Tomas Vystavel

List of Publications by Year in descending order

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	Tuneable in-situ nanoCT workflow using FIB/SEM. Ultramicroscopy, 2021, 225, 113283.	1.9	0
2	Large area EBSD mapping using a tilt-free configuration and direct electron detection sensor. Microscopy and Microanalysis, 2021, 27, 1832-1835.	0.4	1
3	The EBSD spatial resolution of a Timepix-based detector in a tilt-free geometry. Ultramicroscopy, 2021, 226, 113294.	1.9	2
4	Crystalline defect analysis in epitaxial Si0.7Ge0.3 layer using site-specific ECCI-STEM. Micron, 2021, 150, 103123.	2.2	3
5	Enhancing the defect contrast in ECCI through angular filtering of BSEs. Ultramicroscopy, 2020, 210, 112922.	1.9	6
6	Application of electron channeling contrast imaging to 3D semiconductor structures through proper detector configurations. Ultramicroscopy, 2020, 210, 112928.	1.9	6
7	Sample Orientation for Electron Channeling Contrast Imaging. Microscopy and Microanalysis, 2019, 25, 508-509.	0.4	0
8	In-situ Low Energy Argon Ion Source for Artifact Free High Resolution STEM Imaging. Microscopy and Microanalysis, 2019, 25, 548-549.	0.4	1
9	Non-destructive characterization of extended crystalline defects in confined semiconductor device structures. Nanoscale, 2018, 10, 7058-7066.	5.6	22
10	â€œSecondary electron spectra of semi-crystalline polymers â€“ A novel polymer characterisation tool?â€• Journal of Electron Spectroscopy and Related Phenomena, 2018, 222, 95-105.	1.7	9
11	Control and in-situ imaging of heat & gas mediated processes in FIB/SEM system. Microscopy and Microanalysis, 2018, 24, 808-809.	0.4	2
12	In-situ Low Energy Argon Ion Source for the Improvement of EBSD Pattern Acquisition. Microscopy and Microanalysis, 2018, 24, 1060-1061.	0.4	1
13	In-situ Heating in SEM and FIB/SEM Systems. Microscopy and Microanalysis, 2018, 24, 336-337.	0.4	0
14	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
15	Tilt-free EBSD. Microscopy and Microanalysis, 2018, 24, 1126-1127.	0.4	8
16	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
17	Applications of an in-situ Low Energy Argon Ion Source for Improvement of TEM and SEM Sample Quality. Microscopy and Microanalysis, 2017, 23, 298-299.	0.4	3
18	New approaches to in-situ heating in FIB/SEM systems. Microscopy and Microanalysis, 2017, 23, 928-929.	0.4	5

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19	Expanding Capabilities of Low-kV STEM Imaging and Transmission Electron Diffraction in FIB/SEM Systems. Microscopy and Microanalysis, 2017, 23, 554-555.	0.4	6
20	Helios G4: Pushing the Limits of TEM Sample Preparation and STEM Resolution. Microscopy and Microanalysis, 2016, 22, 30-31.	0.4	2
21	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
22	MEMS-based Heating Element for in-situ Dynamical Experiments on FIB/SEM Systems. Microscopy and Microanalysis, 2016, 22, 184-185.	0.4	7
23	The Synergic Effect of Atomic Hydrogen Adsorption and Catalyst Spreading on Ge Nanowire Growth Orientation and Kinking. Nano Letters, 2016, 16, 4880-4886.	9.1	21
24	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
25	Real-Time Observation of Collector Droplet Oscillations during Growth of Straight Nanowires. Nano Letters, 2014, 14, 1756-1761.	9.1	19
26	Toward Site-Specific Dopant Contrast in Scanning Electron Microscopy. Microscopy and Microanalysis, 2014, 20, 1312-1317.	0.4	3
27	Optimized Electron Column and Detection Scheme for Advanced Imaging and Analysis of Metals. Microscopy and Microanalysis, 2014, 20, 1102-1103.	0.4	1
28	Enhanced Angular Topographic Backscatter Electron Filtering. Microscopy and Microanalysis, 2013, 19, 1204-1205.	0.4	1
29	Controlled faceting in â€˜110â€‰ germanium nanowire growth by switching between vapor-liquid-solid and vapor-solid-solid growth. Applied Physics Letters, 2012, 100, .	3.3	15
30	In-situ SEM observation of âŸ¨110âŸ© oriented Ge nanowire growth. Microscopy and Microanalysis, 2012, 18, 1082-1083.	0.4	1
31	In-situ Observation of Solutions by WetSTEM. Microscopy and Microanalysis, 2012, 18, 1090-1091.	0.4	0
32	Monochromatic non-immersion FEG SEM. Microscopy and Microanalysis, 2012, 18, 1282-1283.	0.4	0
33	Guided Assembly of Gold Colloidal Nanoparticles on Silicon Substrates Prepatterned by Charged Particle Beams. ACS Nano, 2012, 6, 10098-10106.	14.6	34
34	Relation between microstructure and adhesion of hot dip galvanized zinc coatings on dual phase steel. Acta Materialia, 2012, 60, 2973-2981.	7.9	106
35	Study of cyclic strain localization and fatigue crack initiation using FIB technique. International Journal of Fatigue, 2012, 39, 44-53.	5.7	77
36	Low energy focused ion beam milling of silicon and germanium nanostructures. Nanotechnology, 2011, 22, 105304.	2.6	23

