Valeriu Filip

List of Publications by Year
in descending order

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95	1,282	687363	395702
papers	citations	13 h-index	33 g-index

96	96	96	969
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Electrochemical Recycling of Platinum Group Metals from Spent Catalytic Converters. Metals, 2020, 10, 822.	2.3	11
2	Influence of electron quantum confinement on the strength of carbon nanotube bundles. Solid State Electronics Letters, 2019, 1, 1-9.	1.0	2
3	AFM study on the surface morphologies of TiN films prepared by magnetron sputtering and Al 2 O 3 films prepared by atomic layer deposition. Vacuum, 2018, 153, 139-144.	3.5	7
4	Quantum focusing and filtering of electrons propagating coherently through non-uniform potential barriers. Thin Solid Films, 2018, 660, 546-557.	1.8	0
5	Review on peculiar issues of field emission in vacuum nanoelectronic devices. Solid-State Electronics, 2017, 138, 3-15.	1.4	14
6	The scaling issues of subnanometer EOT gate dielectrics for the ultimate nano CMOS technology. , 2017, , .		0
7	Study of composite cathodes in electron field emission devices: Relative contributions of resonant and sequential tunneling. , 2016, , .		0
8	Comparative study of resonant and sequential features in electron field emission from composite surfaces. Thin Solid Films, 2016, 608, 26-33.	1.8	3
9	Tunneling-based charge percolation transport in a random network of semi-conductive nanoclusters embedded in a dielectric matrix. Thin Solid Films, 2015, 574, 84-92.	1.8	2
10	Comparative study of resonant and sequential features in electron field emission from composite surfaces. , 2015, , .		0
11	Assessing the size distribution of droplets in a cloud chamber from light extinction data during a transient regime. Journal of Atmospheric and Solar-Terrestrial Physics, 2014, 109, 29-36.	1.6	2
12	Quantum tunneling based percolating transport of electric charges in a network of conductive nanoclusters embedded in a dielectric matrix. , 2013, , .		0
13	Miniature x-ray tubes: current state and future prospects. Journal of Instrumentation, 2013, 8, T03005-T03005.	1.2	7
14	Degradation behaviors of GaN light-emitting diodes under high-temperature and high-current stressing. Microelectronics Reliability, 2012, 52, 1636-1639.	1.7	11
15	Modeling of terminal ring structures for high-voltage power MOSFETs. Microelectronics Reliability, 2012, 52, 1645-1650.	1.7	1
16	Model for trap-assisted electron tunneling in thin insulators. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C2A58-C2A63.	1.2	1
17	Background analysis of field-induced electron emission from nanometer-scale heterostructured emitters. Journal of Vacuum Science & Technology B, 2009, 27, 711-718.	1.3	1
18	Growth of Y-junction bamboo-shaped CNx nanotubes on GaAs substrate using single feedstock. Applied Surface Science, 2009, 255, 4611-4615.	6.1	17

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19	Temperature-dependent light-emitting characteristics of InGaN/GaN diodes. Microelectronics Reliability, 2009, 49, 38-41.	1.7	43
20	Model for trap-assisted electron tunneling in thin insulators. , 2009, , .		0
21	Photoluminescence of Silicon Nanocrystals Embedded in Silicon Oxide. Journal of Nanoscience and Nanotechnology, 2009, 9, 1272-1276.	0.9	8
22	Probability Current and Antiresonances of Particle Tunneling Through Biased Heterostructures. Journal of Nanoscience and Nanotechnology, 2009, 9, 1237-1241.	0.9	1
23	Preparation of Si nanocrystallites by phase separation of Si-rich silicon nitride. , 2008, , .		1
24	Electroluminescence of silicon nanoclusters excited by tunneling carrier injection. Journal of Vacuum Science & Technology B, 2008, 26, 813-820.	1.3	5
25	Modeling of linear carbon nanotube nanotriodes with improved field uniformity. Journal of Vacuum Science & Technology B, 2008, 26, 806-812.	1.3	0
26	Analytical modeling for the electron emission properties of carbon nanotube arrays. Journal of Vacuum Science & Technology B, 2007, 25, 472.	1.3	7
27	Nitrogen Incorporation into Hafnium Oxide Films by Plasma Immersion Ion Implantation. Japanese Journal of Applied Physics, 2007, 46, 3234-3238.	1.5	11
28	Bonding Structure of Silicon Oxynitride Grown by Plasma-Enhanced Chemical Vapor Deposition. Japanese Journal of Applied Physics, 2007, 46, 3202-3205.	1.5	12
29	Silicon integrated photonics begins to revolutionize. Microelectronics Reliability, 2007, 47, 1-10.	1.7	33
30	Definition of curve fitting parameter to study tunneling and trapping of electrons in Si/ultra-thin SiO2/metal structures. Microelectronics Reliability, 2006, 46, 1027-1034.	1.7	1
31	Stressing effects on the charge trapping of silicon oxynitride prepared by thermal oxidation of LPCVD Si-rich silicon nitride. Thin Solid Films, 2006, 504, 7-10.	1.8	3
32	Current transport and high-field reliability of aluminum/hafnium oxide/silicon structure. Thin Solid Films, 2006, 504, 312-316.	1.8	17
33	Material properties of interfacial silicate layer and its influence on the electrical characteristics of MOS devices using hafnia as the gate dielectric. Thin Solid Films, 2006, 504, 192-196.	1.8	33
34	A double-layer current conduction model for high-Î¹ gate dielectric materials with interfacial oxide or silicate layer. Microelectronic Engineering, 2006, 83, 1950-1956.	2.4	2
35	Quantum charge transportation in metal-oxide-Si structures with ultrathin oxide. Journal of Vacuum Science & Technology B, 2006, 24, 38.	1.3	6
36	Parameter dispersion characterization for arrays of HfC-coated emitters on poly-Si substrate. Journal of Vacuum Science & Technology B, 2006, 24, 1045.	1.3	4

