Jan J Dubowski

List of Publications by Year
in descending order

111 papers	1,656 citations	361045 20 h-index	377514 34 g-index
111 all docs	111 docs citations	111 times ranked	1513 citing authors

#	Article	IF	Citations
1	Strategies for capturing Bacillus thuringiensis spores on surfaces of (001) GaAs-based biosensors. Talanta, 2022, 236, 122813.	2.9	4
2	Selective Detection of Legionella pneumophila Serogroup 1 and 5 with a Digital Photocorrosion Biosensor Using Antimicrobial Peptide-Antibody Sandwich Strategy. Biosensors, 2022, 12, 105.	2.3	4
3	Investigation of Conditions for Capture of Live Legionella pneumophila with Polyclonal and Recombinant Antibodies. Biosensors, 2022, 12, 380.	2.3	1
4	Rapid, Sensitive, and Selective Quantification of Bacillus cereus Spores Using xMAP Technology. Microorganisms, 2022, 10, 1408.	1.6	4
5	Water Sampling Module for Collecting and Concentrating Legionella pneumophila from Low-to-Medium Contaminated Environment. Biosensors, 2021, 11, 34.	2.3	3
6	Short Ligand, Cysteine-Modified Warnericin RK Antimicrobial Peptides Favor Highly Sensitive Detection of Legionella pneumophila. ACS Omega, 2021, 6, 1299-1308.	1.6	10
7	Polymer Brushâ€“GaAs Interface and Its Use as an Antibody-Compatible Platform for Biosensing. ACS Omega, 2021, 6, 7286-7295.	1.6	7
8	Formation of extraordinary density alkanethiol self-assembled monolayers on surfaces of digitally photocorroded (001) GaAs/AlGaAs nanoheterostructures. Applied Physics Letters, 2021, 118, 222102.	1.5	2
9	Regenerable ZnO/GaAs Bulk Acoustic Wave Biosensor for Detection of Escherichia coli in â€œComplexâ€• Biological Medium. Biosensors, 2021, 11, 145.	2.3	8
10	Bandgap Engineering of Quantum Semiconductor Microstructures. , 2021, , 1577-1610.		0
11	Sodium dodecyl sulfate decorated Legionella pneumophila for enhanced detection with a GaAs/AlGaAs nanoheterostructure biosensor. Sensors and Actuators B: Chemical, 2020, 304, 127007.	4.0	13
12	Formation of a Au/Au₉Ga₄ Alloy Nanoshell on a Bacterial Surface through Galvanic Displacement Reaction for High-Contrast Imaging. ACS Applied Bio Materials, 2020, 3, 477-485.	2.3	7
13	Antimicrobial warnericin RK peptide functionalized GaAs/AlGaAs biosensor for highly sensitive and selective detection of Legionella pneumophila. Biochemical Engineering Journal, 2020, 154, 107435.	1.8	18
14	Consequence of Galvanic Displacement Reaction on Digital Photocorrosion of GaAs/Al_{0.35}Ga_{0.65}As Nanoheterostructures. Journal of Physical Chemistry C, 2020, 124, 27772-27779.	1.5	4
15	Microbial synergistic interactions enhanced power generation in co-culture driven microbial fuel cell. Science of the Total Environment, 2020, 738, 140138.	3.9	33
16	Deposition and characterization of ZnO thin films on GaAs and Pt/GaAs substrates. Materials Chemistry and Physics, 2020, 247, 122854.	2.0	3
17	Bandgap Engineering of Quantum Semiconductor Microstructures. , 2020, , 1-34.		1
18	(Invited) Photoluminescence Diagnostics of Nanoscale Dissolution of III-V Semiconductor Nanoheterostructures. ECS Meeting Abstracts, 2020, MA2020-01, 1075-1075.	0.0	0

