

Michael Schmidt

List of Publications by Year in descending order

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79
papers

2,867
citations

236612

25
h-index

174990

52
g-index

81
all docs

81
docs citations

81
times ranked

4146
citing authors

#	ARTICLE	IF	CITATIONS
1	Size-controlled highly luminescent silicon nanocrystals: A SiO/SiO ₂ superlattice approach. Applied Physics Letters, 2002, 80, 661-663.	1.5	789
2	Magnetic Field-Induced Ferroelectric Switching in Multiferroic Aurivillius Phase Thin Films at Room Temperature. Journal of the American Ceramic Society, 2013, 96, 2339-2357.	1.9	154
3	Biom mineralization Mechanism of Gold by Zygomycete Fungi Rhizopus oryzae. ACS Nano, 2012, 6, 6165-6173.	7.3	146
4	Air sensitivity of MoS ₂ , MoSe ₂ , MoTe ₂ , HfS ₂ , and HfSe ₂ . Journal of Applied Physics, 2016, 120, .	1.1	134
5	The Origin of Shape Sensitivity in Palladium-Catalyzed Suzuki-Miyaura Cross Coupling Reactions. Angewandte Chemie - International Edition, 2014, 53, 4142-4145.	7.2	116
6	Enhanced Catalytic Activity of High-Index Faceted Palladium Nanoparticles in Suzuki-Miyaura Coupling Due to Efficient Leaching Mechanism. ACS Catalysis, 2014, 4, 3105-3111.	5.5	83
7	Vertical strain and doping gradients in thick GaN layers. Applied Physics Letters, 1997, 71, 2490-2492.	1.5	78
8	Silicon Nanocrystals in Liquid Media: Optical Properties and Surface Stabilization by Microplasma-Induced Non-Equilibrium Liquid Chemistry. Advanced Functional Materials, 2012, 22, 954-964.	7.8	72
9	Stability, Oxidation, and Shape Evolution of PVP-Capped Pd Nanocrystals. Journal of Physical Chemistry C, 2014, 118, 6522-6530.	1.5	57
10	Comparative study of photoluminescence of undoped and erbium-doped size-controlled nanocrystalline Si ⁺ -SiO ₂ multilayered structures. Journal of Applied Physics, 2004, 96, 2254-2260.	1.1	56
11	Impact of Forming Gas Annealing on the Performance of Surface-Channel $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}$ MOSFETs With an ALD Al_2O_3 Gate Dielectric. IEEE Transactions on Electron Devices, 2012, 59, 1084-1090.	1.6	52
12	Interface Defects in HfO ₂ , LaSiO _x , and Gd ₂ O ₃ High-k/Metal-Gate Structures on Silicon. Journal of the Electrochemical Society, 2008, 155, G13.	1.3	46
13	Si/SiO ₂ multiple quantum wells for all silicon tandem cells: Conductivity and photocurrent measurements. Thin Solid Films, 2008, 516, 6763-6766.	0.8	44
14	Room temperature ferroelectric and magnetic investigations and detailed phase analysis of Aurivillius phase Bi ₅ Ti ₃ Fe _{0.7} Co _{0.3} O ₁₅ thin films. Journal of Applied Physics, 2012, 112, .	1.1	40
15	Synthesis and characterisation of cross-linked chitosan composites functionalised with silver and gold nanoparticles for antimicrobial applications. Science and Technology of Advanced Materials, 2017, 18, 528-540.	2.8	40
16	Rhenium-doped MoS ₂ films. Applied Physics Letters, 2017, 111, .	1.5	40
17	Probing Interface Defects in Top-Gated MoS ₂ Transistors with Impedance Spectroscopy. ACS Applied Materials & Interfaces, 2017, 9, 24348-24356.	4.0	38
18	Highly efficient sensitizing of erbium ion luminescence in size-controlled nanocrystalline Si/SiO ₂ superlattice structures. Applied Physics Letters, 2004, 84, 2512-2514.	1.5	37

