Francois Vurpillot

List of Publications by Year
in descending order

109 papers	3,339 citations	172207 29 h-index	155451 55 g-index
113 all docs	113 docs citations	113 times ranked	2018 citing authors

#	Article	IF	Citations
1	Trajectory overlaps and local magnification in three-dimensional atom probe. Applied Physics Letters, 2000, 76, 3127-3129.	1.5	390
2	Composition of Wide Bandgap Semiconductor Materials and Nanostructures Measured by Atom Probe Tomography and Its Dependence on the Surface Electric Field. Journal of Physical Chemistry C, 2014, 118, 24136-24151.	1.5	135
3	Reconstructing atom probe data: A review. Ultramicroscopy, 2013, 132, 19-30.	0.8	126
4	Atom probe tomography spatial reconstruction: Status and directions. Current Opinion in Solid State and Materials Science, 2013, 17, 236-247.	5.6	122
5	Chromatic Aberrations in the Field Evaporation Behavior of Small Precipitates. Microscopy and Microanalysis, 2008, 14, 561-570.	0.2	119
6	Correlated field evaporation as seen by atom probe tomography. Surface Science, 2007, 601, 536-543.	0.8	110
7	Structural analyses in three-dimensional atom probe: a Fourier transform approach. Journal of Microscopy, 2001, 203, 295-302.	0.8	109
8	A model accounting for spatial overlaps in 3D atom-probe microscopy. Ultramicroscopy, 2001, 89, 145-153.	0.8	104
9	Thermal response of a field emitter subjected to ultra-fast laser illumination. Journal Physics D: Applied Physics, 2009, 42, 125502.	1.3	101
10	The spatial resolution of 3D atom probe in the investigation of single-phase materials. Ultramicroscopy, 2000, 84, 213-224.	0.8	90
11	Depth resolution function of the laser assisted tomographic atom probe in the investigation of semiconductors. Journal of Applied Physics, 2009, 106, .	1.1	79
12	Improvement of multilayer analyses with a three-dimensional atom probe. Surface and Interface Analysis, 2004, 36, 552-558.	0.8	76
13	Correlation of Microphotoluminescence Spectroscopy, Scanning Transmission Electron Microscopy, and Atom Probe Tomography on a Single Nano-object Containing an InGaN/GaN Multiquantum Well System. Nano Letters, 2014, 14, 107-114.	4.5	70
14	Application of Fourier transform and autocorrelation to cluster identification in the three-dimensional atom probe. Journal of Microscopy, 2004, 216, 234-240.	0.8	63
15	Pragmatic reconstruction methods in atom probe tomography. Ultramicroscopy, 2011, 111, 1286-1294.	0.8	63
16	A new step towards the lattice reconstruction in 3DAP. Ultramicroscopy, 2003, 95, 223-229.	0.8	60
17	Investigation of wÃ¼stite (Fe1âˆ’O) by femtosecond laser assisted atom probe tomography. Ultramicroscopy, 2011, 111, 584-588.	0.8	59
18	On the detection of multiple events in atom probe tomography. Ultramicroscopy, 2018, 189, 54-60.	0.8	59

