Francois Vurpillot

List of Publications by Year
in descending order

109 papers	3,339 citations	172457 29 h-index	155660 55 g-index
113 all docs	113 docs citations	113 times ranked	2018 citing authors

#	Article	IF	Citations
1	Development of an Energy-Sensitive Detector for the Atom Probe Tomography. Microscopy and Microanalysis, 2022, 28, 1076-1091.	0.4	6
2	Reflections on the Spatial Performance of Atom Probe Tomography in the Analysis of Atomic Neighborhoods. Microscopy and Microanalysis, 2022, 28, 1116-1126.	0.4	16
3	A model to predict image formation in the three-dimensional field ion microscope. Computer Physics Communications, 2021, 260, 107317.	7.5	9
4	Influence of field conditions on quantitative analysis of single crystal thorium dioxide by atom probe tomography. Ultramicroscopy, 2021, 220, 113167.	1.9	5
5	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.	0.4	4
6	A Tomographic Atom Probe laser assisted by a flexible optical system. Microscopy and Microanalysis, 2021, 27, 1260-1261.	0.4	1
7	Surface Microscopy of Atomic and Molecular Hydrogen from Field-Evaporating Semiconductors. Journal of Physical Chemistry C, 2021, 125, 17078-17087.	3.1	4
8	Analytical Three-Dimensional Field Ion Microscopy of an Amorphous Glass FeBSi. Microscopy and Microanalysis, 2021, , 1-9.	0.4	2
9	Revealing atomic-scale vacancy-solute interaction in nickel. Scripta Materialia, 2021, 203, 114036.	5.2	7
10	Dynamic Effects in Voltage Pulsed Atom Probe. Microscopy and Microanalysis, 2020, 26, 1133-1146.	0.4	6
11	Analysis of nanoscale fluid inclusions in geomaterials by atom probe tomography: Experiments and numerical simulations. Ultramicroscopy, 2020, 218, 113092.	1.9	8
12	Detecting Dissociation Dynamics of Phosphorus Molecular Ions by Atom Probe Tomography. Journal of Physical Chemistry A, 2020, 124, 10977-10988.	2.5	6
13	Super-resolution Optical Spectroscopy of Nanoscale Emitters within a Photonic Atom Probe. Nano Letters, 2020, 20, 8733-8738.	9.1	8
14	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.	5.5	12
15	Characterization of a High Voltage and High Frequency pulse generator configuration for Atom Probe. , 2020, , .		1
16	Design of A Multistage Marx Generator topology based on SiC-MOSFET Device for Atomic Probe Tomography Applications. , 2020, , .		1
17	Preferential Evaporation in Atom Probe Tomography: An Analytical Approach. Microscopy and Microanalysis, 2020, 26, 689-698.	0.4	10
18	Interpreting nanovoids in atom probe tomography data for accurate local compositional measurements. Nature Communications, 2020, 11, 1022.	12.8	23

