

Tomas Vystavel

List of Publications by Year in descending order

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90
papers

1,109
citations

430874

18
h-index

434195

31
g-index

94
all docs

94
docs citations

94
times ranked

1391
citing authors

#	ARTICLE	IF	CITATIONS
1	Relation between microstructure and adhesion of hot dip galvanized zinc coatings on dual phase steel. <i>Acta Materialia</i> , 2012, 60, 2973-2981.	7.9	106
2	Nanosized metal clusters: Challenges and opportunities. <i>Jom</i> , 2004, 56, 40-45.	1.9	83
3	Study of cyclic strain localization and fatigue crack initiation using FIB technique. <i>International Journal of Fatigue</i> , 2012, 39, 44-53.	5.7	77
4	The shape of extrusions and intrusions and initiation of stage I fatigue cracks. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009, 517, 204-211.	5.6	63
5	Nanosized iron clusters investigated with in situ transmission electron microscopy. <i>Applied Physics Letters</i> , 2003, 82, 197-199.	3.3	59
6	Magnetic and structural properties of Co nanocluster thin films. <i>Physical Review B</i> , 2005, 71, .	3.2	55
7	Coalescence aspects of cobalt nanoparticles during in situ high-temperature annealing. <i>Journal of Applied Physics</i> , 2006, 99, 024307.	2.5	51
8	Guided Assembly of Gold Colloidal Nanoparticles on Silicon Substrates Prepatterned by Charged Particle Beams. <i>ACS Nano</i> , 2012, 6, 10098-10106.	14.6	34
9	Focused ion beam (FIB) milling of electrically insulating specimens using simultaneous primary electron and ion beam irradiation. <i>Journal Physics D: Applied Physics</i> , 2007, 40, 874-877.	2.8	31
10	Improving SEM Imaging Performance Using Beam Deceleration. <i>Microscopy Today</i> , 2009, 17, 40-49.	0.3	31
11	Diamond and pore structure observed in wood charcoal. <i>Journal of Wood Science</i> , 2001, 47, 414-416.	1.9	27
12	Electron microscopic study on pyrolysis of CCA (chromium, copper and arsenic oxide)-treated wood. <i>Journal of Analytical and Applied Pyrolysis</i> , 2003, 68-69, 635-643.	5.5	23
13	Low energy focused ion beam milling of silicon and germanium nanostructures. <i>Nanotechnology</i> , 2011, 22, 105304.	2.6	23
14	In-situ transmission electron microscopy observation of slip propagation in $\lambda/3$ bicrystals. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2002, 324, 183-189.	5.6	22
15	Non-destructive characterization of extended crystalline defects in confined semiconductor device structures. <i>Nanoscale</i> , 2018, 10, 7058-7066.	5.6	22
16	The Synergic Effect of Atomic Hydrogen Adsorption and Catalyst Spreading on Ge Nanowire Growth Orientation and Kinking. <i>Nano Letters</i> , 2016, 16, 4880-4886.	9.1	21
17	Real-Time Observation of Collector Droplet Oscillations during Growth of Straight Nanowires. <i>Nano Letters</i> , 2014, 14, 1756-1761.	9.1	19
18	Microstructure of nanocrystalline FeZr(N)-films and their soft magnetic properties. <i>Journal of Magnetism and Magnetic Materials</i> , 2002, 242-245, 180-182.	2.3	18

