

Jelena Radovanovic

List of Publications by Year in descending order

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103
papers

703
citations

623188

14
h-index

713013

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. | 1.1 | 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. | 1.0 | 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. | 0.9 | 30 |
| 4 | Design of GaN/AlGaIn quantum wells for maximal intersubband absorption in 1.3-2.4 μm wavelength range. Solid State Communications, 2002, 121, 619-624. | 0.9 | 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. | 1.0 | 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. | 1.3 | 27 |
| 7 | Analytical expression for Risken-Nummedal-Graham-Haken instability threshold in quantum cascade lasers. Optics Express, 2016, 24, 26911. | 1.7 | 27 |
| 8 | Low-Threshold RNGH Instabilities in Quantum Cascade Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 1-16. | 1.9 | 21 |
| 9 | Optimization of spin-filtering properties in diluted magnetic semiconductor heterostructures. Journal of Applied Physics, 2006, 99, 073905. | 1.1 | 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. | 0.9 | 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. | 0.7 | 17 |
| 12 | Time delay in thin slabs with self-focusing Kerr-type nonlinearity. Physical Review A, 2008, 77, . | 1.0 | 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. | 1.3 | 15 |
| 14 | Anisotropic spin-dependent electron tunneling in a triple-barrier resonant tunneling diode. Journal of Applied Physics, 2007, 102, 123704. | 1.1 | 15 |
| 15 | Quantum-well shape optimization for intersubband-related electro-optic modulation properties. Physical Review B, 1999, 59, 5637-5642. | 1.1 | 14 |
| 16 | Analysis of tunneling times in absorptive and dispersive media. Journal of the Optical Society of America B: Optical Physics, 2008, 25, 1800. | 0.9 | 14 |
| 17 | Phase-breaking effects in double-barrier resonant tunneling diodes with spin-orbit interaction. Journal of Applied Physics, 2010, 108, . | 1.1 | 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. | 1.0 | 13 |

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|----|---|-----|-----------|
| 19 | Quantum well shape optimization of continuously graded Al _x Ga _{1-x} N structures by combined supersymmetric and coordinate transform methods. <i>Physical Review B</i> , 2004, 69, . | 1.1 | 13 |
| 20 | Multimode RINGH instabilities of Fabry-Pérot cavity QCLs: impact of diffusion. <i>Optical and Quantum Electronics</i> , 2016, 48, 1. | 1.5 | 13 |
| 21 | Tunneling times in metamaterials with saturable nonlinearity. <i>Physical Review A</i> , 2009, 80, . | 1.0 | 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. | 1.1 | 11 |
| 23 | Enhanced modeling of band nonparabolicity with application to a mid-IR quantum cascade laser structure. <i>Physica Scripta</i> , 2014, T162, 014014. | 1.2 | 11 |
| 24 | Resonant intersubband harmonic generation in asymmetric Bragg-confined quantum wells. <i>Solid State Communications</i> , 1999, 110, 339-343. | 0.9 | 10 |
| 25 | Spin-dependent electron transport in nonmagnetic semiconductor nanostructures. <i>Optical Materials</i> , 2008, 30, 1134-1138. | 1.7 | 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. | 0.9 | 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. | 1.5 | 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. | 1.0 | 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. | 0.9 | 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. | 0.9 | 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. | 0.9 | 9 |
| 32 | Two methods of quantum well profile optimization for maximal nonlinear optical susceptibilities. <i>Physical Review B</i> , 2001, 63, . | 1.1 | 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. | 1.5 | 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. | 1.1 | 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. | 1.0 | 7 |
| 36 | Spin-dependent dwell times of electron tunneling through double- and triple-barrier structures. <i>Journal of Applied Physics</i> , 2008, 103, 083701. | 1.1 | 7 |