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37	In-situ observation of â€˜110â€‰ oriented Ge nanowire growth and associated collector droplet behavior. Applied Physics Letters, 2011, 99, .	3.3	15
38	Application of FIB technique to study of early fatigue damage in polycrystals. Journal of Physics: Conference Series, 2010, 240, 012058.	0.4	0
39	A new method for mechanical testing of thin films: Application to aluminum. Journal of Materials Research, 2009, 24, 1353-1360.	2.6	0
40	The shape of extrusions and intrusions and initiation of stage I fatigue cracks. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 517, 204-211.	5.6	63
41	Image Quality Improvements in Thermionic Scanning Electron Microscopes. Microscopy and Microanalysis, 2009, 15, 236-237.	0.4	2
42	Improving SEM Imaging Performance Using Beam Deceleration. Microscopy Today, 2009, 17, 40-49.	0.3	31
43	Opportunities from the nanoworld: Gas phase nanoparticles. Journal of Alloys and Compounds, 2008, 449, 237-241.	5.5	3
44	In-situ focused ion beam (FIB) microscopy at high temperature. Journal of Physics: Conference Series, 2008, 126, 012029.	0.4	1
45	Focused ion beam (FIB) milling of electrically insulating specimens using simultaneous primary electron and ion beam irradiation. Journal Physics D: Applied Physics, 2007, 40, 874-877.	2.8	31
46	Interface Microstructure and Adhesion of Zinc Coatings on TRIP Steels. Materials Science Forum, 2007, 539-543, 1104-1109.	0.3	11
47	Fatigue Crack Initiation in Crystalline Materials â€“ Experimental Evidence and Models. Key Engineering Materials, 2007, 345-346, 379-382.	0.4	6
48	Nanolithography of Electrically Insulating Materials Using Simultaneous Defocused Primary Electron Beam and Focused Ion Beam Irradiation. Microscopy and Microanalysis, 2007, 13, .	0.4	0
49	Comparison between carbonization of wood charcoal with Al-triisopropoxide and alumina. Journal of the European Ceramic Society, 2006, 26, 719-723.	5.7	3
50	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
51	Coalescence aspects of cobalt nanoparticles duringin situhigh-temperature annealing. Journal of Applied Physics, 2006, 99, 024307.	2.5	51
52	In situ Transmission Electron Microscopy Studies on Structural Dynamics of Transition Metal Nanoclusters. Journal of Materials Research, 2005, 20, 1785-1791.	2.6	12
53	Nano-Sized Cobalt Cluster Films: Structure and Functionality. Advanced Engineering Materials, 2005, 7, 21-25.	3.5	6
54	Magnetic and structural properties of Co nanocluster thin films. Physical Review B, 2005, 71, .	3.2	55

