

Andrian Kuchuk

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	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
2	Investigation of SiGeSn/GeSn/SiGeSn single quantum well with enhanced well emission. Nanotechnology, 2022, 33, 085201.	2.6	5
3	Single crystalline Ge thin film growth on <i>c</i> -plane sapphire substrates by molecular beam epitaxy (MBE). CrystEngComm, 2022, 24, 4372-4380.	2.6	4
4	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
5	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
6	Band Offsets of the MOCVD-Grown $\text{In}_{0.21}\text{Ga}_{0.79}\text{As}_2\text{O}_3/\text{Ga}_{0.2}\text{O}_3/\text{Ga}_{0.2}\text{O}_3$ (010) Heterojunction. ACS Applied Materials & Interfaces, 2022, 14, 33944-33951.	8.0	3
7	Growth kinetics and nanoscale structure-property relationships of InN nanostructures on GaN(0001). Applied Surface Science, 2021, 537, 147997.	6.1	5
8	GaAs layer on c-plane sapphire for light emitting sources. Applied Surface Science, 2021, 542, 148554.	6.1	3
9	Energy band engineering toward hardened electronics in ionizing radiation environments via quantum gettering. Journal of Applied Physics, 2021, 129, 084501.	2.5	1
10	Indium segregation in ultra-thin In(Ga)As/GaAs single quantum wells revealed by photoluminescence spectroscopy. Applied Physics Letters, 2021, 118, .	3.3	5
11	Study of SiGeSn/GeSn single quantum well toward high-performance all-group-IV optoelectronics. Journal of Applied Physics, 2021, 129, .	2.5	11
12	InAs nanostructures for solar cell: Improved efficiency by submonolayer quantum dot. Solar Energy Materials and Solar Cells, 2021, 224, 111026.	6.2	7
13	Impact of Long-Term Annealing on Photoluminescence from $\text{Ge}_{1-x}\text{Sn}_x$ Alloys. Crystals, 2021, 11, 905.	2.2	7
14	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
15	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
16	GaAs epitaxial growth on R-plane sapphire substrate. Journal of Crystal Growth, 2020, 548, 125848.	1.5	7
17	Strain suppressed Sn incorporation in GeSn epitaxially grown on Ge/Si(001) substrate. Applied Physics Letters, 2020, 116, .	3.3	19
18	Luminescence Properties of GaN/In _x Ga _{1-x} N/In _y Ga _{1-y} N Double Graded Structures (Zigzag Quantum) Tj ETQq0 0,0,rgBT /Oylock 10	2.2	4

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19	Effect of indium accumulation on the growth and properties of ultrathin In(Ga)N/GaN quantum wells. <i>Materials and Design</i> , 2020, 190, 108565.	7.0	3
20	Investigation of the Structural and Optical Properties of Compositionally Graded Strained In _x Ga _{1-x} N Layers. <i>Physica Status Solidi (B): Basic Research</i> , 2020, 257, 1900591.	1.5	2
21	Compositionally Graded AlGaIn Nanostructures: Strain Distribution and X-ray Diffraction Reciprocal Space Mapping. <i>Crystal Growth and Design</i> , 2020, 20, 1543-1551.	3.0	7
22	X-ray diffraction study of strain relaxation, spontaneous compositional gradient, and dislocation density in GeSn/Ge/Si(100) heterostructures. <i>Semiconductor Science and Technology</i> , 2020, 35, 075009.	2.0	8
23	Impact of defects on photoexcited carrier relaxation dynamics in GeSn thin films. <i>Journal of Physics Condensed Matter</i> , 2020, 33, 065702.	1.8	6
24	CsPbBr ₃ perovskite photodetector with interdigital chromium electrodes. <i>Engineering Research Express</i> , 2020, 2, 045011.	1.6	2
25	Crystalline GaAs Thin Film Growth on a c-Plane Sapphire Substrate. <i>Crystal Growth and Design</i> , 2019, 19, 5088-5096.	3.0	17
26	Photovoltage spectroscopy of direct and indirect bandgaps of strained Ge _{1-x} Sn thin films on a Ge/Si(001) substrate. <i>Acta Materialia</i> , 2019, 171, 40-47.	7.9	16
27	Local Strain and Crystalline Defects in GaN/AlGaIn/GaN(0001) Heterostructures Induced by Compositionally Graded AlGaIn Buried Layers. <i>Crystal Growth and Design</i> , 2019, 19, 200-210.	3.0	11
28	Direct bandgap type-I GeSn/GeSn quantum well on a GeSn- and Ge- buffered Si substrate. <i>AIP Advances</i> , 2018, 8, 025104.	1.3	19
29	Polarization Effects in Graded AlGaIn Nanolayers Revealed by Current-Sensing and Kelvin Probe Microscopy. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 6755-6763.	8.0	16
30	Kinetically controlled transition from 2D nanostructured films to 3D multifaceted InN nanocrystals on GaN(0001). <i>CrystEngComm</i> , 2018, 20, 1499-1508.	2.6	7
31	Excitation intensity and thickness dependent emission mechanism from an ultrathin InAs layer in GaAs matrix. <i>Journal of Applied Physics</i> , 2018, 124, .	2.5	14
32	Study of direct bandgap type-I GeSn/GeSn double quantum well with improved carrier confinement. <i>Nanotechnology</i> , 2018, 29, 465201.	2.6	17
33	Kinetically controlled indium surface coverage effects on PAMBE-growth of InN/GaN(0001) quantum well structures. <i>Journal of Applied Physics</i> , 2018, 123, 195302.	2.5	2
34	High temperature capacitors using AlN grown by MBE as the dielectric. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2018, 36, 041202.	1.2	4
35	Strain relaxation in GaN/AlN superlattices on GaN(0001) substrate: Combined superlattice-to-substrate lattice misfit and thickness-dependent effects. <i>Materials and Design</i> , 2018, 157, 141-150.	7.0	5
36	Asymmetrical reciprocal space mapping using X-ray diffraction: a technique for structural characterization of GaN/AlN superlattices. <i>CrystEngComm</i> , 2017, 19, 2977-2982.	2.6	17