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|----|---|-----|-----------|
| 37 | MATLAB-based program for optimization of quantum cascade laser active region parameters and calculation of output characteristics in magnetic field. <i>Computer Physics Communications</i> , 2014, 185, 998-1006. | 3.0 | 7 |
| 38 | Quantum well shape optimization by variational calculus: maximizing the Stark effect and quantum interference derived electro-optic susceptibility. <i>Optics Communications</i> , 2001, 194, 181-190. | 1.0 | 6 |
| 39 | Influence of electron-electron scattering on electron relaxation rates in three and four-level quantum cascade lasers in magnetic fields. <i>Optics Communications</i> , 2007, 279, 330-335. | 1.0 | 6 |
| 40 | Multiscale in modelling and validation for solar photovoltaics. <i>EPJ Photovoltaics</i> , 2018, 9, 10. | 0.8 | 6 |
| 41 | Tunable semiconductor metamaterials based on quantum cascade laser layout assisted by strong magnetic field. <i>Journal of Applied Physics</i> , 2011, 110, 123704. | 1.1 | 5 |
| 42 | Negative refraction in semiconductor metamaterials based on quantum cascade laser design for the mid-IR and THz spectral range. <i>Applied Physics A: Materials Science and Processing</i> , 2012, 109, 763-768. | 1.1 | 5 |
| 43 | Bound states in the continuum generated by supersymmetric quantum mechanics and phase rigidity of the corresponding wavefunctions. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2015, 379, 2707-2714. | 0.9 | 5 |
| 44 | Magnetic field effects on THz quantum cascade laser: A comparative analysis of three and four quantum well based active region design. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2016, 81, 275-280. | 1.3 | 5 |
| 45 | Numerical parametric study of chiral effects and group delays in \hat{C}_2 element based terahertz metamaterial. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2019, 383, 1816-1820. | 0.9 | 5 |
| 46 | Optimizing optical nonlinearities in GaInAs/AlInAs quantum cascade lasers. <i>Nuclear Technology and Radiation Protection</i> , 2014, 29, 10-16. | 0.3 | 5 |
| 47 | SUSY transformation of guided modes in semiconductor waveguides. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005, 2, 3552-3555. | 0.8 | 4 |
| 48 | Quantum cascade laser: Applications in chemical detection and environmental monitoring. <i>Nuclear Technology and Radiation Protection</i> , 2009, 24, 75-81. | 0.3 | 4 |
| 49 | Goos-Hänchen shift and time delay in dispersive nonlinear media. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2011, 375, 1357-1361. | 0.9 | 4 |
| 50 | Optimization of InAs/AlInAs quantum wells based up-converter for silicon solar cells. <i>Journal of Applied Physics</i> , 2011, 110, . | 1.1 | 4 |
| 51 | Refractive properties of metamaterial composed of InGaAs layers with alternating doping densities. <i>Journal of Electromagnetic Waves and Applications</i> , 2012, 26, 2323-2331. | 1.0 | 4 |
| 52 | Genetic algorithm applied to the optimization of quantum cascade lasers with second harmonic generation. <i>Journal of Applied Physics</i> , 2014, 115, 053712. | 1.1 | 4 |
| 53 | Influence of the geometry of terahertz chiral metamaterial on transmission group delays. <i>Optical and Quantum Electronics</i> , 2016, 48, 1. | 1.5 | 4 |
| 54 | Analysis of the influence of external magnetic field on transition matrix elements in quantum well and quantum cascade laser structures. <i>Superlattices and Microstructures</i> , 2016, 96, 134-149. | 1.4 | 4 |