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19	Size controlled nc-Si synthesis by SiO/SiO ₂ superlattices. Journal of Non-Crystalline Solids, 2002, 299-302, 1075-1078.	1.5	36
20	Bright luminescence from erbium doped nc-Si/SiO ₂ superlattices. Journal of Non-Crystalline Solids, 2002, 299-302, 678-682.	1.5	34
21	Direct visualization of magnetic field induced magnetoelectric switching in multiferroic aurivillius phase thin films. Journal of the American Ceramic Society, 2017, 100, 975-987.	1.9	34
22	Electrochemically modified boron-doped diamond electrode with Pd and Pd-Sn nanoparticles for ethanol electrooxidation. Electrochimica Acta, 2017, 243, 310-319.	2.6	33
23	Direct atomic scale determination of magnetic ion partition in a room temperature multiferroic material. Scientific Reports, 2017, 7, 1737.	1.6	32
24	Growth of 1Tâ€² MoTe ₂ by Thermally Assisted Conversion of Electrodeposited Tellurium Films. ACS Applied Energy Materials, 2019, 2, 521-530.	2.5	30
25	Investigation of Au-Hg amalgam formation on substrate-immobilized individual Au nanorods. Journal of Materials Chemistry C, 2015, 3, 8865-8872.	2.7	29
26	Isolating the Photovoltaic Junction: Atomic Layer Deposited TiO ₂ -RuO ₂ Alloy Schottky Contacts for Silicon Photoanodes. ACS Applied Materials & Interfaces, 2016, 8, 23763-23773.	4.0	25
27	Fabrication and photoluminescence properties of erbium doped size-controlled silicon nanocrystals. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2003, 105, 214-220.	1.7	24
28	Optical Emission of a Strained Direct-Band-Gap Ge Quantum Well Embedded Inside InGaAs Alloy Layers. Physical Review Letters, 2013, 110, 177404.	2.9	24
29	Low sheet resistance titanium nitride films by low-temperature plasma-enhanced atomic layer deposition using design of experiments methodology. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, 031506.	0.9	24
30	Photoluminescence of Er ³⁺ -implanted amorphous hydrogenated silicon suboxides. Physical Review B, 2003, 68, .	1.1	23
31	InAlAs solar cell on a GaAs substrate employing a graded In _x Ga _{1-x} As-InP metamorphic buffer layer. Applied Physics Letters, 2013, 102, .	1.5	23
32	Absence of Evidence â‰¥ Evidence of Absence: Statistical Analysis of Inclusions in Multiferroic Thin Films. Scientific Reports, 2015, 4, 5712.	1.6	23
33	Electrically active interface defects in the In _{0.53} Ga _{0.47} As MOS system. Microelectronic Engineering, 2013, 109, 182-188.	1.1	22
34	Back-gated Nb-doped MoS ₂ junctionless field-effect-transistors. AIP Advances, 2016, 6, .	0.6	20
35	The curious case of thin-body Ge crystallization. Applied Physics Letters, 2011, 99, 131910.	1.5	19
36	Diagnosis of phosphorus monolayer doping in silicon based on nanowire electrical characterisation. Journal of Applied Physics, 2018, 123, 125701.	1.1	19