#	Article	IF	Citations
19	Interpreting Voids in Atom Probe Tomography Data via Experiment and Theory. Microscopy and Microanalysis, 2019, 25, 290-291.	0.4	0
20	A Mesoscopic Field Evaporation Model. Microscopy and Microanalysis, 2019, 25, 286-287.	0.4	6
21	Unraveling the Metastability of C_n²⁺ (n = 2â€“4) Clusters. Journal of Physical Chemistry Letters, 2019, 10, 581-588.	4.6	24
22	An Automated Computational Approach for Complete In-Plane Compositional Interface Analysis by Atom Probe Tomography. Microscopy and Microanalysis, 2019, 25, 389-400.	0.4	16
23	Spatial and Compositional Biases Introduced by Position Sensitive Detection Systems in APT: A Simulation Approach. Microscopy and Microanalysis, 2019, 25, 418-424.	0.4	7
24	Enhancing Element Identification by Expectationâ€“Maximization Method in Atom Probe Tomography. Microscopy and Microanalysis, 2019, 25, 367-377.	0.4	8
25	Imaging individual solute atoms at crystalline imperfections in metals. New Journal of Physics, 2019, 21, 123020.	2.9	26
26	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.	3.1	11
27	Enhanced dynamic reconstruction for atom probe tomography. Ultramicroscopy, 2019, 197, 72-82.	1.9	8
28	Simulation tools for atom probe tomography: A path for diagnosis and treatment of image degradation. Materials Characterization, 2018, 146, 336-346.	4.4	12
29	A chemical composition correction model for nanoclusters observed by APT - Application to ODS steel nanoparticles. Journal of Nuclear Materials, 2018, 505, 240-248.	2.7	30
30	Impact of local electrostatic field rearrangement on field ionization. Journal Physics D: Applied Physics, 2018, 51, 105601.	2.8	20
31	On the detection of multiple events in atom probe tomography. Ultramicroscopy, 2018, 189, 54-60.	1.9	59
32	Dissociation of GaN2+ and AlN2+ in APT: Analysis of experimental measurements. Journal of Chemical Physics, 2018, 149, 134311.	3.0	11
33	Kronâ€“Branin modelling of ultra-short pulsed signal microelectrode. EPJ Applied Physics, 2018, 81, 21001.	0.7	2
34	Dissociation of GaN2+ and AlN2+ in APT: Electronic structure and stability in strong DC field. Journal of Chemical Physics, 2018, 149, 134310.	3.0	7
35	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.	6.6	26
36	Composition Metrology of Ternary Semiconductor Alloys Analyzed by Atom Probe Tomography. Journal of Physical Chemistry C, 2018, 122, 16704-16714.	3.1	22

#	Article	IF	Citations
37	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.	0.4	40
38	Optimizing Atom Probe Analysis with Synchronous Laser Pulsing and Voltage Pulsing. Microscopy and Microanalysis, 2017, 23, 221-226.	0.4	4
39	True Atomic-Scale Imaging in Three Dimensions: A Review of the Rebirth of Field-Ion Microscopy. Microscopy and Microanalysis, 2017, 23, 210-220.	0.4	16
40	Atom probe tomography analysis of SiGe fins embedded in SiO 2 : Facts and artefacts. Ultramicroscopy, 2017, 179, 100-107.	1.9	22
41	New Atom Probe Tomography Reconstruction Algorithm for Multilayered Samples: Beyond the Hemispherical Constraint. Microscopy and Microanalysis, 2017, 23, 247-254.	0.4	15
42	Electronic structure and stability of the SiO2+ dications produced in tomographic atom probe experiments. Journal of Chemical Physics, 2017, 147, 164301.	3.0	17
43	Simulation of field-induced molecular dissociation in atom-probe tomography: Identification of a neutral emission channel. Physical Review A, 2017, 95, .	2.5	43
44	Recent Reconstruction Developments in IVAS. Microscopy and Microanalysis, 2017, 23, 638-639.	0.4	0
45	Reconstructing APT Datasets: Challenging the Limits of the Possible. Microscopy and Microanalysis, 2017, 23, 640-641.	0.4	0
46	Atomistic Simulations of Surface Effects Under High Electric Fields. Microscopy and Microanalysis, 2017, 23, 644-645.	0.4	1
47	Carrier Localization in GaN/AlN Quantum Dots As Revealed by Three-Dimensional Multimicroscopy. Nano Letters, 2017, 17, 4261-4269.	9.1	14
48	Multi-excitonic emission from Stranski-Krastanov GaN/AlN quantum dots inside a nanoscale tip. Applied Physics Letters, 2017, 111, .	3.3	11
49	Dissociation of Molecular Ions During the DC Field Evaporation ZnO in Atom Probe Tomography. Microscopy and Microanalysis, 2016, 22, 662-663.	0.4	2
50	Field Evaporation Behavior of Metal Oxide/Metal Interfaces. Microscopy and Microanalysis, 2016, 22, 678-679.	0.4	0
51	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, .	2.5	49
52	Advanced volume reconstruction and data mining methods in atom probe tomography. MRS Bulletin, 2016, 41, 46-52.	3.5	12
53	Dissociation Dynamics of Molecular Ions in High dc Electric Field. Journal of Physical Chemistry A, 2016, 120, 3654-3662.	2.5	26
54	Nanoscale photoconductive switching effect applied to atom probe tomography. Europhysics Letters, 2016, 116, 27002.	2.0	1