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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	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
39	Optical and structural study of deformation states in the GaN/AlN superlattices. Journal of Applied Physics, 2017, 122, .	2.5	11
40	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
41	Ni-Based Ohmic Contacts to n-Type 4H-SiC: The Formation Mechanism and Thermal Stability. Advances in Condensed Matter Physics, 2016, 2016, 1-26.	1.1	41
42	An influence of the local strain on cathodoluminescence of GaN/Al _x Ga _{1-x} N nanowire structures. Journal of Applied Physics, 2016, 120, .	2.5	9
43	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
44	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
45	X-ray Reciprocal Space Mapping of Graded Al _x Ga _{1-x} N Films and Nanowires. Nanoscale Research Letters, 2016, 11, 81.	5.7	0
46	Effect of strain-polarization fields on optical transitions in AlGa _x /Ga _{1-x} N multi-quantum well structures. Physica E: Low-Dimensional Systems and Nanostructures, 2016, 76, 140-145.	2.7	8
47	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
48	Nanoscale Electrostructural Characterization of Compositionally Graded Al _x Ga _{1-x} N Heterostructures on GaN/Sapphire (0001) Substrate. ACS Applied Materials & Interfaces, 2015, 7, 23320-23327.	8.0	17
49	Measuring the depth profiles of strain/composition in AlGa _x -graded layer by high-resolution x-ray diffraction. Journal of Applied Physics, 2014, 116, .	2.5	17
50	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
51	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
52	Formation of MgZnO alloy under thermodynamic conditions. Physica B: Condensed Matter, 2014, 453, 123-126.	2.7	6
53	Mechanism of strain-influenced quantum well thickness reduction in GaN/AlN short-period superlattices. Nanotechnology, 2014, 25, 245602.	2.6	18
54	Structure and light emission of Si-rich Al ₂ O ₃ and Si-rich-SiO ₂ nanocomposites. Microelectronic Engineering, 2014, 125, 62-67.	2.4	4