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19	Metalâ€“Organocatalyst for Detoxification of Phosphorothioate Pesticides: Demonstration of Acetylcholine Esterase Activity. Inorganic Chemistry, 2019, 58, 9773-9784.	1.9	11
20	Photo-Atomic Layer Etching of GaAs/AlGaAs Nanoheterostructures. ACS Applied Materials & Interfaces, 2019, 11, 17968-17978.	4.0	13
21	Synthesis of a 3,4-Disubstituted 1,8-Naphthalimide-Based DNA Intercalator for Direct Imaging of Legionella pneumophila. ACS Omega, 2019, 4, 5829-5838.	1.6	15
22	Binding strategies for capturing and growing Escherichia coli on surfaces of biosensing devices. Talanta, 2019, 192, 270-277.	2.9	9
23	Formation Kinetics of Mixed Self-Assembled Monolayers of Alkanethiols on GaAs(100). Langmuir, 2019, 35, 4415-4427.	1.6	16
24	Precision tuning of InAs quantum dot emission wavelength by iterative laser annealing. Optics and Laser Technology, 2018, 103, 382-386.	2.2	6
25	Open circuit potential monitored digital photocorrosion of GaAs/AlGaAs quantum well microstructures. Applied Physics Letters, 2018, 112, .	1.5	6
26	Growth of Escherichia coli on the GaAs (001) surface. Talanta, 2018, 178, 69-77.	2.9	8
27	ATP Induced Modulation in Ï€â€“Ï€ Stacking Interactions in Pyrene Based Zinc Complexes: Chemosensor Study and Quantitative Investigation of Apyrase Activity. Crystal Growth and Design, 2018, 18, 4320-4333.	1.4	15
28	Photocorrosion metrology of photoluminescence emitting GaAs/AlGaAs heterostructures. Journal Physics D: Applied Physics, 2017, 50, 035106.	1.3	10
29	Monitoring Growth and Antibiotic Susceptibility of Escherichia coli with Photoluminescence Emitting Semiconductor Biochips. Procedia Technology, 2017, 27, 244-245.	1.1	0
30	Monitoring growth and antibiotic susceptibility of Escherichia coli with photoluminescence of GaAs/AlGaAs quantum well microstructures. Biosensors and Bioelectronics, 2017, 93, 234-240.	5.3	23
31	Photonic biosensor based on photocorrosion of GaAs/AlGaAs quantum heterostructures for detection of Legionella pneumophila. Biointerphases, 2016, 11, 019301.	0.6	34
32	Chemotaxis for enhanced immobilization ofEscherichia coliandLegionella pneumophilaon biofunctionalized surfaces of GaAs. Biointerphases, 2016, 11, 021004.	0.6	7
33	Electrically biased GaAs/AlGaAs heterostructures for enhanced detection of bacteria. , 2016, , .		2
34	pH-Dependent Photocorrosion of GaAs/AlGaAs Quantum Well Microstructures. Journal of Physical Chemistry C, 2016, 120, 26129-26137.	1.5	14
35	Regeneration of a thiolated and antibody functionalized GaAs (001) surface using wet chemical processes. Biointerphases, 2016, 11, 019302.	0.6	8
36	Ultraviolet laser quantum well intermixing based prototyping of bandgap tuned heterostructures for the fabrication of superluminescent diodes. Optics and Laser Technology, 2016, 78, 5-9.	2.2	3

