Andrian Kuchuk

List of Publications by Year
in descending order

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86 papers	911 citations	516710 16 h-index	642732 23 g-index
86 all docs	86 docs citations	86 times ranked	1010 citing authors

#	Article	IF	Citations
1	Low-temperature method for thermochromic high ordered VO2 phase formation. Materials Letters, 2012, 68, 215-217.	2.6	65
2	Ni-Based Ohmic Contacts ton-Type 4H-SiC: The Formation Mechanism and Thermal Stability. Advances in Condensed Matter Physics, 2016, 2016, 1-26.	1.1	41
3	Study of a SiGeSn/GeSn/SiGeSn structure toward direct bandgap type-I quantum well for all group-IV optoelectronics. Optics Letters, 2017, 42, 387.	3.3	39
4	Substrate effects on the strain relaxation in GaN/AlN short-period superlattices. Nanoscale Research Letters, 2012, 7, 289.	5.7	37
5	Mechanism of dislocation-governed charge transport in schottky diodes based on gallium nitride. Semiconductors, 2008, 42, 689-693.	0.5	28
6	Long-term stability of Niâ€“silicide ohmic contact to n-type 4Hâ€“SiC. Microelectronic Engineering, 2008, 85, 2142-2145.	2.4	25
7	High-resolution X-ray diffraction analysis of strain distribution in GaN nanowires on Si(111) substrate. Nanoscale Research Letters, 2015, 10, 51.	5.7	21
8	Structural transformation and functional properties of vanadium oxide films after low-temperature annealing. Thin Solid Films, 2014, 564, 179-185.	1.8	20
9	On the Formation of Ni-Based Ohmic Contacts to n-Type 4H-SiC. Materials Science Forum, 2009, 615-617, 573-576.	0.3	19
10	Direct bandgap type-I GeSn/GeSn quantum well on a GeSn- and Ge- buffered Si substrate. AIP Advances, 2018, 8, 025104.	1.3	19
11	Strain suppressed Sn incorporation in GeSn epitaxially grown on Ge/Si(001) substrate. Applied Physics Letters, 2020, 116, .	3.3	19
12	Mechanism of strain-influenced quantum well thickness reduction in GaN/AlN short-period superlattices. Nanotechnology, 2014, 25, 245602.	2.6	18
13	Measuring the depth profiles of strain/composition in AlGaN-graded layer by high-resolution x-ray diffraction. Journal of Applied Physics, 2014, 116, .	2.5	17
14	Nanoscale Electrostructural Characterization of Compositionally Graded Al_xGa_{1â€“x}N Heterostructures on GaN/Sapphire (0001) Substrate. ACS Applied Materials & Interfaces, 2015, 7, 23320-23327.	8.0	17
15	Asymmetrical reciprocal space mapping using X-ray diffraction: a technique for structural characterization of GaN/AlN superlattices. CrystEngComm, 2017, 19, 2977-2982.	2.6	17
16	Study of direct bandgap type-I GeSn/GeSn double quantum well with improved carrier confinement. Nanotechnology, 2018, 29, 465201.	2.6	17
17	Crystalline GaAs Thin Film Growth on a c-Plane Sapphire Substrate. Crystal Growth and Design, 2019, 19, 5088-5096.	3.0	17
18	Thermal degradation of Au/Ni2Si/n-SiC ohmic contacts under different conditions. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 165, 38-41.	3.5	16

