

Jelena Radovanovic

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8632350/publications.pdf>

Version: 2024-02-01

103
papers

703
citations

623734

14
h-index

713466

21
g-index

105
all docs

105
docs citations

105
times ranked

399
citing authors

#	ARTICLE	IF	CITATIONS
1	Electron-phonon relaxation rates and optical gain in a quantum cascade laser in a magnetic field. Journal of Applied Physics, 2005, 97, 103109.	2.5	32
2	Optimization of resonant second- and third-order nonlinearities in step and continuously graded semiconductor quantum wells. IEEE Journal of Quantum Electronics, 1998, 34, 795-802.	1.9	30
3	Intersubband absorption in Pöschl-Teller-like semiconductor quantum wells. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 269, 179-185.	2.1	30
4	Design of GaN/AlGaIn quantum wells for maximal intersubband absorption in 1.3-2.4 μ m wavelength range. Solid State Communications, 2002, 121, 619-624.	1.9	30
5	Influence of the active region design on output characteristics of GaAs/AlGaAs quantum cascade lasers in a strong magnetic field. Semiconductor Science and Technology, 2006, 21, 215-220.	2.0	30
6	Optimization and magnetic-field tunability of quantum cascade laser for applications in trace gas detection and monitoring. Journal Physics D: Applied Physics, 2010, 43, 045101.	2.8	27
7	Analytical expression for Riken-Nummedal-Graham-Haken instability threshold in quantum cascade lasers. Optics Express, 2016, 24, 26911.	3.4	27
8	Low-Threshold RNGH Instabilities in Quantum Cascade Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 1-16.	2.9	21
9	Optimization of spin-filtering properties in diluted magnetic semiconductor heterostructures. Journal of Applied Physics, 2006, 99, 073905.	2.5	18
10	Influence of nonparabolicity on electronic structure of quantum cascade laser. Physics Letters, Section A: General, Atomic and Solid State Physics, 2014, 378, 2222-2225.	2.1	18
11	Photonic crystals with bound states in continuum and their realization by an advanced digital grading method. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 415304.	2.1	17
12	Time delay in thin slabs with self-focusing Kerr-type nonlinearity. Physical Review A, 2008, 77, .	2.5	16
13	Application of the genetic algorithm to the optimized design of semimagnetic semiconductor-based spin-filters. Journal Physics D: Applied Physics, 2007, 40, 5066-5070.	2.8	15
14	Anisotropic spin-dependent electron tunneling in a triple-barrier resonant tunneling diode. Journal of Applied Physics, 2007, 102, 123704.	2.5	15
15	Quantum-well shape optimization for intersubband-related electro-optic modulation properties. Physical Review B, 1999, 59, 5637-5642.	3.2	14
16	Analysis of tunneling times in absorptive and dispersive media. Journal of the Optical Society of America B: Optical Physics, 2008, 25, 1800.	2.1	14
17	Phase-breaking effects in double-barrier resonant tunneling diodes with spin-orbit interaction. Journal of Applied Physics, 2010, 108, .	2.5	14
18	Optimal design of gan-algan bragg-confined structures for intersubband absorption in the near-infrared spectral range. IEEE Journal of Quantum Electronics, 2003, 39, 1297-1304.	1.9	13