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19	3D analysis of advanced nano-devices using electron and atom probe tomography. Ultramicroscopy, 2014, 136, 185-192.	0.8	52
20	Field evaporation: A kinetic Monte Carlo approach on the influence of temperature. Surface Science, 2011, 605, 2025-2031.	0.8	49
21	Statistical correction of atom probe tomography data of semiconductor alloys combined with optical spectroscopy: The case of Al0.25Ga0.75N. Journal of Applied Physics, 2016, 119, .	1.1	49
22	A new approach to the interpretation of atom probe field-ion microscopy images. Ultramicroscopy, 2001, 89, 137-144.	0.8	48
23	Understanding Atom Probe Tomography of Oxide-Supported Metal Nanoparticles by Correlation with Atomic-Resolution Electron Microscopy and Field Evaporation Simulation. Journal of Physical Chemistry Letters, 2014, 5, 1361-1367.	2.1	46
24	Three-dimensional nanoscale study of Al segregation and quantum dot formation in GaAs/AlGaAs core-shell nanowires. Applied Physics Letters, 2014, 105, .	1.5	45
25	Simulation of field-induced molecular dissociation in atom-probe tomography: Identification of a neutral emission channel. Physical Review A, 2017, 95, .	1.0	43
26	Application of Delaunay tessellation for the characterization of solute-rich clusters in atom probe tomography. Ultramicroscopy, 2011, 111, 200-206.	0.8	40
27	Analysis of Radiation Damage in Light Water Reactors: Comparison of Cluster Analysis Methods for the Analysis of Atom Probe Data. Microscopy and Microanalysis, 2017, 23, 366-375.	0.2	40
28	Clustering and Local Magnification Effects in Atom Probe Tomography: A Statistical Approach. Microscopy and Microanalysis, 2010, 16, 643-648.	0.2	37
29	Three dimensional imaging and analysis of a single nano-device at the ultimate scale using correlative microscopy techniques. Applied Physics Letters, 2015, 106, .	1.5	31
30	A chemical composition correction model for nanoclusters observed by APT - Application to ODS steel nanoparticles. Journal of Nuclear Materials, 2018, 505, 240-248.	1.3	30
31	Some aspects of the silicon behaviour under femtosecond pulsed laser field evaporation. Ultramicroscopy, 2007, 107, 767-772.	0.8	29
32	A model to predict image formation in Atom probeTomography. Ultramicroscopy, 2013, 132, 152-157.	0.8	27
33	Energy deficit of pulsed-laser field-ionized and field-emitted ions from non-metallic nano-tips. Journal of Applied Physics, 2014, 115, .	1.1	27
34	A Meshless Algorithm to Model Field Evaporation in Atom Probe Tomography. Microscopy and Microanalysis, 2015, 21, 1649-1656.	0.2	27
35	Dissociation Dynamics of Molecular Ions in High dc Electric Field. Journal of Physical Chemistry A, 2016, 120, 3654-3662.	1.1	26
36	Green Electroluminescence from Radial m-Plane InGaN Quantum Wells Grown on GaN Wire Sidewalls by Metalâ€“Organic Vapor Phase Epitaxy. ACS Photonics, 2018, 5, 4330-4337.	3.2	26

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37	Imaging individual solute atoms at crystalline imperfections in metals. New Journal of Physics, 2019, 21, 123020.	1.2	26
38	Investigation at the atomic scale of the Co spatial distribution in Zn(Co)O magnetic semiconductor oxide. Journal of Applied Physics, 2009, 105, .	1.1	24
39	Unraveling the Metastability of C_n²⁺ (n = 2â€“4) Clusters. Journal of Physical Chemistry Letters, 2019, 10, 581-588.	2.1	24
40	Improved ion detection efficiency of microchannel plate detectors. Review of Scientific Instruments, 2002, 73, 1734-1740.	0.6	23
41	Optical and thermal processes involved in ultrafast laser pulse interaction with a field emitter. Ultramicroscopy, 2007, 107, 713-719.	0.8	23
42	Evidence of atomic-scale arsenic clustering in highly doped silicon. Journal of Applied Physics, 2009, 106, .	1.1	23
43	Numerical study of femtosecond laser-assisted atom probe tomography. Applied Physics A: Materials Science and Processing, 2013, 110, 703-707.	1.1	23
44	Interpreting nanovoids in atom probe tomography data for accurate local compositional measurements. Nature Communications, 2020, 11, 1022.	5.8	23
45	Atom probe tomography analysis of SiGe fins embedded in SiO 2 : Facts and artefacts. Ultramicroscopy, 2017, 179, 100-107.	0.8	22
46	Composition Metrology of Ternary Semiconductor Alloys Analyzed by Atom Probe Tomography. Journal of Physical Chemistry C, 2018, 122, 16704-16714.	1.5	22
47	Laser-assisted atom probe tomography and nanosciences. International Journal of Materials Research, 2008, 99, 454-460.	0.1	21
48	Impact of local electrostatic field rearrangement on field ionization. Journal Physics D: Applied Physics, 2018, 51, 105601.	1.3	20
49	Ultrafast ion emission from metallic tip excited by femtosecond laser pulses. Applied Physics Letters, 2006, 89, 251903.	1.5	17
50	Conditions to cancel the laser polarization dependence of a subwavelength tip. Applied Physics Letters, 2009, 94, .	1.5	17
51	Electronic structure and stability of the SiO2+ dications produced in tomographic atom probe experiments. Journal of Chemical Physics, 2017, 147, 164301.	1.2	17
52	Coupling atom probe tomography and photoluminescence spectroscopy: Exploratory results and perspectives. Ultramicroscopy, 2013, 132, 75-80.	0.8	16
53	True Atomic-Scale Imaging in Three Dimensions: A Review of the Rebirth of Field-Ion Microscopy. Microscopy and Microanalysis, 2017, 23, 210-220.	0.2	16
54	An Automated Computational Approach for Complete In-Plane Compositional Interface Analysis by Atom Probe Tomography. Microscopy and Microanalysis, 2019, 25, 389-400.	0.2	16