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19	Structural and Optical Characteristics of GeSn Quantum Wells for Silicon-Based Mid-Infrared Optoelectronic Applications. Journal of Electronic Materials, 2016, 45, 6265-6272.	2.2	16
20	Polarization Effects in Graded AlGaN Nanolayers Revealed by Current-Sensing and Kelvin Probe Microscopy. ACS Applied Materials & Interfaces, 2018, 10, 6755-6763.	8.0	16
21	Photovoltage spectroscopy of direct and indirect bandgaps of strained Ge1-Sn thin films on a Ge/Si(001) substrate. Acta Materialia, 2019, 171, 40-47.	7.9	16
22	Mechanism of strain relaxation by twisted nanocolumns revealed in AlGaN/GaN heterostructures. Applied Physics Letters, 2009, 95, .	3.3	15
23	Amorphous Taâ€“Siâ€“N diffusion barriers on GaAs. Thin Solid Films, 2004, 459, 292-296.	1.8	14
24	Excitation intensity and thickness dependent emission mechanism from an ultrathin InAs layer in GaAs matrix. Journal of Applied Physics, 2018, 124, .	2.5	14
25	Quantitative Correlation Study of Dislocation Generation, Strain Relief, and Sn Outdiffusion in Thermally Annealed GeSn Epilayers. Crystal Growth and Design, 2021, 21, 1666-1673.	3.0	14
26	TEM Characterisation of Silicide Phase Formation in Ni-Based Ohmic Contacts to 4H n-SiC. Materials Transactions, 2011, 52, 315-318.	1.2	12
27	Influence of template type and buffer strain on structural properties of GaN multilayer quantum wells grown by PAMBE, an x-ray study. Journal Physics D: Applied Physics, 2011, 44, 025403.	2.8	12
28	Modelling of X-ray diffraction curves for GaN nanowires on Si(1 1 1). Journal of Crystal Growth, 2014, 401, 347-350.	1.5	12
29	The Peculiarities of Strain Relaxation in GaN/AlN Superlattices Grown on Vicinal GaN (0001) Substrate: Comparative XRD and AFM Study. Nanoscale Research Letters, 2016, 11, 252.	5.7	12
30	Effect of p-n junction overheating on degradation of silicon high-power pulsed IMPATT diodes. Semiconductors, 2011, 45, 253-259.	0.5	11
31	The Formation Mechanism of Ni-Based Ohmic Contacts to 4H-n-SiC. Materials Science Forum, 0, 717-720, 833-836.	0.3	11
32	Optical and structural study of deformation states in the GaN/AlN superlattices. Journal of Applied Physics, 2017, 122, .	2.5	11
33	Local Strain and Crystalline Defects in GaN/AlGaN/GaN(0001) Heterostructures Induced by Compositionally Graded AlGaN Buried Layers. Crystal Growth and Design, 2019, 19, 200-210.	3.0	11
34	Study of SiGeSn/GeSn single quantum well toward high-performance all-group-IV optoelectronics. Journal of Applied Physics, 2021, 129, .	2.5	11
35	Si-rich Al2O3 films grown by RF magnetron sputtering: structural and photoluminescence properties versus annealing treatment. Nanoscale Research Letters, 2013, 8, 273.	5.7	10
36	The influence of annealing on structural and photoluminescence properties of silicon-rich Al2O3 films prepared by co-sputtering. Physica E: Low-Dimensional Systems and Nanostructures, 2013, 51, 115-119.	2.7	10