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37	Ferroelectric Behavior in Exfoliated 2D Aurivillius Oxide Flakes of Sub-Unit Cell Thickness. <i>Advanced Electronic Materials</i> , 2020, 6, 1901264.	2.6	18
38	Local strain distribution of hexagonal GaN pyramids. <i>Journal of Crystal Growth</i> , 1998, 189-190, 630-633.	0.7	17
39	Resistive-substrate interface tailoring for generating high-density arrays of Ge and Bi ₂ Se ₃ nanowires by electron beam lithography. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2012, 30, .	0.6	17
40	A study of the temperature dependence of the local ferroelectric properties of <i>c</i> -axis oriented Bi ₆ Ti ₃ Fe ₂ O ₁₈ Aurivillius phase thin films: Illustrating the potential of a novel lead-free perovskite material for high density memory applications. <i>AIP Advances</i> , 2015, 5, .	0.6	17
41	Exploring ferroelectric and magnetic properties of Tb-substituted <i>m</i> = 5 layered Aurivillius phase thin films. <i>Journal of Applied Physics</i> , 2018, 123, .	1.1	17
42	Direct imaging of local strain relaxation along the side facets and the edges of hexagonal GaN pyramids by cathodoluminescence microscopy. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 1998, 2, 552-556.	1.3	16
43	Atomic layer deposition of Cu with a carbene-stabilized Cu(silylamide). <i>Journal of Materials Chemistry C</i> , 2014, 2, 9205-9214.	2.7	16
44	Shell@Core Coaxial NiO@Ni Nanowire Arrays as High Performance Enzymeless Glucose Sensor. <i>Journal of the Electrochemical Society</i> , 2013, 160, B207-B212.	1.3	14
45	Large-area growth of MoS ₂ at temperatures compatible with integrating back-end-of-line functionality. <i>2D Materials</i> , 2021, 8, 025008.	2.0	14
46	Er doping of nanocrystalline-Si/SiO ₂ superlattices. <i>Thin Solid Films</i> , 2001, 397, 211-215.	0.8	13
47	Directed self-assembly of PS- <i>b</i> -PMMA block copolymer using HSQ lines for translational alignment. <i>Journal of Materials Chemistry C</i> , 2013, 1, 1192-1196.	2.7	13
48	Stencil lithography of superconducting contacts on MBE-grown topological insulator thin films. <i>Journal of Crystal Growth</i> , 2017, 477, 183-187.	0.7	13
49	Confinement effects in crystallization and Er doping of Si nanostructures. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2001, 11, 245-251.	1.3	12
50	Strong morphological dependence of luminescence efficiency and emission wavelength in hexagonal GaN crystallites directly imaged by scanning cathodoluminescence microscopy. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 1997, 50, 165-169.	1.7	11
51	Impact of Surface Nano-textured Stainless Steel Prepared by Focused Ion Beam on Endothelial Cell Growth. <i>Journal of Nanoscience and Nanotechnology</i> , 2013, 13, 5283-5290.	0.9	10
52	(Invited) Evaluation of Few-Layer MoS ₂ Transistors with a Top Gate and HfO ₂ Dielectric. <i>ECS Transactions</i> , 2016, 75, 153-162.	0.3	10
53	Self-Healing Thermal Annealing: Surface Morphological Restructuring Control of GaN Nanorods. <i>Crystal Growth and Design</i> , 2016, 16, 6769-6775.	1.4	10
54	A bottom-up fabrication method for the production of visible light active photonic crystals. <i>Journal of Materials Chemistry C</i> , 2014, 2, 1675-1682.	2.7	9

