Jelena Radovanovic

List of Publications by Year
in descending order

103	703	623734	713466
papers	citations	14 h-index	21 g-index

105	105	105	399
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Physical and materials aspects of photonic crystals for microwaves and millimetre waves. International Journal of Materials Research, 2022, 95, 618-623.	0.3	2
2	Refined modelling of anisotropy influence on the optical gain in Mid-IR quantum cascade lasers. Optical and Quantum Electronics, 2022, 54, .	3.3	1
3	Theoretical approach to quantum cascade micro-laser broadband multimode emission in strong magnetic fields. Physics Letters, Section A: General, Atomic and Solid State Physics, 2021, 387, 127007.	2.1	9
4	Numerical study of Riskenâ€“Nummedalâ€“Grahamâ€“Haken instability in mid-infrared Fabryâ€“PÃ©rot quantum cascade lasers. Optical and Quantum Electronics, 2020, 52, 1.	3.3	10
5	Numerical parametric study of chiral effects and group delays in Î© element based terahertz metamaterial. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 1816-1820.	2.1	5
6	Transmission and tunneling time characteristics in light propagation through anisotropic double semiconductor layered structure. Optical and Quantum Electronics, 2018, 50, 1.	3.3	1
7	Controlling the Quantum Cascade Laser Frequency Comb via Risken-Nummedal-Graham-Haken Instability. , 2018, , .		0
8	Optimization of cubic GaN/AlGaN quantum cascade structures for negative refraction in the THz spectral range. Optical and Quantum Electronics, 2018, 50, 1.	3.3	4
9	Multiscale in modelling and validation for solar photovoltaics. EPJ Photovoltaics, 2018, 9, 10.	1.6	6
10	Low-Threshold RNGH Instabilities in Quantum Cascade Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 1-16.	2.9	21
11	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
12	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
13	Tailoring Risken-Nummedal-Graham-Haken instability in quantum cascade lasers. , 2017, , .		2
14	Analytical expression for Risken-Nummedal-Graham-Haken instability threshold in quantum cascade lasers. Optics Express, 2016, 24, 26911.	3.4	27
15	Influence of the geometry of terahertz chiral metamaterial on transmission group delays. Optical and Quantum Electronics, 2016, 48, 1.	3.3	4
16	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
17	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
18	Delay times in a terahertz chiral metamaterial slab. Physical Review A, 2016, 94, .	2.5	3

#	Article	IF	Citations
19	Advances in the science of light. Optical and Quantum Electronics, 2016, 48, 1.	3.3	0
20	Multimode RNGH instabilities of Fabry-PÃ©rot cavity QCLs: impact of diffusion. Optical and Quantum Electronics, 2016, 48, 1.	3.3	13
21	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
22	WKB method for potentials unbounded from below. Modern Physics Letters B, 2016, 30, 1650003.	1.9	4
23	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
24	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
25	Nonparabolic effects in multiple quantum well structures and influence of external magnetic field on dipole matrix elements. Electronics, 2016, 19, 39.	0.3	0
26	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
27	Cubic GaN/AlGaN based quantum wells optimized for applications to tunable mid-infrared photodetectors. Optical and Quantum Electronics, 2015, 47, 865-872.	3.3	8
28	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
29	Numerical modelling of thermal effects on biological tissue during laser-material interaction. Physica Scripta, 2014, T162, 014041.	2.5	2
30	GaInAs/AlInAs quantum cascade laser design based on optimized second harmonic generation. Physica Scripta, 2014, T162, 014009.	2.5	0
31	Method for generating a discrete state in the continuum part of the spectrum. Applied Mathematics and Computation, 2014, 246, 514-518.	2.2	0
32	Frequency up-conversion in nonpolar a-plane GaN/AlGaN based multiple quantum wells optimized for applications with silicon solar cells. Journal of Applied Physics, 2014, 116, 033703.	2.5	1
33	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
34	Optimization of cubic GaN/AlGaN quantum well-based structures for intersubband absorption in the infrared spectral range. Solid State Communications, 2014, 182, 38-42.	1.9	9
35	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
36	Genetic algorithm applied to the optimization of quantum cascade lasers with second harmonic generation. Journal of Applied Physics, 2014, 115, 053712.	2.5	4