#	ARTICLE	IF	CITATIONS
19	Quantum well shape optimization of continuously graded $\text{Al}_x\text{Ga}_{1-x}$ structures by combined supersymmetric and coordinate transform methods. <i>Physical Review B</i> , 2004, 69, .	3.2	13
20	Multimode RNGH instabilities of Fabry-Pérot cavity QCLs: impact of diffusion. <i>Optical and Quantum Electronics</i> , 2016, 48, 1.	3.3	13
21	Tunneling times in metamaterials with saturable nonlinearity. <i>Physical Review A</i> , 2009, 80, .	2.5	12
22	Quantum-well profile optimization for maximal Stark effect and application to tunable infrared photodetectors. <i>Journal of Applied Physics</i> , 2002, 91, 525.	2.5	11
23	Enhanced modeling of band nonparabolicity with application to a mid-IR quantum cascade laser structure. <i>Physica Scripta</i> , 2014, T162, 014014.	2.5	11
24	Resonant intersubband harmonic generation in asymmetric Bragg-confined quantum wells. <i>Solid State Communications</i> , 1999, 110, 339-343.	1.9	10
25	Spin-dependent electron transport in nonmagnetic semiconductor nanostructures. <i>Optical Materials</i> , 2008, 30, 1134-1138.	3.6	10
26	Influence of nonparabolicity on boundary conditions in semiconductor quantum wells. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2009, 373, 3071-3074.	2.1	10
27	Numerical study of Risken's Nummedal's-Graham's-Haken instability in mid-infrared Fabry-Pérot quantum cascade lasers. <i>Optical and Quantum Electronics</i> , 2020, 52, 1.	3.3	10
28	The role of electron-electron scattering in gain modulation of a mid-infrared quantum cascade laser in strong magnetic field. <i>Semiconductor Science and Technology</i> , 2012, 27, 045006.	2.0	9
29	Comment on: "Questions concerning the generalized Hartman effect" [Phys. Lett. A 375 (2011) 3259]. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2012, 376, 1401-1402.	2.1	9
30	Optimization of cubic GaN/AlGaIn quantum well-based structures for intersubband absorption in the infrared spectral range. <i>Solid State Communications</i> , 2014, 182, 38-42.	1.9	9
31	Theoretical approach to quantum cascade micro-laser broadband multimode emission in strong magnetic fields. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2021, 387, 127007.	2.1	9
32	Two methods of quantum well profile optimization for maximal nonlinear optical susceptibilities. <i>Physical Review B</i> , 2001, 63, .	3.2	8
33	Cubic GaN/AlGaIn based quantum wells optimized for applications to tunable mid-infrared photodetectors. <i>Optical and Quantum Electronics</i> , 2015, 47, 865-872.	3.3	8
34	Intersubband absorption at $\lambda = 1.3 \mu\text{m}$ in optimized GaN/AlGaIn Bragg-confined structures. <i>Journal of Applied Physics</i> , 2002, 92, 7672-7674.	2.5	7
35	Global optimization of semiconductor quantum well profile for maximal optical rectification by variational calculus. <i>Semiconductor Science and Technology</i> , 2002, 17, 716-720.	2.0	7
36	Spin-dependent dwell times of electron tunneling through double- and triple-barrier structures. <i>Journal of Applied Physics</i> , 2008, 103, 083701.	2.5	7

#	ARTICLE	IF	CITATIONS
37	MATLAB-based program for optimization of quantum cascade laser active region parameters and calculation of output characteristics in magnetic field. Computer Physics Communications, 2014, 185, 998-1006.	7.5	7
38	Quantum well shape optimization by variational calculus: maximizing the Stark effect and quantum interference derived electro-optic susceptibility. Optics Communications, 2001, 194, 181-190.	2.1	6
39	Influence of electron-electron scattering on electron relaxation rates in three and four-level quantum cascade lasers in magnetic fields. Optics Communications, 2007, 279, 330-335.	2.1	6
40	Multiscale in modelling and validation for solar photovoltaics. EPJ Photovoltaics, 2018, 9, 10.	1.6	6
41	Tunable semiconductor metamaterials based on quantum cascade laser layout assisted by strong magnetic field. Journal of Applied Physics, 2011, 110, 123704.	2.5	5
42	Negative refraction in semiconductor metamaterials based on quantum cascade laser design for the mid-IR and THz spectral range. Applied Physics A: Materials Science and Processing, 2012, 109, 763-768.	2.3	5
43	Bound states in the continuum generated by supersymmetric quantum mechanics and phase rigidity of the corresponding wavefunctions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2015, 379, 2707-2714.	2.1	5
44	Magnetic field effects on THz quantum cascade laser: A comparative analysis of three and four quantum well based active region design. Physica E: Low-Dimensional Systems and Nanostructures, 2016, 81, 275-280.	2.7	5
45	Numerical parametric study of chiral effects and group delays in $\hat{\sigma}$ element based terahertz metamaterial. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 1816-1820.	2.1	5
46	Optimizing optical nonlinearities in GaInAs/AlInAs quantum cascade lasers. Nuclear Technology and Radiation Protection, 2014, 29, 10-16.	0.8	5
47	SUSY transformation of guided modes in semiconductor waveguides. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 3552-3555.	0.8	4
48	Quantum cascade laser: Applications in chemical detection and environmental monitoring. Nuclear Technology and Radiation Protection, 2009, 24, 75-81.	0.8	4
49	Goos-Hänchen shift and time delay in dispersive nonlinear media. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 1357-1361.	2.1	4
50	Optimization of InAs/AlInAs quantum wells based up-converter for silicon solar cells. Journal of Applied Physics, 2011, 110, .	2.5	4
51	Refractive properties of metamaterial composed of InGaAs layers with alternating doping densities. Journal of Electromagnetic Waves and Applications, 2012, 26, 2323-2331.	1.6	4
52	Genetic algorithm applied to the optimization of quantum cascade lasers with second harmonic generation. Journal of Applied Physics, 2014, 115, 053712.	2.5	4
53	Influence of the geometry of terahertz chiral metamaterial on transmission group delays. Optical and Quantum Electronics, 2016, 48, 1.	3.3	4
54	Analysis of the influence of external magnetic field on transition matrix elements in quantum well and quantum cascade laser structures. Superlattices and Microstructures, 2016, 96, 134-149.	3.1	4