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55	Persistence of Ferroelectricity Close to Unit-Cell Thickness in Structurally Disordered Aurivillius Phases. <i>Chemistry of Materials</i> , 2020, 32, 10511-10523.	3.2	9
56	Room temperature luminescence of Er doped nc-Si/SiO ₂ superlattices. <i>Journal of Non-Crystalline Solids</i> , 2000, 266-269, 608-613.	1.5	8
57	Long-term stability of transparent n/p ZnO homojunctions grown by rf-sputtering at room-temperature. <i>Journal of Materiomics</i> , 2019, 5, 428-435.	2.8	8
58	The structural and electrical properties of the SrTa ₂ O ₆ /In _{0.53} Ga _{0.47} As/InP system. <i>Microelectronic Engineering</i> , 2011, 88, 1054-1057.	1.1	7
59	Charged Domain Wall and Polar Vortex Topologies in a Room-Temperature Magnetoelectric Multiferroic Thin Film. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 5525-5536.	4.0	7
60	FIB Patterning of Stainless Steel for the Development of Nano-Structured Stent Surfaces for Cardiovascular Applications. <i>Journal of Physics: Conference Series</i> , 2012, 371, 012065.	0.3	6
61	Competitive carrier interactions influencing the emission dynamics of GaAsSb-capped InAs quantum dots. <i>Applied Physics Letters</i> , 2012, 101, 231109.	1.5	6
62	Investigation of electron mobility in surface-channel Al ₂ O ₃ /In _{0.53} Ga _{0.47} As MOSFETs. <i>Solid-State Electronics</i> , 2013, 88, 37-42.	0.8	6
63	InAlN high electron mobility transistor Ti/Al/Ni/Au Ohmic contact optimisation assisted by in-situ high temperature transmission electron microscopy. <i>Applied Physics Letters</i> , 2015, 107, 113506.	1.5	6
64	Structural and Electrical Investigation of MoS ₂ Thin Films Formed by Thermal Assisted Conversion of Mo Metal. <i>ECS Journal of Solid State Science and Technology</i> , 2016, 5, Q3016-Q3020.	0.9	6
65	Monolithic integration of patterned BaTiO ₃ thin films on Ge wafers. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2018, 36, .	0.6	6
66	Fluorine implantation in germanium for dopant diffusion control. <i>AIP Conference Proceedings</i> , 2012, , .	0.3	5
67	AsH ₃ gas-phase <i>ex situ</i> doping 3D silicon structures. <i>Journal of Applied Physics</i> , 2018, 124, .	1.1	4
68	Compositional Tuning of the Aurivillius Phase Material Bi ₅ Ti ₃ Fe _{1+x} Nb _x O ₁₅ (0 ≤ x ≤ 0.4) Grown by Chemical Solution Deposition and its Influence on the Structural, Magnetic, and Optical Properties of the Material. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2021, 68, 303-313.	1.7	4
69	Probing Ferroelectric Behavior in Sub-10 nm Bismuth-Rich Aurivillius Films by Piezoresponse Force Microscopy. <i>Microscopy and Microanalysis</i> , 2021, , 1-11.	0.2	4
70	Spatially resolved investigations of the excitonic luminescence in GaN. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 1997, 50, 192-196.	1.7	2
71	Improved reliability of Al ₂ O ₃ /InGaAs/InP MOS structures through in-situ forming gas annealing. , 2012, , .		2
72	Thermal characterization of direct wafer bonded Si-on-SiC. <i>Applied Physics Letters</i> , 2022, 120, 113503.	1.5	2

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73	Synthesis and size control of Si nanocrystals by SiO/SiO ₂ superlattices and Er doping. Materials Research Society Symposia Proceedings, 2002, 737, 331.	0.1	1
74	High-efficiency erbium ion luminescence in silicon nanocrystal systems. Physics of the Solid State, 2004, 46, 104-108.	0.2	1
75	Germanium Fin Structure Optimization for Future MugFET and FinFET Applications. ECS Transactions, 2011, 35, 27-34.	0.3	1
76	Correlative Microscopy Study of FIB Patterned Stainless Steel Surfaces as Novel Nano-Structured Stents for Cardiovascular Applications. Materials Research Society Symposia Proceedings, 2012, 1466, 26.	0.1	1
77	Photoluminescence of Er ³⁺ ions in layers of quasi-ordered silicon nanocrystals in a silicon dioxide matrix. Journal of Experimental and Theoretical Physics, 2003, 97, 1123-1130.	0.2	0
78	<title>Light emission from erbium-doped nanocrystalline silicon/silicon dioxide layers under strong optical excitation</title>. , 2005, , .		0
79	FIB Patterning of Stainless Steel for the Development of Nano-structured Stent Surfaces for Cardiovascular Applications. Lecture Notes in Nanoscale Science and Technology, 2013, , 391-416.	0.4	0