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37	Selective Area Modification of Silicon Surface Wettability by Pulsed UV Laser Irradiation in Liquid Environment. Journal of Visualized Experiments, 2015, , e52720.	0.2	1
38	Carrier-induced fast wavelength switching in tunable V-cavity laser with quantum well intermixed tuning section. Optics Express, 2015, 23, 26336.	1.7	13
39	Excimer laser induced quantum well intermixing: a reproducibility study of the process for fabrication of photonic integrated devices. Optics Express, 2015, 23, 1073.	1.7	12
40	GaAs Based on Bulk Acoustic Wave Sensor for Biological Molecules Detection. Procedia Engineering, 2015, 120, 721-726.	1.2	14
41	Integrated electrically driven surface plasmon resonance device for biosensing applications. Optics Express, 2015, 23, 19763.	1.7	1
42	GaAs/AlGaAs heterostructure based photonic biosensor for rapid detection of Escherichia coli in phosphate buffered saline solution. Sensors and Actuators B: Chemical, 2015, 207, 556-562.	4.0	48
43	Selective areain situconversion of Si (0â€‰0â€‰1) hydrophobic to hydrophilic surface by excimer laser irradiation in hydrogen peroxide. Journal Physics D: Applied Physics, 2014, 47, 385106.	1.3	17
44	Solvent-mediated self-assembly of hexadecanethiol on GaAs (001). Applied Surface Science, 2014, 299, 66-72.	3.1	13
45	Excimer laser-assisted chemical process for formation of hydrophobic surface of Si (001). Applied Physics A: Materials Science and Processing, 2014, 117, 37-41.	1.1	1
46	UV laser induced selective-area bandgap engineering for fabrication of InGaAsP/InP laser devices. Optics and Laser Technology, 2013, 51, 36-42.	2.2	10
47	Chemical evolution of InP/InGaAs/InGaAsP microstructures irradiated in air and deionized water with ArF and KrF lasers. Applied Surface Science, 2013, 270, 16-24.	3.1	12
48	Enhanced spectrum superluminescent diodes fabricated by infrared laser rapid thermal annealing. Optics and Laser Technology, 2013, 54, 401-406.	2.2	6
49	Water-Mediated Self-Assembly of 16-Mercaptohexadecanoic Acid on GaAs (001). Journal of Physical Chemistry C, 2013, 117, 15090-15097.	1.5	12
50	Enhanced photoluminescence emission from bandgap shifted InGaAs/InGaAsP/InP microstructures processed with UV laser quantum well intermixing. Journal Physics D: Applied Physics, 2013, 46, 445103.	1.3	7
51	Real-time detection of influenza A virus using semiconductor nanophotonics. Light: Science and Applications, 2013, 2, e62-e62.	7.7	43
52	Experimental evidence for mobile luminescence center mobility on partial dislocations in 4H-SiC using hyperspectral electroluminescence imaging. Applied Physics Letters, 2013, 102, .	1.5	10
53	Miniaturized Quantum Semiconductor Surface Plasmon Resonance Platform for Detection of Biological Molecules. Biosensors, 2013, 3, 201-210.	2.3	5
54	Conic hyperspectral dispersion mapping applied to semiconductor plasmonics. Light: Science and Applications, 2012, 1, e28-e28.	7.7	64

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55	Enhanced Photonic Stability of GaAs in Aqueous Electrolyte Using Alkanethiol Self-Assembled Monolayers and Postprocessing with Ammonium Sulfide. Journal of Physical Chemistry C, 2012, 116, 2891-2895.	1.5	17
56	Study of surface morphology and refractive index of dielectric and metallic films used for the fabrication of monolithically integrated surface plasmon resonance biosensing devices. Microelectronic Engineering, 2012, 93, 91-94.	1.1	13
57	Surface morphology of SiO2 coated InP/InGaAs/InGaAsP microstructures following irradiation with the ArF and KrF excimer lasers. , 2011, , .		4
58	Surface and interface study of SiO2-x coated InP/InGaAs/InGaAsP semiconductor laser microstructures processed in the soft KrF laser irradiation regime. Proceedings of SPIE, 2011, , .	0.8	2
59	A photoluminescence-based quantum semiconductor biosensor for rapid in situ detection of Escherichia coli. Sensors and Actuators B: Chemical, 2011, 160, 46-51.	4.0	41
60	Plasmonic propagations distances for interferometric surface plasmon resonance biosensing. Nanoscale Research Letters, 2011, 6, 388.	3.1	18
61	Quantitation of influenza A virus in the presence of extraneous protein using electrochemical impedance spectroscopy. Electrochimica Acta, 2011, 56, 8325-8328.	2.6	37
62	Surface barrier analysis of semi-insulating and n+-type GaAs(001) following passivation with n-alkanethiol SAMs. Applied Surface Science, 2011, 257, 4543-4546.	3.1	9
63	Electro-optic investigation of the surface trapping efficiency inn-alkanethiol SAM passivated GaAs(001). Nanotechnology, 2011, 22, 235704.	1.3	15
64	Molecular self-assembly and passivation of GaAs (001) with alkanethiol monolayers: A view towards bio-functionalization. Applied Surface Science, 2010, 256, 5714-5721.	3.1	41
65	ArF excimer laser-induced quantum well intermixing in dielectric layer coated InGaAs/InGaAsP microstructures. , 2010, , .		2
66	Decomposition of Thimerosal and Dynamics of Thiosalicylic Acid Attachment on GaAs(001) Surface Observed with in Situ Photoluminescence. Journal of Physical Chemistry C, 2010, 114, 13657-13662.	1.5	12
67	Hyperspectral imaging of diffracted surface plasmons. Optics Express, 2010, 18, 27327.	1.7	8
68	Formation dynamics of hexadecanethiol self-assembled monolayers on (001) GaAs observed with photoluminescence and Fourier transform infrared spectroscopies. Journal of Applied Physics, 2009, 106, .	1.1	18
69	Laser-based bandgap engineering of quantum semiconductor wafers. , 2009, , .		2
70	Observation of surface enhanced IR absorption coefficient in alkanethiol based self-assembled monolayers on GaAs(001). Journal of Applied Physics, 2009, 105, .	1.1	20
71	Specific immobilization of influenza A virus on GaAs (001) surface. Journal of Biomedical Optics, 2009, 14, 054042.	1.4	17
72	Laser rapid thermal annealing of quantum semiconductor wafers: a one step bandgap engineering technique. Applied Physics A: Materials Science and Processing, 2009, 94, 667-674.	1.1	11