#	Article	IF	Citations
55	Bridging the Gap between the Modeling Approach and the Experiment in Atom Probe Tomography. Microscopy and Microanalysis, 2015, 21, 37-38.	0.4	0
56	A Meshless Algorithm to Model Field Evaporation in Atom Probe Tomography. Microscopy and Microanalysis, 2015, 21, 1649-1656.	0.4	27
57	Dynamic evolution and fracture of multilayer field emitters in atom probe tomography: a new interpretation. EPJ Applied Physics, 2015, 72, 21001.	0.7	12
58	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.	3.8	1
59	Ion energy spread in laser-assisted atom probe tomography. Europhysics Letters, 2015, 109, 37009.	2.0	7
60	Pulse shaping optimization for improving atom probe tomography. International Journal of Mass Spectrometry, 2015, 386, 47-53.	1.5	12
61	Challenges in the study of Fe/MgO/Fe interfaces using 3D Atom Probe. Thin Solid Films, 2015, 589, 38-46.	1.8	11
62	Three dimensional imaging and analysis of a single nano-device at the ultimate scale using correlative microscopy techniques. Applied Physics Letters, 2015, 106, .	3.3	31
63	Quantitative analysis of Si/SiGeC superlattices using atom probe tomography. Ultramicroscopy, 2015, 159, 223-231.	1.9	4
64	Quantitative investigation of SiGeC layers using atom probe tomography. Ultramicroscopy, 2015, 150, 23-29.	1.9	10
65	ANALYSIS OF EXCITATION PULSED SIGNAL PROPAGATION FOR ATOM PROBE TOMOGRAPHY SYSTEM. Progress in Electromagnetics Research Letters, 2014, 47, 61-70.	0.7	5
66	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.	4.6	46
67	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.	3.1	135
68	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.	9.1	70
69	3D analysis of advanced nano-devices using electron and atom probe tomography. Ultramicroscopy, 2014, 136, 185-192.	1.9	52
70	Energy deficit of pulsed-laser field-ionized and field-emitted ions from non-metallic nano-tips. Journal of Applied Physics, 2014, 115, .	2.5	27
71	Three-dimensional nanoscale study of Al segregation and quantum dot formation in GaAs/AlGaAs core-shell nanowires. Applied Physics Letters, 2014, 105, .	3.3	45
72	Numerical study of femtosecond laser-assisted atom probe tomography. Applied Physics A: Materials Science and Processing, 2013, 110, 703-707.	2.3	23

#	Article	IF	Citations
73	A model to predict image formation in Atom probeTomography. Ultramicroscopy, 2013, 132, 152-157.	1.9	27
74	Reconstructing atom probe data: A review. Ultramicroscopy, 2013, 132, 19-30.	1.9	126
75	Atom probe tomography spatial reconstruction: Status and directions. Current Opinion in Solid State and Materials Science, 2013, 17, 236-247.	11.5	122
76	Coupling atom probe tomography and photoluminescence spectroscopy: Exploratory results and perspectives. Ultramicroscopy, 2013, 132, 75-80.	1.9	16
77	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.	0.4	5
78	Laser-assisted atom probe tomography investigation of magnetic FePt nanoclusters: First experiments. Journal of Alloys and Compounds, 2012, 517, 40-44.	5.5	14
79	Field evaporation: A kinetic Monte Carlo approach on the influence of temperature. Surface Science, 2011, 605, 2025-2031.	1.9	49
80	Pragmatic reconstruction methods in atom probe tomography. Ultramicroscopy, 2011, 111, 1286-1294.	1.9	63
81	Investigation of wÃ¼stite (Fe1â^'O) by femtosecond laser assisted atom probe tomography. Ultramicroscopy, 2011, 111, 584-588.	1.9	59
82	Application of Delaunay tessellation for the characterization of solute-rich clusters in atom probe tomography. Ultramicroscopy, 2011, 111, 200-206.	1.9	40
83	Clustering and Local Magnification Effects in Atom Probe Tomography: A Statistical Approach. Microscopy and Microanalysis, 2010, 16, 643-648.	0.4	37
84	Conditions to cancel the laser polarization dependence of a subwavelength tip. Applied Physics Letters, 2009, 94, .	3.3	17
85	Depth resolution function of the laser assisted tomographic atom probe in the investigation of semiconductors. Journal of Applied Physics, 2009, 106, .	2.5	79
86	Thermal response of a field emitter subjected to ultra-fast laser illumination. Journal Physics D: Applied Physics, 2009, 42, 125502.	2.8	101
87	Investigation at the atomic scale of the Co spatial distribution in Zn(Co)O magnetic semiconductor oxide. Journal of Applied Physics, 2009, 105, .	2.5	24
88	Ultrafast emission of ions during laser ablation of metal for 3D atom probe. Applied Surface Science, 2009, 255, 5154-5158.	6.1	12
89	Evidence of atomic-scale arsenic clustering in highly doped silicon. Journal of Applied Physics, 2009, 106, .	2.5	23
90	3D atom probe assisted by femtosecond laser pulses. Applied Physics A: Materials Science and Processing, 2008, 93, 995-1003.	2.3	7