#	Article	IF	Citations
37	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
38	Enhanced modeling of band nonparabolicity with application to a mid-IR quantum cascade laser structure. Physica Scripta, 2014, T162, 014014.	2.5	11
39	Optimizing optical nonlinearities in GaInAs/AlInAs quantum cascade lasers. Nuclear Technology and Radiation Protection, 2014, 29, 10-16.	0.8	5
40	Ellipsometry data analysis and ellipsometric spectra of complex materials. Tehnika, 2014, 69, 185-189.	0.2	0
41	Frequency conversion in a-GaN/AlGaN Bragg-confined structures for applications for solar cells. Tehnika, 2014, 69, 377-381.	0.2	0
42	Mid-infrared semiconductor metamaterials utilizing intersubband transitions in quantum cascade laser structure. Physica Scripta, 2012, T149, 014049.	2.5	0
43	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
44	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
45	Comparison of tunneling times in isotropic and anisotropic media. Applied Physics A: Materials Science and Processing, 2012, 109, 997-1006.	2.3	2
46	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
47	Investigation of transmission resonances with specific properties in rectangular semiconductor quantum wells. European Journal of Physics, 2012, 33, 583-591.	0.6	2
48	Optimization of planar nanostructures based on cubic GaN/AlGaN for applications in the IR spectral range by Genetic Algorithm. , 2012, , .		0
49	The role of electron-electron scattering in gain modulation of a mid-infrared quantum cascade laser in strong magnetic field. Semiconductor Science and Technology, 2012, 27, 045006.	2.0	9
50	Comment on: â€œQuestions concerning the generalized Hartman effectâ€•[Phys. Lett. A 375 (2011) 3259]. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 1401-1402.	2.1	9
51	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
52	Magnetotunneling in resonant tunneling structures with spinâ€‰â^'â€‰orbit interaction. Journal of Applied Physics, 2011, 110, 064507.	2.5	1
53	Tunable semiconductor metamaterials based on quantum cascade laser layout assisted by strong magnetic field. Journal of Applied Physics, 2011, 110, 123704.	2.5	5
54	Goosâ€“HÃnchen 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

#	Article	IF	Citations
55	Optimization of InAs/AlInAs quantum wells based up-converter for silicon solar cells. Journal of Applied Physics, 2011, 110, .	2.5	4
56	Tunneling times in dispersive and third-order nonlinear optical metamaterials. Journal of Nanophotonics, 2011, 5, 051802.	1.0	2
57	Charge Carrier Transport in Quantum Cascade Lasers in Strong Magnetic Field. Acta Physica Polonica A, 2011, 119, 99-102.	0.5	1
58	Inter-Landau Level Scattering Processes in Magnetic Field Assisted THz Quantum Cascade Laser. Acta Physica Polonica A, 2011, 120, 227-230.	0.5	0
59	A quantum transport model for the double-barrier nonmagnetic spin filter. Journal of Physics: Conference Series, 2010, 242, 012008.	0.4	1
60	Phase-breaking effects in double-barrier resonant tunneling diodes with spin-orbit interaction. Journal of Applied Physics, 2010, 108, .	2.5	14
61	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
62	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
63	Modeling of dwell time and group delay in dispersive and absorptive media. Physica Scripta, 2009, T135, 014040.	2.5	1
64	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
65	Quantum cascade laser: Applications in chemical detection and environmental monitoring. Nuclear Technology and Radiation Protection, 2009, 24, 75-81.	0.8	4
66	Nonparabolicity effects and the spinâ€“split electron dwell time in symmetric IIIâ€“V double-barrier structures. Microelectronics Journal, 2009, 40, 611-614.	2.0	3
67	Influence of nonparabolicity on boundary conditions in semiconductor quantum wells. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 3071-3074.	2.1	10
68	Tunneling times in metamaterials with saturable nonlinearity. Physical Review A, 2009, 80, .	2.5	12
69	Influence of the Goos-HÃnchen Shift on Tunneling Times in Dispersive Nonlinear Media. Acta Physica Polonica A, 2009, 116, 638-641.	0.5	1
70	Time Delay in Thin Dielectric Slabs with Saturable Nonlinearity. Acta Physica Polonica A, 2009, 115, 834-837.	0.5	1
71	Engineering and Advanced Digitalization of Photonic Structures with Bound Field in the Continuum. Acta Physica Polonica A, 2009, 116, 607-610.	0.5	0
72	Spin Precession of Quasi-Bound States in Heterostructures with Spin-Orbit Interaction. Acta Physica Polonica A, 2009, 116, 513-515.	0.5	0