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73	c(4 Ã— 2) Structures of Alkanethiol Monolayers on Au (111) Compatible with the Constraint of Dense Packing. Langmuir, 2009, 25, 7353-7358.	1.6	35
74	Surface plasmon effects induced by uncollimated emission of semiconductor microstructures. Optics Express, 2009, 17, 10411.	1.7	10
75	Iterative bandgap engineering at selected areas of quantum semiconductor wafers. Optics Express, 2009, 17, 19842.	1.7	6
76	The Role of Gold Adatoms and Stereochemistry in Self-Assembly of Methylthiolate on Au(111). Journal of the American Chemical Society, 2009, 131, 12989-12993.	6.6	159
77	Surface Dipole Layer Potential Induced IR Absorption Enhancement in n-Alkanethiol SAMs on GaAs(001). Langmuir, 2009, 25, 13561-13568.	1.6	19
78	Excimer laser-induced crystallization of CdSe thin films. Applied Physics A: Materials Science and Processing, 2008, 93, 869-874.	1.1	2
79	Structure of Thiol Self-Assembled Monolayers Commensurate with the GaAs (001) Surface. Langmuir, 2008, 24, 13299-13305.	1.6	44
80	Adsorption Kinetics of Hydrogen Sulfide and Thiols on GaAs (001) Surfaces in a Vacuum. Journal of Physical Chemistry C, 2008, 112, 3726-3733.	1.5	33
81	ArF laser-based quantum well intermixing in InGaAs/InGaAsP heterostructures. Applied Physics Letters, 2008, 93, 071106.	1.5	17
82	Surface plasmon assisted photoluminescence in GaAsâ€“AlGaAs quantum well microstructures. Applied Physics Letters, 2007, 91, 163106.	1.5	16
83	Suppressed intermixing in InAlGaAs/ AlGaAs/GaAs and AlGaAs/GaAs quantum well heterostructures irradiated with a KrF excimer laser. Applied Physics A: Materials Science and Processing, 2007, 89, 423-426.	1.1	12
84	Structure, Bonding Nature, and Binding Energy of Alkanethiolate on As-Rich GaAs (001) Surface:Â A Density Functional Theory Study. Journal of Physical Chemistry B, 2006, 110, 23619-23622.	1.2	31
85	Fourier-transform infrared and photoluminescence spectroscopies of self-assembled monolayers of long-chain thiols on (001) GaAs. Journal of Applied Physics, 2006, 99, 054701.	1.1	44
86	Immobilization of avidin on (001) GaAs surface. Applied Physics A: Materials Science and Processing, 2006, 83, 357-360.	1.1	23
87	First-principles Study of Adsorption Energetics of Alkanethiols on GaAs(001). Materials Research Society Symposia Proceedings, 2006, 950, 1.	0.1	0
88	X-ray photoelectron spectroscopy study of self-assembled monolayers of alkanethiols on (001) GaAs. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2006, 24, 1756-1759.	0.9	16
89	Novel Quantum Dot based Approach for Biosensing. , 2006, , .		2
90	QUANTUM DOT BIO-TEMPLATE FOR RAPID DETECTION OF PATHOGENIC SUBSTANCES. , 2006, , 159-173.		1