#	ARTICLE	IF	CITATIONS
55	WKB method for potentials unbounded from below. Modern Physics Letters B, 2016, 30, 1650003.	1.9	4
56	Optimization of cubic GaN/AlGaIn quantum cascade structures for negative refraction in the THz spectral range. Optical and Quantum Electronics, 2018, 50, 1.	3.3	4
57	Global optimization of intersubband resonant third harmonic generation in semiconductor quantum-well structures. Solid State Communications, 2001, 118, 145-149.	1.9	3
58	Nonparabolicity effects and the spin-split electron dwell time in symmetric III-V double-barrier structures. Microelectronics Journal, 2009, 40, 611-614.	2.0	3
59	Influence of interface roughness scattering on output characteristics of GaAs/AlGaAs quantum cascade laser in a magnetic field. Journal Physics D: Applied Physics, 2011, 44, 325105.	2.8	3
60	Modeling of electron relaxation processes and the optical gain in a magnetic-field assisted THz quantum cascade laser. Physica Scripta, 2012, T149, 014017.	2.5	3
61	Properties of the resonant tunneling diode in external magnetic field with inclusion of the Rashba effect. Solid State Communications, 2014, 189, 52-57.	1.9	3
62	Possibilities of achieving negative refraction in QCL-based semiconductor metamaterials in the THz spectral range. Optical and Quantum Electronics, 2015, 47, 883-891.	3.3	3
63	Delay times in a terahertz chiral metamaterial slab. Physical Review A, 2016, 94, .	2.5	3
64	Tunneling times in dispersive and third-order nonlinear optical metamaterials. Journal of Nanophotonics, 2011, 5, 051802.	1.0	2
65	Comparison of tunneling times in isotropic and anisotropic media. Applied Physics A: Materials Science and Processing, 2012, 109, 997-1006.	2.3	2
66	Investigation of transmission resonances with specific properties in rectangular semiconductor quantum wells. European Journal of Physics, 2012, 33, 583-591.	0.6	2
67	Numerical modelling of thermal effects on biological tissue during laser-material interaction. Physica Scripta, 2014, T162, 014041.	2.5	2
68	Exploring negative refraction conditions for quantum cascade semiconductor metamaterials in the terahertz spectral range. Journal Physics D: Applied Physics, 2016, 49, 085105.	2.8	2
69	Infinite dwell time and group delay in resonant electron tunneling through double complex potential barrier. Superlattices and Microstructures, 2017, 112, 415-421.	3.1	2
70	Transmission singularities in resonant electron tunneling through double complex potential barrier. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 3542-3547.	2.1	2
71	Tailoring Risken-Nummedal-Graham-Haken instability in quantum cascade lasers. , 2017, , .		2
72	Analysis of dipole matrix element in quantum well and quantum cascade laser under the influence of external magnetic field. Serbian Journal of Electrical Engineering, 2016, 13, 45-58.	0.4	2

