Axial SiGe Heteronanowire Tunneling Field-Effect Transistors. Nano Letters, 2012, 12, 5850-5855.	9.1	40
30	The role of metal vacancies during high-temperature oxidation of alloys. Npj Materials Degradation, 2018, 2, .	5.8	35
31	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
32	Minority Carrier Lifetimes and Surface Effects in VLSâ€Grown Axial pâ€“n Junction Silicon Nanowires. Advanced Materials, 2011, 23, 4306-4311.	21.0	32
33	Tomographic mapping of the nanoscale water-filled pore structure in corroded borosilicate glass. Npj Materials Degradation, 2020, 4, .	5.8	29
34	A Mechanistic Understanding of Nonclassical Crystal Growth in Hydrothermally Synthesized Sodium Yttrium Fluoride Nanowires. Chemistry of Materials, 2020, 32, 2753-2763.	6.7	27
35	Extinction Coefficients and Purity of Single-Walled Carbon Nanotubes. Journal of Nanoscience and Nanotechnology, 2004, 4, 995-1004.	0.9	26
36	Effect of aging temperature on phase decomposition and mechanical properties in cast duplex stainless steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 690, 365-377.	5.6	26

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37	Resolving Iron(II) Sorption and Oxidative Growth on Hematite (001) Using Atom Probe Tomography. Journal of Physical Chemistry C, 2018, 122, 3903-3914.	3.1	26
38	Effects of long-term thermal aging on bulk and local mechanical behavior of ferritic-austenitic duplex stainless steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 720, 130-139.	5.6	21
39	Mapping electrostatic profiles across axial p-n junctions in Si nanowires using off-axis electron holography. Applied Physics Letters, 2013, 103, .	3.3	19
40	Probing the Origin of Interfacial Carriers in SrTiO₃â€“LaCrO₃ Superlattices. Chemistry of Materials, 2017, 29, 1147-1155.	6.7	19
41	Enhancing magnesite formation at low temperature and high CO2 pressure: The impact of seed crystals and minor components. Chemical Geology, 2015, 395, 119-125.	3.3	16
42	Element redistributions during early stages of oxidation in a Ni38Cr22Fe20Mn10Co10 multi-principal element alloy. Scripta Materialia, 2021, 194, 113609.	5.2	16
43	Atom probe tomography of nanoscale electronic materials. MRS Bulletin, 2016, 41, 30-34.	3.5	15
44	Nanoscale Perspectives of Metal Degradation via In Situ Atom Probe Tomography. Topics in Catalysis, 2020, 63, 1606-1622.	2.8	15
45	Cryo-based structural characterization and growth model of salt film on metal. Corrosion Science, 2020, 174, 108812.	6.6	15
46	Singlet-Oxygen Generation from Individual Semiconducting and Metallic Nanostructures during Near-Infrared Laser Trapping. ACS Photonics, 2015, 2, 559-564.	6.6	14
47	Rapid assessment of structural and compositional changes during early stages of zirconium alloy oxidation. Npj Materials Degradation, 2020, 4, .	5.8	14
48	Directional Gateway to Metal Oxidation: 3D Chemical Mapping Unfolds Oxygen Diffusional Pathways in Rhodium Nanoparticles. Journal of Physical Chemistry Letters, 2020, 11, 3144-3151.	4.6	14
49	Calcareous organic matter coatings sequester siderophores in alkaline soils. Science of the Total Environment, 2020, 724, 138250.	8.0	14
50	Cryogenic specimens for nanoscale characterization of solidâ€“liquid interfaces. MRS Bulletin, 2019, 44, 949-955.	3.5	12
51	Spontaneous phase segregation of Sr ₂ NiO ₃ and SrNi ₂ O ₃ during SrNiO ₃ heteroepitaxy. Science Advances, 2021, 7, .	10.3	12
52	Catalyst Composition and Impurity-Dependent Kinetics of Nanowire Heteroepitaxy. ACS Nano, 2013, 7, 7689-7697.	14.6	11
53	Characterization of electrical properties in axial Si-Ge nanowire heterojunctions using off-axis electron holography and atom-probe tomography. Journal of Applied Physics, 2016, 120, .	2.5	10
54	Characterization of CoCu- and CoMn-Based Catalysts for the Fischerâ€“Tropsch Reaction Toward Chain-Lengthened Oxygenates. Topics in Catalysis, 2018, 61, 1016-1023.	2.8	10