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55	Reflections on the Spatial Performance of Atom Probe Tomography in the Analysis of Atomic Neighborhoods. Microscopy and Microanalysis, 2022, 28, 1116-1126.	0.2	16
56	New Atom Probe Tomography Reconstruction Algorithm for Multilayered Samples: Beyond the Hemispherical Constraint. Microscopy and Microanalysis, 2017, 23, 247-254.	0.2	15
57	Laser-assisted atom probe tomography investigation of magnetic FePt nanoclusters: First experiments. Journal of Alloys and Compounds, 2012, 517, 40-44.	2.8	14
58	Carrier Localization in GaN/AlN Quantum Dots As Revealed by Three-Dimensional Multimicroscopy. Nano Letters, 2017, 17, 4261-4269.	4.5	14
59	Ultrafast emission of ions during laser ablation of metal for 3D atom probe. Applied Surface Science, 2009, 255, 5154-5158.	3.1	12
60	Dynamic evolution and fracture of multilayer field emitters in atom probe tomography: a new interpretation. EPJ Applied Physics, 2015, 72, 21001.	0.3	12
61	Pulse shaping optimization for improving atom probe tomography. International Journal of Mass Spectrometry, 2015, 386, 47-53.	0.7	12
62	Advanced volume reconstruction and data mining methods in atom probe tomography. MRS Bulletin, 2016, 41, 46-52.	1.7	12
63	Simulation tools for atom probe tomography: A path for diagnosis and treatment of image degradation. Materials Characterization, 2018, 146, 336-346.	1.9	12
64	Characterization of Pd and Pd@Au core-shell nanoparticles using atom probe tomography and field evaporation simulation. Journal of Alloys and Compounds, 2020, 831, 154721.	2.8	12
65	Challenges in the study of Fe/MgO/Fe interfaces using 3D Atom Probe. Thin Solid Films, 2015, 589, 38-46.	0.8	11
66	Multi-excitonic emission from Stranski-Krastanov GaN/AlN quantum dots inside a nanoscale tip. Applied Physics Letters, 2017, 111, .	1.5	11
67	Dissociation of GaN2+ and AlN2+ in APT: Analysis of experimental measurements. Journal of Chemical Physics, 2018, 149, 134311.	1.2	11
68	Interpreting the Presence of an Additional Oxide Layer in Analysis of Metal Oxidesâ€“Metal Interfaces in Atom Probe Tomography. Journal of Physical Chemistry C, 2019, 123, 1313-1319.	1.5	11
69	The New Laser assisted Wide Angle Tomographic Atom Probe. Microscopy and Microanalysis, 2006, 12, 1726-1727.	0.2	10
70	Quantitative investigation of SiGeC layers using atom probe tomography. Ultramicroscopy, 2015, 150, 23-29.	0.8	10
71	Preferential Evaporation in Atom Probe Tomography: An Analytical Approach. Microscopy and Microanalysis, 2020, 26, 689-698.	0.2	10
72	A model to predict image formation in the three-dimensional field ion microscope. Computer Physics Communications, 2021, 260, 107317.	3.0	9

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73	Enhancing Element Identification by Expectationâ€“Maximization Method in Atom Probe Tomography. Microscopy and Microanalysis, 2019, 25, 367-377.	0.2	8
74	Enhanced dynamic reconstruction for atom probe tomography. Ultramicroscopy, 2019, 197, 72-82.	0.8	8
75	Analysis of nanoscale fluid inclusions in geomaterials by atom probe tomography: Experiments and numerical simulations. Ultramicroscopy, 2020, 218, 113092.	0.8	8
76	Super-resolution Optical Spectroscopy of Nanoscale Emitters within a Photonic Atom Probe. Nano Letters, 2020, 20, 8733-8738.	4.5	8
77	3D atom probe assisted by femtosecond laser pulses. Applied Physics A: Materials Science and Processing, 2008, 93, 995-1003.	1.1	7
78	Ion energy spread in laser-assisted atom probe tomography. Europhysics Letters, 2015, 109, 37009.	0.7	7
79	Dissociation of GaN2+ and AlN2+ in APT: Electronic structure and stability in strong DC field. Journal of Chemical Physics, 2018, 149, 134310.	1.2	7
80	Spatial and Compositional Biases Introduced by Position Sensitive Detection Systems in APT: A Simulation Approach. Microscopy and Microanalysis, 2019, 25, 418-424.	0.2	7
81	Revealing atomic-scale vacancy-solute interaction in nickel. Scripta Materialia, 2021, 203, 114036.	2.6	7
82	Structural investigation of TbCo2/Fe magnetostrictive thin films by tomographic atom probe and MÃ¶ssbauer spectrometry. Journal of Magnetism and Magnetic Materials, 2007, 310, 2215-2216.	1.0	6
83	A Mesoscopic Field Evaporation Model. Microscopy and Microanalysis, 2019, 25, 286-287.	0.2	6
84	Dynamic Effects in Voltage Pulsed Atom Probe. Microscopy and Microanalysis, 2020, 26, 1133-1146.	0.2	6
85	Detecting Dissociation Dynamics of Phosphorus Molecular Ions by Atom Probe Tomography. Journal of Physical Chemistry A, 2020, 124, 10977-10988.	1.1	6
86	Development of an Energy-Sensitive Detector for the Atom Probe Tomography. Microscopy and Microanalysis, 2022, 28, 1076-1091.	0.2	6
87	Ultrafast Laser Assisted Field Evaporation and Atom Probe Tomography Applications. Journal of Physics: Conference Series, 2007, 59, 132-135.	0.3	5
88	Nanometer Scale Tomographic Investigation of Fine Scale Precipitates in a CuFeNi Granular System by Three-Dimensional Field Ion Microscopy. Microscopy and Microanalysis, 2012, 18, 1129-1134.	0.2	5
89	ANALYSIS OF EXCITATION PULSED SIGNAL PROPAGATION FOR ATOM PROBE TOMOGRAPHY SYSTEM. Progress in Electromagnetics Research Letters, 2014, 47, 61-70.	0.4	5
90	Influence of field conditions on quantitative analysis of single crystal thorium dioxide by atom probe tomography. Ultramicroscopy, 2021, 220, 113167.	0.8	5