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37	Coherent and sequential tunneling mechanisms for field electron emission through layers of wide band gap materials. Journal of Vacuum Science & Technology B, 2006, 24, 881.	1.3	7
38	General Analytical Relationship for Electric Field of Gated Field Emitters. Japanese Journal of Applied Physics, 2005, 44, 3854-3859.	1.5	7
39	Emission Statistics for HfC Emitter Arrays after Residual Gas Exposure. Japanese Journal of Applied Physics, 2005, 44, 5959-5963.	1.5	2
40	Field electron emission from two-dimensional electron gas. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 657.	1.6	7
41	Emission statistics for Si and HfC emitter arrays after residual gas exposure. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 707.	1.6	73
42	High-efficiency light-emitting device based on silicon nanostructures and tunneling carrier injection. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 2449.	1.6	7
43	Analytical model for electron field emission from capped carbon nanotubes. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 1234.	1.6	6
44	Characterization of enhanced field emission from HfC-coated Si emitter arrays through parameter extraction. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 1227.	1.6	15
45	Modeling of field emission nanotriodes with carbon nanotube emitters. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 366.	1.6	27
46	Model parameter extraction for nonlinear Fowlerâ€“Nordheim field emission data. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 1550.	1.6	14
47	Influence of the electronic structure on the field electron emission from carbon nanotubes. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 382.	1.6	9
48	Sequential tunneling model of field emission through dielectric deposits on nanotips. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 1692.	1.6	2
49	Field electron emission from carbon nanotubes grown by plasma-enhanced chemical vapor deposition. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2002, 20, 122.	1.6	12
50	Dual-Gate Electron Emission Structure with Nanotube-on-Emitter for X-Ray Generation. Japanese Journal of Applied Physics, 2002, 41, 5551-5556.	1.5	8
51	Oscillator Ionization Vacuum Gauge with Field Emitters. Japanese Journal of Applied Physics, 2002, 41, 5945-5950.	1.5	1
52	Carbon nanotubes as electron source in an x-ray tube. Applied Physics Letters, 2001, 78, 2578-2580.	3.3	410
53	Modeling of the electron field emission from carbon nanotubes. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2001, 19, 1016.	1.6	51
54	Growth of aligned carbon nanotubes by plasma-enhanced chemical vapor deposition: Optimization of growth parameters. Journal of Applied Physics, 2001, 90, 1529-1533.	2.5	111