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19	Niobium nanoclusters studied with in situ transmission electron microscopy. Applied Physics Letters, 2003, 83, 3909-3911.	3.3	18
20	High-resolution and conventional electron microscopy study of a $\hat{\xi} = 3$, $[101]\{121\}$ twin grain boundary in molybdenum. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2001, 81, 417-429.	0.6	17
21	Catalytic carbonization of wood charcoal: graphite or diamond?. Carbon, 2004, 42, 961-964.	10.3	16
22	<i>In-situ</i> observation of $\hat{\xi} = 110$ oriented Ge nanowire growth and associated collector droplet behavior. Applied Physics Letters, 2011, 99, .	3.3	15
23	Controlled faceting in $\hat{\xi} = 110$ germanium nanowire growth by switching between vapor-liquid-solid and vapor-solid-solid growth. Applied Physics Letters, 2012, 100, .	3.3	15
24	Controlling the induced anisotropy in soft magnetic films for high-frequency applications. IEEE Transactions on Magnetics, 2002, 38, 3144-3146.	2.1	14
25	Influence of stresses and magnetostriction on the soft magnetic behavior of metallic films. Journal of Magnetism and Magnetic Materials, 2006, 299, 219-224.	2.3	14
26	Structural dynamics of gas-phase molybdenum nanoclusters: A transmission electron microscopy study. Applied Physics Letters, 2005, 86, 1131-1133.	3.3	13
27	In situ Transmission Electron Microscopy Studies on Structural Dynamics of Transition Metal Nanoclusters. Journal of Materials Research, 2005, 20, 1785-1791.	2.6	12
28	Relation between observed micromagnetic ripple and FMR width in ultrasoft magnetic films. IEEE Transactions on Magnetics, 2002, 38, 3027-3029.	2.1	11
29	Thermal stability of ultrasoft Fe $\hat{\xi}$ Zr $\hat{\xi}$ N films. Journal of Physics Condensed Matter, 2003, 15, 7663-7674.	1.8	11
30	Interface Microstructure and Adhesion of Zinc Coatings on TRIP Steels. Materials Science Forum, 2007, 539-543, 1104-1109.	0.3	11
31	Wetting of molybdenum grain boundaries by nickel: effect of the boundary structure and energy. Acta Materialia, 2000, 48, 3303-3310.	7.9	10
32	Catalytic Graphitization of Wood-Based Carbons with Alumina by Pulse Current Heating. Fullerenes Nanotubes and Carbon Nanostructures, 2005, 13, 435-445.	2.1	10
33	Ultrasoft Magnetic Films Investigated with Lorentz Transmission Electron Microscopy and Electron Holography. Microscopy and Microanalysis, 2002, 8, 274-287.	0.4	9
34	High-Throughput Large Volume SEM Workflow using Sparse Scanning and In-painting Algorithms Inspired by Compressive Sensing. Microscopy and Microanalysis, 2017, 23, 150-151.	0.4	9
35	Secondary electron spectra of semi-crystalline polymers – A novel polymer characterisation tool? Journal of Electron Spectroscopy and Related Phenomena, 2018, 222, 95-105.	1.7	9
36	Measurement of the volume expansion of a grain boundary by the phase method. Ultramicroscopy, 2002, 90, 163-170.	1.9	8