#	ARTICLE	IF	CITATIONS
73	Physical and materials aspects of photonic crystals for microwaves and millimetre waves. International Journal of Materials Research, 2022, 95, 618-623.	0.3	2
74	Control of Optical Gain in the Active Region of Quantum Cascade Laser by Strong Perpendicular Magnetic Field. Materials Science Forum, 2005, 494, 31-36.	0.3	1
75	Modeling of dwell time and group delay in dispersive and absorptive media. Physica Scripta, 2009, T135, 014040.	2.5	1
76	A quantum transport model for the double-barrier nonmagnetic spin filter. Journal of Physics: Conference Series, 2010, 242, 012008.	0.4	1
77	Magnetotunneling in resonant tunneling structures with spin-orbit interaction. Journal of Applied Physics, 2011, 110, 064507.	2.5	1
78	Frequency up-conversion in nonpolar a-plane GaN/AlGaIn based multiple quantum wells optimized for applications with silicon solar cells. Journal of Applied Physics, 2014, 116, 033703.	2.5	1
79	Transmission and tunneling time characteristics in light propagation through anisotropic double semiconductor layered structure. Optical and Quantum Electronics, 2018, 50, 1.	3.3	1
80	Influence of the Goos-Hänchen Shift on Tunneling Times in Dispersive Nonlinear Media. Acta Physica Polonica A, 2009, 116, 638-641.	0.5	1
81	Time Delay in Thin Dielectric Slabs with Saturable Nonlinearity. Acta Physica Polonica A, 2009, 115, 834-837.	0.5	1
82	Quantum Cascade Laser Design for Tunable Output at Characteristic Wavelengths in the Mid-Infrared Spectral Range. Acta Physica Polonica A, 2010, 117, 772-776.	0.5	1
83	Charge Carrier Transport in Quantum Cascade Lasers in Strong Magnetic Field. Acta Physica Polonica A, 2011, 119, 99-102.	0.5	1
84	Refined modelling of anisotropy influence on the optical gain in Mid-IR quantum cascade lasers. Optical and Quantum Electronics, 2022, 54, .	3.3	1
85	Supersymmetric quantum-well shape optimization for intersubband bound-continuum second harmonic generation. Superlattices and Microstructures, 2000, 28, 143-150.	3.1	0
86	Intersubband Nonlinear Optical Susceptibility and Electro-Optical Coefficients in Asymmetric Bragg-Confined Coupled Quantum Wells. Physica Scripta, 2000, 61, 381-384.	2.5	0
87	Optimization of Intersubband Optical Nonlinearities in Continually Graded AlGaIn Quantum Well Structures. Materials Science Forum, 2004, 453-454, 21-26.	0.3	0
88	Physical Model and Scattering Dynamics Engineering for Intersubband Lasers and Photodetectors. , 0, , .		0
89	Design and optimization of GaN/AlGaIn quantum wells and Bragg confined structures for short wavelength (1.3µm > λ > 2.1µm) intersubband absorption. , 0, , .		0
90	Mid-infrared semiconductor metamaterials utilizing intersubband transitions in quantum cascade laser structure. Physica Scripta, 2012, T149, 014049.	2.5	0

#	ARTICLE	IF	CITATIONS
91	Optimization of planar nanostructures based on cubic GaN/AlGaIn for applications in the IR spectral range by Genetic Algorithm. , 2012, , .		0
92	GaInAs/AlInAs quantum cascade laser design based on optimized second harmonic generation. Physica Scripta, 2014, T162, 014009.	2.5	0
93	Method for generating a discrete state in the continuum part of the spectrum. Applied Mathematics and Computation, 2014, 246, 514-518.	2.2	0
94	Tunneling times in bianisotropic, dispersive and absorptive metamaterials. Physics Letters, Section A: General, Atomic and Solid State Physics, 2016, 380, 4008-4012.	2.1	0
95	Advances in the science of light. Optical and Quantum Electronics, 2016, 48, 1.	3.3	0
96	Controlling the Quantum Cascade Laser Frequency Comb via Risken-Nummedal-Graham-Haken Instability. , 2018, , .		0
97	Time Delay in Thin Slabs with Kerr-Type Nonlinearity. Acta Physica Polonica A, 2007, 112, 987-992.	0.5	0
98	Engineering and Advanced Digitalization of Photonic Structures with Bound Field in the Continuum. Acta Physica Polonica A, 2009, 116, 607-610.	0.5	0
99	Spin Precession of Quasi-Bound States in Heterostructures with Spin-Orbit Interaction. Acta Physica Polonica A, 2009, 116, 513-515.	0.5	0
100	Inter-Landau Level Scattering Processes in Magnetic Field Assisted THz Quantum Cascade Laser. Acta Physica Polonica A, 2011, 120, 227-230.	0.5	0
101	Ellipsometry data analysis and ellipsometric spectra of complex materials. Tehnika, 2014, 69, 185-189.	0.2	0
102	Frequency conversion in a-GaN/AlGaIn Bragg-confined structures for applications for solar cells. Tehnika, 2014, 69, 377-381.	0.2	0
103	Nonparabolic effects in multiple quantum well structures and influence of external magnetic field on dipole matrix elements. Electronics, 2016, 19, 39.	0.3	0