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37	Sensitivity enhancement in an in-vitro glucose sensor using gold nanoelectrode ensembles. Journal of Materials Science: Materials in Electronics, 2017, 28, 5452-5459.	2.2	10
38	An influence of the local strain on cathodoluminescence of GaN/AlxGa1â^'xN nanowire structures. Journal of Applied Physics, 2016, 120, .	2.5	9
39	Barrier properties of Taâ€“Siâ€“N films in Ag-and Au-containing metallization. Vacuum, 2004, 74, 195-199.	3.5	8
40	Features of temperature dependence of contact resistivity in ohmic contacts on lappedn-Si. Journal of Applied Physics, 2012, 112, 063703.	2.5	8
41	Features of ZnS-powder doping with a Mn impurity during synthesis and subsequent annealing. Semiconductors, 2013, 47, 713-720.	0.5	8
42	Effect of strain-polarization fields on optical transitions in AlGaN/GaN multi-quantum well structures. Physica E: Low-Dimensional Systems and Nanostructures, 2016, 76, 140-145.	2.7	8
43	X-ray diffraction study of strain relaxation, spontaneous compositional gradient, and dislocation density in GeSn/Ge/Si(100) heterostructures. Semiconductor Science and Technology, 2020, 35, 075009.	2.0	8
44	Influence of layer deformation on thermal quenching of exciton photoluminescence in short-period GaAs/AlAs superlattices. Semiconductor Science and Technology, 2004, 19, 475-479.	2.0	7
45	Kinetically controlled transition from 2D nanostructured films to 3D multifaceted InN nanocrystals on GaN(0001). CrystEngComm, 2018, 20, 1499-1508.	2.6	7
46	GaAs epitaxial growth on R-plane sapphire substrate. Journal of Crystal Growth, 2020, 548, 125848.	1.5	7
47	Compositionally Graded AlGaN Nanostructures: Strain Distribution and X-ray Diffraction Reciprocal Space Mapping. Crystal Growth and Design, 2020, 20, 1543-1551.	3.0	7
48	InAs nanostructures for solar cell: Improved efficiency by submonolayer quantum dot. Solar Energy Materials and Solar Cells, 2021, 224, 111026.	6.2	7
49	Impact of Long-Term Annealing on Photoluminescence from Ge1â^'xSnx Alloys. Crystals, 2021, 11, 905.	2.2	7
50	Coherent-interface-induced strain in large lattice-mismatched materials: A new approach for modeling Raman shift. Nano Research, 2022, 15, 2405-2412.	10.4	7
51	Relationship between Condition of Deposition and Properties of W-Ti-N Thin Films Prepared by Reactive Magnetron Sputtering. Advanced Engineering Materials, 2006, 8, 209-212.	3.5	6
52	Fundamentals and practice of metal contacts to wide band gap semiconductor devices. Crystal Research and Technology, 2012, 47, 261-272.	1.3	6
53	Correlation between luminescent characteristics and phase composition of ZnS:Cu powder prepared by self-propagating high temperature synthesis. Journal of Luminescence, 2014, 145, 970-975.	3.1	6
54	Formation of MgZnO alloy under thermodynamic conditions. Physica B: Condensed Matter, 2014, 453, 123-126.	2.7	6

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55	Impact of defects on photoexcited carrier relaxation dynamics in GeSn thin films. Journal of Physics Condensed Matter, 2020, 33, 065702.	1.8	6
56	ZnOâ€“GaN tunnel junction for transparent ohmic contacts to p-GaN. Journal of Alloys and Compounds, 2004, 371, 129-132.	5.5	5
57	Reliability Tests of Au-Metallized Ni-Based Ohmic Contacts to 4H-n-SiC with and without Nanocomposite Diffusion Barriers. Materials Science Forum, 0, 645-648, 737-740.	0.3	5
58	Effect of well/barrier thickness ratio on strain relaxation in GaN/AlN superlattices grown on GaN/sapphire template. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2017, 35, .	1.2	5
59	Strain relaxation in GaN/AlN superlattices on GaN(0001) substrate: Combined superlattice-to-substrate lattice misfit and thickness-dependent effects. Materials and Design, 2018, 157, 141-150.	7.0	5
60	Growth kinetics and nanoscale structure-property relationships of InN nanostructures on GaN(0Â0Â0Â1). Applied Surface Science, 2021, 537, 147997.	6.1	5
61	Indium segregation in ultra-thin In(Ga)As/GaAs single quantum wells revealed by photoluminescence spectroscopy. Applied Physics Letters, 2021, 118, .	3.3	5
62	Investigation of SiGeSn/GeSn/SiGeSn single quantum well with enhanced well emission. Nanotechnology, 2022, 33, 085201.	2.6	5
63	Heat-Resistant Au-TiBx-n-GaN Schottky Diodes. , 2006, , .		4
64	Thermal stability of thin amorphous Ta-Si-N films used in Au/GaN metallization. Technical Physics, 2006, 51, 1383-1385.	0.7	4
65	Structural transformations in ZnS:Cu in the course of thermal annealing. Semiconductors, 2012, 46, 188-192.	0.5	4
66	Structure and light emission of Si-rich Al2O3 and Si-rich-SiO2 nanocomposites. Microelectronic Engineering, 2014, 125, 62-67.	2.4	4
67	High temperature capacitors using AlN grown by MBE as the dielectric. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2018, 36, 041202.	1.2	4
68	Luminescence Properties of GaN/InxGa1â^'xN/InyGa1â^'yN Double Graded Structures (Zigzag Quantum) Tj ETQq0 0 0 rgBT /Overlock 10	2.2	4
69	Single crystalline Ge thin film growth on c-plane sapphire substrates by molecular beam epitaxy (MBE). CrystEngComm, 2022, 24, 4372-4380.	2.6	4
70	Microstructure Characterization of Si/Ni Contact Layers on <i>n</i>-Type 4H-SiC by TEM and XEDS. Materials Science Forum, 0, 778-780, 697-701.	0.3	3
71	Effect of indium accumulation on the growth and properties of ultrathin In(Ga)N/GaN quantum wells. Materials and Design, 2020, 190, 108565.	7.0	3
72	GaAs layer on c-plane sapphire for light emitting sources. Applied Surface Science, 2021, 542, 148554.	6.1	3