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55	Modeling the electron field emission from carbon nanotube films. Ultramicroscopy, 2001, 89, 39-49.	1.9	92
56	Focusing properties of dual-gate field emitters. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2001, 19, 892.	1.6	3
57	Field Emitter Magnetic Sensor with Steered Focused Electron Beam. Japanese Journal of Applied Physics, 2001, 40, 2173-2177.	1.5	5
58	Focusing Properties of Volcano-Shaped Dual-Gate Field Emitters. Japanese Journal of Applied Physics, 2001, 40, 83-86.	1.5	7
59	Electron Motion Three-Dimensional Confinement for Microelectronic Vacuum Gauges with Field Emitters. Japanese Journal of Applied Physics, 2001, 40, 2165-2172.	1.5	2
60	Device Applied Fowler-Nordheim Relationship. Japanese Journal of Applied Physics, 2001, 40, 4802-4805.	1.5	4
61	Electron-Beam Focusing and Deflection Properties for Misaligned Dual Gate Field Emitters. Japanese Journal of Applied Physics, 2001, 40, 3996-4001.	1.5	4
62	Vacuum microelectronics devices based on the controlled electron motion in electric and magnetic fields. EPJ Applied Physics, 2000, 10, 33-42.	0.7	3
63	Calculation of the field emission current density from n-SI through injection in N-doped diamond. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 937.	1.6	4
64	Proposal and modeling of a novel thermal microprobe using n-Si/nitrogen doped diamond cathodes. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 1073.	1.6	2
65	Focusing Properties of a Novel Dual-Gate Edge Emitter. Japanese Journal of Applied Physics, 2000, 39, 5800-5804.	1.5	4
66	Analysis of a pressure sensor using n-Si/nitrogen doped diamond cathodes. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 1077.	1.6	3
67	Probe Anode as a Characterization Tool for Field Emission Arrays. Japanese Journal of Applied Physics, 1999, 38, 6237-6239.	1.5	0
68	Modeling of field emission microtriodes with Si semiconductor emitters. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 542.	1.6	4
69	Electron motion and confinement in the orbitip vacuum gauge. Ultramicroscopy, 1999, 79, 167-174.	1.9	2
70	Electron motion and confinement in the orbitip vacuum gauge. Ultramicroscopy, 1999, 79, 159-166.	1.9	3
71	Modeling of a miniaturized mass spectrometer with field emission electron source. Applied Surface Science, 1999, 146, 217-223.	6.1	5
72	Electron field emission from semiconductors through oxide layers: possible transport effects. Applied Surface Science, 1999, 146, 347-356.	6.1	2

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73	Transport phenomena related to electron field emission from semiconductors through thick oxide layers. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 520.	1.6	5
74	Study of the inverted-magnetron cold emission microelectronic vacuum gauge. Ultramicroscopy, 1998, 73, 129-137.	1.9	9
75	A conceptual design for a microelectronic ionization vacuum gauge. Applied Surface Science, 1998, 126, 292-302.	6.1	10
76	Transient and stationary field emission currents from semiconductors computed by a simple semi-classical method. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 888.	1.6	8
77	Proposal for a new UV-light generating device based on cold electron emission. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1998, 16, 2885-2889.	2.1	1
78	Analysis of a pressure sensor based on an array of collector-assisted field-emission triodes. Review of Scientific Instruments, 1997, 68, 4615-4620.	1.3	9
79	Proposal for a new self-focusing configuration involving porous silicon for field emission flat panel displays. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1997, 15, 2369-2374.	2.1	13
80	Transient and Stationary Field Emission Currents from Semiconductors Computed by a Simple Semi-Classical Method. , 1997, , .		0
81	Analysis of microwave generation by field emitted electrons moving in crossed electric and magnetic fields. Applied Surface Science, 1997, 111, 185-193.	6.1	9
82	Modelling of the field emission microtriode with emitter covered with porous silicon. Applied Surface Science, 1996, 94-95, 79-86.	6.1	11
83	Modelling of a magnetic sensor based on vacuum field emission. Applied Surface Science, 1996, 94-95, 87-93.	6.1	17
84	Possible Generation of Transient THz Electronic Drift Effects in a Semiconductor by a High Electric Field. Journal De Physique, I, 1996, 6, 403-412.	1.2	1
85	The influence of the electronic structure on the field electron emission from carbon nanotubes. , 0, , .		0
86	Modeling of field emission nanotriodes with carbon nanotube emitters. , 0, , .		0
87	Characterization of enhanced field emission from HfC-coated Si emitter arrays through parameter extraction. , 0, , .		0
88	A novel light emitting device based on Si nanostructures and tunneling injection of carriers. , 0, , .		2
89	Dielectric breakdown characteristics and interface trapping of hafnium oxide films. , 0, , .		2
90	Modeling and simulation of tunneling current in ultrathin oxide with the presence of oxide/silicon interface traps. , 0, , .		0

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91	Field electron emission through and from two-dimensional electron gas. , 0, , .		0
92	Model of coherent electron field emission from semiconductors through nanometer-wide dielectric coverings. , 0, , .		0
93	Coherent and sequential tunneling mechanisms for field electron emission through layers of wide band gap materials. , 0, , .		0
94	Parameter dispersion characterization for arrays of HfC-coated emitters on poly-Si substrate. , 0, , .		0
95	Silicon Integrated Photonics for Microelectronics Evolution. , 0, , .		1