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37	Tilt-free EBSD. <i>Microscopy and Microanalysis</i> , 2018, 24, 1126-1127.	0.4	8
38	Electron microscopic study on catalytic carbonization of biomass carbon: I. carbonization of wood charcoal at high temperature by al-triisopropoxide. <i>Molecular Crystals and Liquid Crystals</i> , 2002, 386, 33-38.	0.9	7
39	Silicon Carbide Nanorods and Ceramics from Wood. <i>Key Engineering Materials</i> , 2004, 264-268, 2267-2270.	0.4	7
40	MEMS-based Heating Element for in-situ Dynamical Experiments on FIB/SEM Systems. <i>Microscopy and Microanalysis</i> , 2016, 22, 184-185.	0.4	7
41	Nano-Sized Cobalt Cluster Films: Structure and Functionality. <i>Advanced Engineering Materials</i> , 2005, 7, 21-25.	3.5	6
42	Fatigue Crack Initiation in Crystalline Materials – Experimental Evidence and Models. <i>Key Engineering Materials</i> , 2007, 345-346, 379-382.	0.4	6
43	Expanding Capabilities of Low-kV STEM Imaging and Transmission Electron Diffraction in FIB/SEM Systems. <i>Microscopy and Microanalysis</i> , 2017, 23, 554-555.	0.4	6
44	Enhancing the defect contrast in ECCI through angular filtering of BSEs. <i>Ultramicroscopy</i> , 2020, 210, 112922.	1.9	6
45	Application of electron channeling contrast imaging to 3D semiconductor structures through proper detector configurations. <i>Ultramicroscopy</i> , 2020, 210, 112928.	1.9	6
46	On the formation of ultra-fine grained Fe-base alloys via phase transformations. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004, 367, 176-184.	5.6	5
47	New approaches to <i>in-situ</i> heating in FIB/SEM systems. <i>Microscopy and Microanalysis</i> , 2017, 23, 928-929.	0.4	5
48	On the Possibility to Predict Dislocation Structures of Low Σ Symmetric Grain Boundaries. <i>Materials Science Forum</i> , 1999, 294-296, 393-396.	0.3	4
49	Segregation, Precipitation and Wetting of Tilt Grain Boundaries in Molybdenum. <i>Journal of Materials Science</i> , 2004, 12, 175-186.	1.2	4
50	Nanostructure and Giant Magnetoresistive Properties of Granular Systems. <i>Journal of Nanoscience and Nanotechnology</i> , 2001, 1, 65-73.	0.9	3
51	Comparison between carbonization of wood charcoal with Al-triisopropoxide and alumina. <i>Journal of the European Ceramic Society</i> , 2006, 26, 719-723.	5.7	3
52	Opportunities from the nanoworld: Gas phase nanoparticles. <i>Journal of Alloys and Compounds</i> , 2008, 449, 237-241.	5.5	3
53	Toward Site-Specific Dopant Contrast in Scanning Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2014, 20, 1312-1317.	0.4	3
54	Applications of an in-situ Low Energy Argon Ion Source for Improvement of TEM and SEM Sample Quality. <i>Microscopy and Microanalysis</i> , 2017, 23, 298-299.	0.4	3

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55	Ascertaining the Nature and Distribution of Extended Crystalline Defects in Emerging Semiconductor Materials Using Electron Channeling Contrast Imaging. ECS Transactions, 2018, 86, 387-396.	0.5	3
56	Crystalline defect analysis in epitaxial Si _{0.7} Ge _{0.3} layer using site-specific ECCI-STEM. Micron, 2021, 150, 103123.	2.2	3
57	Dislocation Interaction with a $\hat{\Gamma}=3$ Grain Boundary Observed by in situ TEM. Materials Science Forum, 1998, 294-296, 397-400.	0.3	2
58	Image Quality Improvements in Thermionic Scanning Electron Microscopes. Microscopy and Microanalysis, 2009, 15, 236-237.	0.4	2
59	Helios G4: Pushing the Limits of TEM Sample Preparation and STEM Resolution. Microscopy and Microanalysis, 2016, 22, 30-31.	0.4	2
60	Control and in-situ imaging of heat & gas mediated processes in FIB/SEM system. Microscopy and Microanalysis, 2018, 24, 808-809.	0.4	2
61	The EBSD spatial resolution of a Timepix-based detector in a tilt-free geometry. Ultramicroscopy, 2021, 226, 113294.	1.9	2
62	Structure and Giant Magneto-Resistive Properties of Co and CoFe nano-particles in a Au matrix. Materials Research Society Symposia Proceedings, 2001, 676, 821.	0.1	1
63	Rigid-body displacement perpendicular to a {211} twin boundary in Mo. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 2001, 81, 1767-1778.	0.6	1
64	Evolution of Free Volume in Ultrasoft Magnetic FeZrN Films during Thermal Annealing. Materials Research Society Symposia Proceedings, 2002, 721, 1.	0.1	1
65	In-situ focused ion beam (FIB) microscopy at high temperature. Journal of Physics: Conference Series, 2008, 126, 012029.	0.4	1
66	In-situ SEM observation of $\hat{\Gamma}=110$ oriented Ge nanowire growth. Microscopy and Microanalysis, 2012, 18, 1082-1083.	0.4	1
67	Enhanced Angular Topographic Backscatter Electron Filtering. Microscopy and Microanalysis, 2013, 19, 1204-1205.	0.4	1
68	Optimized Electron Column and Detection Scheme for Advanced Imaging and Analysis of Metals. Microscopy and Microanalysis, 2014, 20, 1102-1103.	0.4	1
69	Study of Stability and Structural Changes Occurring during High Thermal Load of the High Voltage Cathode Material by In Situ Scanning Electron Microscopy. Microscopy and Microanalysis, 2016, 22, 1380-1381.	0.4	1
70	In-situ Low Energy Argon Ion Source for the Improvement of EBSD Pattern Acquisition. Microscopy and Microanalysis, 2018, 24, 1060-1061.	0.4	1
71	In-situ Low Energy Argon Ion Source for Artifact Free High Resolution STEM Imaging. Microscopy and Microanalysis, 2019, 25, 548-549.	0.4	1
72	Large area EBSD mapping using a tilt-free configuration and direct electron detection sensor. Microscopy and Microanalysis, 2021, 27, 1832-1835.	0.4	1