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73	Band Offsets of the MOCVD-Grown Î²-(Al_{0.21}Ga_{0.79})₂O₃/Î²-Ga₂O₃ (010) Heterojunction. ACS Applied Materials & Interfaces, 2022, 14, 33944-33951.	8.0	3
74	Formation of rocking curves for quasi-forbidden reflections in short-periodic superlattices GaAs/AlGaAs. Journal of Applied Crystallography, 2004, 37, 150-155.	4.5	2
75	Comparative Investigation of Structural and Optical Properties of Si-Rich Oxide Films Fabricated by Magnetron Sputtering. Advanced Materials Research, 0, 854, 117-124.	0.3	2
76	Kinetically controlled indium surface coverage effects on PAMBE-growth of InN/GaN(0001) quantum well structures. Journal of Applied Physics, 2018, 123, 195302.	2.5	2
77	Investigation of the Structural and Optical Properties of Compositionally Vâ€Graded Strained In x Ga 1â€“ x N Layers. Physica Status Solidi (B): Basic Research, 2020, 257, 1900591.	1.5	2
78	Conductivity-Type Conversion in Self-Assembled GeSn Stripes on Ge/Si(100) under Electric Field. ACS Applied Electronic Materials, 2021, 3, 4388-4397.	4.3	2
79	CsPbBr₃ perovskite photodetector with interdigital chromium electrodes. Engineering Research Express, 2020, 2, 045011.	1.6	2
80	The Growth of Polarization Domains in Ultrathin Ferroelectric Films Seeded by the Tip of an Atomic Force Microscope. Nanoscale Research Letters, 2022, 17, 52.	5.7	2
81	Evolution of the deformation state and composition as a result of changes in the number of quantum wells in multilayered InGaN/GaN structures. Semiconductors, 2011, 45, 753-760.	0.5	1
82	Ni-Based Ohmic Contacts to Silicon Carbide Examined by Electron Microscopy. Solid State Phenomena, 2012, 186, 82-85.	0.3	1
83	Integrated microwave (centimeter-range) modulator on polycrystalline diamond layers. Technical Physics, 2013, 58, 420-424.	0.7	1
84	Energy band engineering toward hardened electronics in ionizing radiation environments via quantum gettering. Journal of Applied Physics, 2021, 129, 084501.	2.5	1
85	X-ray Reciprocal Space Mapping of Graded Al x Ga1â€‰â^'â€‰x N Films and Nanowires. Nanoscale Research Letters, 2016, 11, 81.	5.7	0
86	Alternative Route of Fracturing in GaN Films Formed by Nanowires Coalescence on Si Substrate. Crystal Growth and Design, 2022, 22, 3264-3270.	3.0	0