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91	Quantitative analysis of Si/SiGeC superlattices using atom probe tomography. Ultramicroscopy, 2015, 159, 223-231.	0.8	4
92	Optimizing Atom Probe Analysis with Synchronous Laser Pulsing and Voltage Pulsing. Microscopy and Microanalysis, 2017, 23, 221-226.	0.2	4
93	Development of Wide Field of View Three-Dimensional Field Ion Microscopy and High-Fidelity Reconstruction Algorithms to the Study of Defects in Nuclear Materials. Microscopy and Microanalysis, 2021, 27, 365-384.	0.2	4
94	Surface Microscopy of Atomic and Molecular Hydrogen from Field-Evaporating Semiconductors. Journal of Physical Chemistry C, 2021, 125, 17078-17087.	1.5	4
95	Dissociation of Molecular Ions During the DC Field Evaporation ZnO in Atom Probe Tomography. Microscopy and Microanalysis, 2016, 22, 662-663.	0.2	2
96	Kronâ€“Branin modelling of ultra-short pulsed signal microelectrode. EPJ Applied Physics, 2018, 81, 21001.	0.3	2
97	Analytical Three-Dimensional Field Ion Microscopy of an Amorphous Glass FeBSi. Microscopy and Microanalysis, 2021, , 1-9.	0.2	2
98	Nanoscale Microstructural and Chemical Analysis of SiO₂â€“Zn_{1â^'x}Al_xO Nanocomposites: Towards a Better Understanding of Si and Al Substitution in ZnO. Journal of the American Ceramic Society, 2015, 98, 3948-3955.	1.9	1
99	Nanoscale photoconductive switching effect applied to atom probe tomography. Europhysics Letters, 2016, 116, 27002.	0.7	1
100	Atomistic Simulations of Surface Effects Under High Electric Fields. Microscopy and Microanalysis, 2017, 23, 644-645.	0.2	1
101	Characterization of a High Voltage and High Frequency pulse generator configuration for Atom Probe. , 2020, , .		1
102	Design of A Multistage Marx Generator topology based on SiC-MOSFET Device for Atomic Probe Tomography Applications. , 2020, , .		1
103	A Tomographic Atom Probe laser assisted by a flexible optical system. Microscopy and Microanalysis, 2021, 27, 1260-1261.	0.2	1
104	3D Atom Probe: Chemical Analysis With (Near) Atomic Resolution. Microscopy and Microanalysis, 2003, 9, 568-569.	0.2	0
105	Bridging the Gap between the Modeling Approach and the Experiment in Atom Probe Tomography. Microscopy and Microanalysis, 2015, 21, 37-38.	0.2	0
106	Field Evaporation Behavior of Metal Oxide/Metal Interfaces. Microscopy and Microanalysis, 2016, 22, 678-679.	0.2	0
107	Recent Reconstruction Developments in IVAS. Microscopy and Microanalysis, 2017, 23, 638-639.	0.2	0
108	Reconstructing APT Datasets: Challenging the Limits of the Possible. Microscopy and Microanalysis, 2017, 23, 640-641.	0.2	0

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109	Interpreting Voids in Atom Probe Tomography Data via Experiment and Theory. Microscopy and Microanalysis, 2019, 25, 290-291.	0.2	0