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55	Structural dynamics of gas-phase molybdenum nanoclusters: A transmission electron microscopy study. Applied Physics Letters, 2005, 86, 113113.	3.3	13
56	Catalytic Graphitization of Woodâ€Based Carbons with Alumina by Pulse Current Heating. Fullerenes Nanotubes and Carbon Nanostructures, 2005, 13, 435-445.	2.1	10
57	Silicon Carbide Nanorods and Ceramics from Wood. Key Engineering Materials, 2004, 264-268, 2267-2270.	0.4	7
58	In situ transmission electron microscopy of nano-sized metal clusters. Materials Research Society Symposia Proceedings, 2004, 839, 161.	0.1	0
59	Segregation, Precipitation and Wetting of Tilt Grain Boundaries in Molybdenum. Journal of Materials Science, 2004, 12, 175-186.	1.2	4
60	On the formation of ultra-fine grained Fe-base alloys via phase transformations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 367, 176-184.	5.6	5
61	Nanosized metal clusters: Challenges and opportunities. Jom, 2004, 56, 40-45.	1.9	83
62	Catalytic carbonization of wood charcoal: graphite or diamond?. Carbon, 2004, 42, 961-964.	10.3	16
63	Electron microscopic study on pyrolysis of CCA (chromium, copper and arsenic oxide)-treated wood. Journal of Analytical and Applied Pyrolysis, 2003, 68-69, 635-643.	5.5	23
64	Nanosized iron clusters investigated with in situ transmission electron microscopy. Applied Physics Letters, 2003, 82, 197-199.	3.3	59
65	Structural Stability of Nano-Sized Clusters. Materials Research Society Symposia Proceedings, 2003, 791, 1.	0.1	0
66	Niobium nanoclusters studied with in situ transmission electron microscopy. Applied Physics Letters, 2003, 83, 3909-3911.	3.3	18
67	Thermal stability of ultrasoft Feâ€“Zrâ€“N films. Journal of Physics Condensed Matter, 2003, 15, 7663-7674.	1.8	11
68	Nano-Structured Magnetic Films Investigated with Lorentz Transmission Electron Microscopy and Electron Holography. , 2003, , 463-480.		0
69	Electron microscopic study on catalytic carbonization of biomass carbon: I. carbonization of wood charcoal at high temperature by al-triisopropoxide. Molecular Crystals and Liquid Crystals, 2002, 386, 33-38.	0.9	7
70	Ultrasoft Magnetic Films Investigated with Lorentz Tranmission Electron Microscopy and Electron Holography. Microscopy and Microanalysis, 2002, 8, 274-287.	0.4	9
71	Evolution of Free Volume in Ultrasoft Magnetic FeZrN Films during Thermal Annealing. Materials Research Society Symposia Proceedings, 2002, 721, 1.	0.1	1
72	Relation between observed micromagnetic ripple and FMR width in ultrasoft magnetic films. IEEE Transactions on Magnetics, 2002, 38, 3027-3029.	2.1	11

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73	Controlling the induced anisotropy in soft magnetic films for high-frequency applications. IEEE Transactions on Magnetics, 2002, 38, 3144-3146.	2.1	14
74	In-situ transmission electron microscopy observation of slip propagation in Î£3 bicrystals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 324, 183-189.	5.6	22
75	Measurement of the volume expansion of a grain boundary by the phase method. Ultramicroscopy, 2002, 90, 163-170.	1.9	8
76	Microstructure of nanocrystalline FeZr(N)-films and their soft magnetic properties. Journal of Magnetism and Magnetic Materials, 2002, 242-245, 180-182.	2.3	18
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	High-resolution and conventional electron microscopy study of a Î£ = 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
79	Nanostructure and Giant Magnetoresistive Properties of Granular Systems. Journal of Nanoscience and Nanotechnology, 2001, 1, 65-73.	0.9	3
80	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
81	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
82	Diamond and pore structure observed in wood charcoal. Journal of Wood Science, 2001, 47, 414-416.	1.9	27
83	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
84	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
85	Wetting of molybdenum grain boundaries by nickel: effect of the boundary structure and energy. Acta Materialia, 2000, 48, 3303-3310.	7.9	10
86	On the Possibility to Predict Dislocation Structures of Low Î£ Symmetric Grain Boundaries. Materials Science Forum, 1999, 294-296, 393-396.	0.3	4
87	Ã‰tude par microscopie Ã haute rÃ©solution et imagerie filtrÃ©e de la sÃ©grÃ©gation et du dÃ©but de prÃ©cipitation dans les joints de grains. European Physical Journal Special Topics, 1999, 09, Pr4-123-Pr4-128.	0.2	0
88	Structure of a [101] Tilt Grain Boundary in a Molybdenum Bicrystal. Materials Science Forum, 1998, 294-296, 259-262.	0.3	0
89	Dislocation Interaction with a Î£=3 Grain Boundary Observed by in situ TEM. Materials Science Forum, 1998, 294-296, 397-400.	0.3	2
90	Relation between observed micromagnetic ripple and FMR width in ultrasoft magnetic films. , 0, , .		0