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55	Structural transformation and functional properties of vanadium oxide films after low-temperature annealing. <i>Thin Solid Films</i> , 2014, 564, 179-185.	1.8	20
56	Si-rich Al ₂ O ₃ films grown by RF magnetron sputtering: structural and photoluminescence properties versus annealing treatment. <i>Nanoscale Research Letters</i> , 2013, 8, 273.	5.7	10
57	The influence of annealing on structural and photoluminescence properties of silicon-rich Al ₂ O ₃ films prepared by co-sputtering. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2013, 51, 115-119.	2.7	10
58	Integrated microwave (centimeter-range) modulator on polycrystalline diamond layers. <i>Technical Physics</i> , 2013, 58, 420-424.	0.7	1
59	Features of ZnS-powder doping with a Mn impurity during synthesis and subsequent annealing. <i>Semiconductors</i> , 2013, 47, 713-720.	0.5	8
60	Substrate effects on the strain relaxation in GaN/AlN short-period superlattices. <i>Nanoscale Research Letters</i> , 2012, 7, 289.	5.7	37
61	Ni-Based Ohmic Contacts to Silicon Carbide Examined by Electron Microscopy. <i>Solid State Phenomena</i> , 2012, 186, 82-85.	0.3	1
62	Features of temperature dependence of contact resistivity in ohmic contacts on lappedn-Si. <i>Journal of Applied Physics</i> , 2012, 112, 063703.	2.5	8
63	Structural transformations in ZnS:Cu in the course of thermal annealing. <i>Semiconductors</i> , 2012, 46, 188-192.	0.5	4
64	Fundamentals and practice of metal contacts to wide band gap semiconductor devices. <i>Crystal Research and Technology</i> , 2012, 47, 261-272.	1.3	6
65	Low-temperature method for thermochromic high ordered VO ₂ phase formation. <i>Materials Letters</i> , 2012, 68, 215-217.	2.6	65
66	TEM Characterisation of Silicide Phase Formation in Ni-Based Ohmic Contacts to 4H n-SiC. <i>Materials Transactions</i> , 2011, 52, 315-318.	1.2	12
67	Influence of template type and buffer strain on structural properties of GaN multilayer quantum wells grown by PAMBE, an x-ray study. <i>Journal Physics D: Applied Physics</i> , 2011, 44, 025403.	2.8	12
68	Effect of p-n junction overheating on degradation of silicon high-power pulsed IMPATT diodes. <i>Semiconductors</i> , 2011, 45, 253-259.	0.5	11
69	Evolution of the deformation state and composition as a result of changes in the number of quantum wells in multilayered InGaN/GaN structures. <i>Semiconductors</i> , 2011, 45, 753-760.	0.5	1
70	On the Formation of Ni-Based Ohmic Contacts to n-Type 4H-SiC. <i>Materials Science Forum</i> , 2009, 615-617, 573-576.	0.3	19
71	Thermal degradation of Au/Ni ₂ Si/n-SiC ohmic contacts under different conditions. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2009, 165, 38-41.	3.5	16
72	Mechanism of strain relaxation by twisted nanocolumns revealed in AlGaIn/GaN heterostructures. <i>Applied Physics Letters</i> , 2009, 95, .	3.3	15

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73	Long-term stability of Ni-silicide ohmic contact to n-type 4H-SiC. <i>Microelectronic Engineering</i> , 2008, 85, 2142-2145.	2.4	25
74	Mechanism of dislocation-governed charge transport in schottky diodes based on gallium nitride. <i>Semiconductors</i> , 2008, 42, 689-693.	0.5	28
75	Heat-Resistant Au-TiBx-n-GaN Schottky Diodes. , 2006, , .		4
76	Thermal stability of thin amorphous Ta-Si-N films used in Au/GaN metallization. <i>Technical Physics</i> , 2006, 51, 1383-1385.	0.7	4
77	Relationship between Condition of Deposition and Properties of W-Ti-N Thin Films Prepared by Reactive Magnetron Sputtering. <i>Advanced Engineering Materials</i> , 2006, 8, 209-212.	3.5	6
78	Influence of layer deformation on thermal quenching of exciton photoluminescence in short-period GaAs/AlAs superlattices. <i>Semiconductor Science and Technology</i> , 2004, 19, 475-479.	2.0	7
79	Formation of rocking curves for quasi-forbidden reflections in short-periodic superlattices GaAs/AlGaAs. <i>Journal of Applied Crystallography</i> , 2004, 37, 150-155.	4.5	2
80	Barrier properties of Ta-Si-N films in Ag-and Au-containing metallization. <i>Vacuum</i> , 2004, 74, 195-199.	3.5	8
81	Amorphous Ta-Si-N diffusion barriers on GaAs. <i>Thin Solid Films</i> , 2004, 459, 292-296.	1.8	14
82	ZnO-GaN tunnel junction for transparent ohmic contacts to p-GaN. <i>Journal of Alloys and Compounds</i> , 2004, 371, 129-132.	5.5	5
83	Reliability Tests of Au-Metallized Ni-Based Ohmic Contacts to 4H-n-SiC with and without Nanocomposite Diffusion Barriers. <i>Materials Science Forum</i> , 0, 645-648, 737-740.	0.3	5
84	The Formation Mechanism of Ni-Based Ohmic Contacts to 4H-n-SiC. <i>Materials Science Forum</i> , 0, 717-720, 833-836.	0.3	11
85	Comparative Investigation of Structural and Optical Properties of Si-Rich Oxide Films Fabricated by Magnetron Sputtering. <i>Advanced Materials Research</i> , 0, 854, 117-124.	0.3	2
86	Microstructure Characterization of Si/Ni Contact Layers on <i>n</i>-Type 4H-SiC by TEM and XEDS. <i>Materials Science Forum</i> , 0, 778-780, 697-701.	0.3	3