#	Article	IF	Citations
73	Spin-dependent electron transport in nonmagnetic semiconductor nanostructures. Optical Materials, 2008, 30, 1134-1138.	3.6	10
74	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
75	Time delay in thin slabs with self-focusing Kerr-type nonlinearity. Physical Review A, 2008, 77, .	2.5	16
76	Spin-dependent dwell times of electron tunneling through double- and triple-barrier structures. Journal of Applied Physics, 2008, 103, 083701.	2.5	7
77	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
78	Anisotropic spin-dependent electron tunneling in a triple-barrier resonant tunneling diode. Journal of Applied Physics, 2007, 102, 123704.	2.5	15
79	Influence of electronâ€“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
80	Time Delay in Thin Slabs with Kerr-Type Nonlinearity. Acta Physica Polonica A, 2007, 112, 987-992.	0.5	0
81	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
82	Optimization of spin-filtering properties in diluted magnetic semiconductor heterostructures. Journal of Applied Physics, 2006, 99, 073905.	2.5	18
83	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
84	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
85	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
86	Quantum well shape optimization of continuously gradedAlxGa1â^'xNstructures by combined supersymmetric and coordinate transform methods. Physical Review B, 2004, 69, .	3.2	13
87	Optimization of Intersubband Optical Nonlinearities in Continually Graded AlGaN Quantum Well Structures. Materials Science Forum, 2004, 453-454, 21-26.	0.3	0
88	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
89	Intersubband absorption at Î»â^¼1.3â€‰Î¼m in optimized GaN/AlGaN Bragg-confined structures. Journal of Applied Physics, 2002, 92, 7672-7674.	2.5	7
90	Quantum-well profile optimization for maximal Stark effect and application to tunable infrared photodetectors. Journal of Applied Physics, 2002, 91, 525.	2.5	11

#	Article	IF	Citations
91	Global optimization of semiconductor quantum well profile for maximal optical rectification by variational calculus. Semiconductor Science and Technology, 2002, 17, 716-720.	2.0	7
92	Design of GaN/AlGaN quantum wells for maximal intersubband absorption in 1.3<Î»<2Î¼m wavelength range. Solid State Communications, 2002, 121, 619-624.	1.9	30
93	Global optimization of intersubband resonant third harmonic generation in semiconductor quantum-well structures. Solid State Communications, 2001, 118, 145-149.	1.9	3
94	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
95	Two methods of quantum well profile optimization for maximal nonlinear optical susceptibilities. Physical Review B, 2001, 63, .	3.2	8
96	Supersymmetric quantum-well shape optimization for intersubband boundâ€“continuum second harmonic generation. Superlattices and Microstructures, 2000, 28, 143-150.	3.1	0
97	Intersubband absorption in PÃ¶schlâ€“Teller-like semiconductor quantum wells. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 269, 179-185.	2.1	30
98	Intersubband Nonlinear Optical Susceptibility and Electro-Optical Coefficients in Asymmetric Bragg-Confined Coupled Quantum Wells. Physica Scripta, 2000, 61, 381-384.	2.5	0
99	Quantum-well shape optimization for intersubband-related electro-optic modulation properties. Physical Review B, 1999, 59, 5637-5642.	3.2	14
100	Resonant intersubband harmonic generation in asymmetric Bragg-confined quantum wells. Solid State Communications, 1999, 110, 339-343.	1.9	10
101	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
102	Physical Model and Scattering Dynamics Engineering for Intersubband Lasers and Photodetectors. , 0, , .		0
103	Design and optimization of GaN/AlGaN quantum wells and Bragg confined structures for short wavelength (1.3Î¼m>Î»>2Î¼m) intersubband absorption. , 0, , .		0