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73	Structure of a [101] Tilt Grain Boundary in a Molybdenum Bicrystal. Materials Science Forum, 1998, 294-296, 259-262.	0.3	0
74	Microstructure and properties of giant magneto-resistant Au 80 Co 20 , Au 80 Co 10 Fe 10 , Cu 70 Ni 25 Fe 4 Mn and Cu 53 Ni 31 Fe 15 Mn. Scripta Materialia, 2001, 44, 1461-1464.	5.2	0
75	Rigid-body displacement perpendicular to a {211} twin boundary in Mo. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 2001, 81, 1767-1778.	0.6	0
76	Relation between observed micromagnetic ripple and FMR width in ultrasoft magnetic films. , 0, , .		0
77	Electron microscopy and Auger spectroscopy study of the wetting of the grain boundaries in the systems Mo-Pb, Mo-Sn, Mo-Ni and Ni-Pb. European Physical Journal Special Topics, 2002, 12, 277-287.	0.2	0
78	Structural Stability of Nano-Sized Clusters. Materials Research Society Symposia Proceedings, 2003, 791, 1.	0.1	0
79	In situ transmission electron microscopy of nano-sized metal clusters. Materials Research Society Symposia Proceedings, 2004, 839, 161.	0.1	0
80	Nanolithography of Electrically Insulating Materials Using Simultaneous Defocused Primary Electron Beam and Focused Ion Beam Irradiation. Microscopy and Microanalysis, 2007, 13, .	0.4	0
81	A new method for mechanical testing of thin films: Application to aluminum. Journal of Materials Research, 2009, 24, 1353-1360.	2.6	0
82	Application of FIB technique to study of early fatigue damage in polycrystals. Journal of Physics: Conference Series, 2010, 240, 012058.	0.4	0
83	In-situ Observation of Solutions by WetSTEM. Microscopy and Microanalysis, 2012, 18, 1090-1091.	0.4	0
84	Monochromatic non-immersion FEG SEM. Microscopy and Microanalysis, 2012, 18, 1282-1283.	0.4	0
85	The synergic effect of atomic hydrogen and catalyst spreading on Ge nanowire growth orientation and kinking. Microscopy and Microanalysis, 2016, 22, 732-733.	0.4	0
86	In-situ Heating in SEM and FIB/SEM Systems. Microscopy and Microanalysis, 2018, 24, 336-337.	0.4	0
87	Sample Orientation for Electron Channeling Contrast Imaging. Microscopy and Microanalysis, 2019, 25, 508-509.	0.4	0
88	Tuneable in-situ nanoCT workflow using FIB/SEM. Ultramicroscopy, 2021, 225, 113283.	1.9	0
89	Nano-Structured Magnetic Films Investigated with Lorentz Transmission Electron Microscopy and Electron Holography. , 2003, , 463-480.		0
90	Étude par microscopie à haute résolution et imagerie filtrée de la ségrégation et du défaut de précipitation dans les joints de grains. European Physical Journal Special Topics, 1999, 09, Pr4-123-Pr4-128.	0.2	0