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55	Correlation and Morphology of Dopant Decomposition in Mn and Co Codoped Ge Epitaxial Films. Journal of Physical Chemistry C, 2012, 116, 276-280.	3.1	7
56	Uranium isotopic ratio measurements of U 3 O 8 reference materials by atom probe tomography. Journal of Environmental Radioactivity, 2016, 153, 206-213.	1.7	7
57	Nanoscale microstructure and chemistry of transparent gahnite glass-ceramics revealed by atom probe tomography. Scripta Materialia, 2021, 203, 114110.	5.2	7
58	Characterization of Element Partitioning at the Austenite/Ferrite Interface of asCast CF-3 and CF-8 Duplex Stainless Steels. Microscopy and Microanalysis, 2015, 21, 365-366.	0.4	6
59	Heterogeneous Twoâ€Phase Pillars in Epitaxial NiFe₂O₄â€LaFeO₃ Nanocomposites. Advanced Materials Interfaces, 2017, 4, 1700396.	3.7	5
60	Compositional partitioning during early stages of oxidation of a uranium-molybdenum alloy. Scripta Materialia, 2022, 212, 114528.	5.2	5
61	Visualizing the Nanoscale Oxygen and Cation Transport Mechanisms during the Early Stages of Oxidation of Feâ€“Crâ€“Ni Alloy Using In Situ Atom Probe Tomography. Advanced Materials Interfaces, 2022, 9, .	3.7	5
62	Deciphering the Distribution and Crystal-Chemical Environment of Arsenic, Lead, Silica, Phosphorus, Tin, and Zinc in a Porous Ferrihydrite Grain Using Transmission Electron Microscopy and Atom Probe Tomography. ACS Earth and Space Chemistry, 2022, 6, 558-570.	2.7	4
63	Pulsed Photothermal Heating of One-Dimensional Nanostructures. Journal of Physical Chemistry C, 2016, 120, 21730-21739.	3.1	3
64	Petrogenesis, alteration, and shock history of intermediate shergottite Northwest Africa 7042: Evidence for hydrous magmatism on Mars?. Geochimica Et Cosmochimica Acta, 2020, 283, 103-123.	3.9	3
65	Visualizing and Quantifying Spinodal Decomposition in a Duplex Stainless Steel. Microscopy and Microanalysis, 2017, 23, 660-661.	0.4	2
66	Understanding Fayalite Chemistry using Electron Microscopy and Atom Probe Tomography. Microscopy and Microanalysis, 2014, 20, 998-999.	0.4	1
67	Exploring New Science Domains with Atom Probe Tomography Enabled by an Environmental Transfer Hub. Microscopy and Microanalysis, 2019, 25, 276-277.	0.4	1
68	Advanced FIB-based Preparation of Cryogenically-prepared Specimens for APT Analysis. Microscopy and Microanalysis, 2019, 25, 878-879.	0.4	1
69	Advanced Cryo-FIB Specimen Preparation and Handling of Environmentally Sensitive Materials for APT Analysis. Microscopy and Microanalysis, 2020, 26, 2094-2095.	0.4	1
70	Reply to Comment on â€œA Mechanistic Understanding of Nonclassical Crystal Growth in Hydrothermally Synthesized Sodium Yttrium Fluoride Nanowiresâ€• Chemistry of Materials, 2021, 33, 3862-3864.	6.7	1
71	Optimal Specimen Preparation for Correlative Atom Probe Tomography and Electron Microscopy of Environmentally Sensitive Materials. Microscopy and Microanalysis, 2021, 27, 2472-2474.	0.4	1
72	Formation of pyrophosphates across grain boundaries induces the formation of mismatched but oriented interfaces in silver phosphate polypods. Applied Surface Science, 2021, 563, 149980.	6.1	1

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73	Atom probe tomography and transmission electron microscopy: a powerful combination to characterize the speciation and distribution of Cu in organic matter. Environmental Sciences: Processes and Impacts, 0, , .	3.5	1
74	Mapping the Electrostatic Profile Across Axial p-n Junctions in Si nanowires using Off-Axis Electron Holography. Microscopy and Microanalysis, 2012, 18, 1826-1827.	0.4	0
75	Controlling axial p-n heterojunction abruptness through catalyst alloying in vapor-liquid-solid grown semiconductor nanowires. Microscopy and Microanalysis, 2012, 18, 1860-1861.	0.4	0
76	Mapping the Complex Phase Formation at the Surface of Supercritical CO Reacted Fayalite for Geologic Sequestration of Greenhouse Gases. Microscopy and Microanalysis, 2013, 19, 976-977.	0.4	0
77	Microscopic Characterization of Heterogeneous Catalysts in 3-D and In-situ/Ex-situ. Microscopy and Microanalysis, 2013, 19, 1662-1663.	0.4	0
78	In-situ TEM Study of Internal and External Stress on Lithiation behavior of High Capacity Anode Materials with a Large Volume Change. Microscopy and Microanalysis, 2014, 20, 1536-1537.	0.4	0
79	Probing the Organic/Inorganic Interface of the Ferritin Protein using Atom Probe Tomography. Microscopy and Microanalysis, 2015, 21, 515-516.	0.4	0
80	Direct Observation of Zirconium Alloy Oxidation at the Nanoscale. Microscopy and Microanalysis, 2019, 25, 318-319.	0.4	0
81	Surface/Subsurface Interactions During Rh Oxidation Revealed by Atom Probe Tomography and Microscopy. Microscopy and Microanalysis, 2019, 25, 330-331.	0.4	0
82	New Science with Atom Probe Tomography Enabled via an Environmental Transfer Hub. Microscopy and Microanalysis, 2019, 25, 340-341.	0.4	0
83	Macro to Nanoscale Approaches to Study Mineral Transformations at the Liquid, Organic, Biological Interface.. Microscopy and Microanalysis, 2020, 26, 1568-1569.	0.4	0
84	In-situ and In-operando Cobalt Oxidation Studied by Atom Probe Tomography. Microscopy and Microanalysis, 2020, 26, 1872-1873.	0.4	0
85	In Situ Atom Probe Tomography Study of The Influence of Deformation on Early Stages of Oxidation of Fe18Cr10Ni Alloy. Microscopy and Microanalysis, 2021, 27, 986-988.	0.4	0
86	Development of the Operando Atom Probe: The Influence of the electric field on Fe oxidation. Microscopy and Microanalysis, 2021, 27, 1516-1517.	0.4	0
87	Prospects of mapping macromolecular structure and ionic gradients in hydrated biological specimens using Atom Probe Tomography. Microscopy and Microanalysis, 2021, 27, 1518-1518.	0.4	0