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91	Surface passivation of (001) GaAs with self-assembled monolayers of long-chain thiols. , 2005, , .		8
92	X-ray photoelectron spectroscopic study of KrF excimer laser nitrided InP surface. Journal of Applied Physics, 2001, 90, 5851-5855.	1.1	8
93	Modification of cleaved surfaces of Bi2Sr2CaCu2O8 single crystals induced by ArF excimer laser irradiation. Applied Surface Science, 1999, 143, 313-318.	3.1	2
94	Enhanced quantum-well photoluminescence in InGaAs/InGaAsP heterostructures following excimer-laser-assisted surface processing. Applied Physics A: Materials Science and Processing, 1999, 69, S299-S303.	1.1	14
95	Folded acoustic modes and photoelastic coefficients in superlattices. Solid State Communications, 1997, 103, 239-242.	0.9	5
96	Laser-assisted dry etching ablation of InP. Applied Surface Science, 1995, 86, 548-553.	3.1	16
97	Quantization of the excitonic polaritons in CdTe/CdMnTe multiple quantum wells. Superlattices and Microstructures, 1994, 16, 1-4.	1.4	3
98	Evidence for the miniband dispersion in the photoreflectance of a CdTe/Cd1-xMnxTe superlattice. Superlattices and Microstructures, 1994, 16, 25-28.	1.4	8
99	Ultrafast exciton spin relaxation in GaAs/AlGaAs and CdMnTe multiple quantum wells. Journal of Luminescence, 1994, 58, 202-205.	1.5	10
100	Fiber optic CdMnTe magnetic field sensor made by the laser ablation deposition technique. IEEE Transactions on Instrumentation and Measurement, 1994, 43, 322-325.	2.4	5
101	Characterization of ZnSe/GaAs heterojunctions by SIMS and ellipsometry. Physica B: Condensed Matter, 1993, 185, 580-584.	1.3	3
102	Low-temperature photoluminescence study of Cd1â^'xMnxTe films grown by pulsed laser evaporation and epitaxy. Surface Science, 1993, 294, 373-380.	0.8	3
103	Excited state spectroscopy of CdTe-Cd0.9Mn0.1Te multiple quantum wells grown by pulsed laser evaporation and epitaxy. Thin Solid Films, 1992, 213, 155-157.	0.8	1
104	Optical properties of CdTe-Cd0.90Mn0.10Te multiple quantum well structures grown by pulsed laser evaporation and epitaxy. Journal of Crystal Growth, 1992, 117, 862-866.	0.7	8
105	Laser induced growth of Cd1â^'xMnxTe and CdTeî—¸Cd1â^'xMnxTe superlattices. Superlattices and Microstructures, 1991, 9, 327-330.	1.4	20
106	Interface effects on electrical properties of high purity InP grown by gas-source molecular beam epitaxy. Journal of Crystal Growth, 1991, 110, 910-914.	0.7	13
107	Pulsed laser evaporation and epitaxy of Cd1â^'xMnxTe. Journal of Crystal Growth, 1990, 101, 105-110.	0.7	21
108	Thermal etch pits and surface morphology of vacuum sublimated (111) and (001) CdTe crystals. Journal of Crystal Growth, 1989, 94, 41-45.	0.7	8

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109	Cadmium arsenide films prepared by pulsed laser evaporation: electrical proerties and lattice parameters. Thin Solid Films, 1987, 147, L51-L54.	0.8	16
110	Growth of polycrystalline Cd3As2 films on room temperature substrates by a pulsed-laser evaporation technique. Thin Solid Films, 1984, 117, 289-297.	0.8	21
111	Electron scattering in CdxHg1â^'xTe. Journal of Physics and Chemistry of Solids, 1981, 42, 351-362.	1.9	95