#	Article	IF	Citations
91	Laser-assisted atom probe tomography and nanosciences. International Journal of Materials Research, 2008, 99, 454-460.	0.3	21
92	Chromatic Aberrations in the Field Evaporation Behavior of Small Precipitates. Microscopy and Microanalysis, 2008, 14, 561-570.	0.4	119
93	Ultrafast Laser Assisted Field Evaporation and Atom Probe Tomography Applications. Journal of Physics: Conference Series, 2007, 59, 132-135.	0.4	5
94	Correlated field evaporation as seen by atom probe tomography. Surface Science, 2007, 601, 536-543.	1.9	110
95	Optical and thermal processes involved in ultrafast laser pulse interaction with a field emitter. Ultramicroscopy, 2007, 107, 713-719.	1.9	23
96	Some aspects of the silicon behaviour under femtosecond pulsed laser field evaporation. Ultramicroscopy, 2007, 107, 767-772.	1.9	29
97	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.	2.3	6
98	Ultrafast ion emission from metallic tip excited by femtosecond laser pulses. Applied Physics Letters, 2006, 89, 251903.	3.3	17
99	The New Laser assisted Wide Angle Tomographic Atom Probe. Microscopy and Microanalysis, 2006, 12, 1726-1727.	0.4	10
100	Application of Fourier transform and autocorrelation to cluster identification in the three-dimensional atom probe. Journal of Microscopy, 2004, 216, 234-240.	1.8	63
101	Improvement of multilayer analyses with a three-dimensional atom probe. Surface and Interface Analysis, 2004, 36, 552-558.	1.8	76
102	A new step towards the lattice reconstruction in 3DAP. Ultramicroscopy, 2003, 95, 223-229.	1.9	60
103	3D Atom Probe: Chemical Analysis With (Near) Atomic Resolution. Microscopy and Microanalysis, 2003, 9, 568-569.	0.4	0
104	Improved ion detection efficiency of microchannel plate detectors. Review of Scientific Instruments, 2002, 73, 1734-1740.	1.3	23
105	A new approach to the interpretation of atom probe field-ion microscopy images. Ultramicroscopy, 2001, 89, 137-144.	1.9	48
106	A model accounting for spatial overlaps in 3D atom-probe microscopy. Ultramicroscopy, 2001, 89, 145-153.	1.9	104
107	Structural analyses in three-dimensional atom probe: a Fourier transform approach. Journal of Microscopy, 2001, 203, 295-302.	1.8	109
108	The spatial resolution of 3D atom probe in the investigation of single-phase materials. Ultramicroscopy, 2000, 84, 213-224.	1.9	90

#	Article	IF	Citations
109	Trajectory overlaps and local magnification in three-dimensional atom probe. Applied Physics Letters, 2000, 76, 3127-3129.	3.3	390