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|----|--|-----|-----------|
| 55 | WKB method for potentials unbounded from below. <i>Modern Physics Letters B</i> , 2016, 30, 1650003. | 1.0 | 4 |
| 56 | Optimization of cubic GaN/AlGaIn quantum cascade structures for negative refraction in the THz spectral range. <i>Optical and Quantum Electronics</i> , 2018, 50, 1. | 1.5 | 4 |
| 57 | Global optimization of intersubband resonant third harmonic generation in semiconductor quantum-well structures. <i>Solid State Communications</i> , 2001, 118, 145-149. | 0.9 | 3 |
| 58 | Nonparabolicity effects and the spin-split electron dwell time in symmetric III-V double-barrier structures. <i>Microelectronics Journal</i> , 2009, 40, 611-614. | 1.1 | 3 |
| 59 | Influence of interface roughness scattering on output characteristics of GaAs/AlGaAs quantum cascade laser in a magnetic field. <i>Journal Physics D: Applied Physics</i> , 2011, 44, 325105. | 1.3 | 3 |
| 60 | Modeling of electron relaxation processes and the optical gain in a magnetic-field assisted THz quantum cascade laser. <i>Physica Scripta</i> , 2012, T149, 014017. | 1.2 | 3 |
| 61 | Properties of the resonant tunneling diode in external magnetic field with inclusion of the Rashba effect. <i>Solid State Communications</i> , 2014, 189, 52-57. | 0.9 | 3 |
| 62 | Possibilities of achieving negative refraction in QCL-based semiconductor metamaterials in the THz spectral range. <i>Optical and Quantum Electronics</i> , 2015, 47, 883-891. | 1.5 | 3 |
| 63 | Delay times in a terahertz chiral metamaterial slab. <i>Physical Review A</i> , 2016, 94, . | 1.0 | 3 |
| 64 | Tunneling times in dispersive and third-order nonlinear optical metamaterials. <i>Journal of Nanophotonics</i> , 2011, 5, 051802. | 0.4 | 2 |
| 65 | Comparison of tunneling times in isotropic and anisotropic media. <i>Applied Physics A: Materials Science and Processing</i> , 2012, 109, 997-1006. | 1.1 | 2 |
| 66 | Investigation of transmission resonances with specific properties in rectangular semiconductor quantum wells. <i>European Journal of Physics</i> , 2012, 33, 583-591. | 0.3 | 2 |
| 67 | Numerical modelling of thermal effects on biological tissue during laser-material interaction. <i>Physica Scripta</i> , 2014, T162, 014041. | 1.2 | 2 |
| 68 | Exploring negative refraction conditions for quantum cascade semiconductor metamaterials in the terahertz spectral range. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 085105. | 1.3 | 2 |
| 69 | Infinite dwell time and group delay in resonant electron tunneling through double complex potential barrier. <i>Superlattices and Microstructures</i> , 2017, 112, 415-421. | 1.4 | 2 |
| 70 | Transmission singularities in resonant electron tunneling through double complex potential barrier. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2017, 381, 3542-3547. | 0.9 | 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. <i>Serbian Journal of Electrical Engineering</i> , 2016, 13, 45-58. | 0.2 | 2 |

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|----|---|-----|-----------|
| 73 | Physical and materials aspects of photonic crystals for microwaves and millimetre waves. International Journal of Materials Research, 2022, 95, 618-623. | 0.1 | 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. | 1.2 | 1 |
| 76 | A quantum transport model for the double-barrier nonmagnetic spin filter. Journal of Physics: Conference Series, 2010, 242, 012008. | 0.3 | 1 |
| 77 | Magnetotunneling in resonant tunneling structures with spin-orbit interaction. Journal of Applied Physics, 2011, 110, 064507. | 1.1 | 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. | 1.1 | 1 |
| 79 | Transmission and tunneling time characteristics in light propagation through anisotropic double semiconductor layered structure. Optical and Quantum Electronics, 2018, 50, 1. | 1.5 | 1 |
| 80 | Influence of the Goos-Hänchen Shift on Tunneling Times in Dispersive Nonlinear Media. Acta Physica Polonica A, 2009, 116, 638-641. | 0.2 | 1 |
| 81 | Time Delay in Thin Dielectric Slabs with Saturable Nonlinearity. Acta Physica Polonica A, 2009, 115, 834-837. | 0.2 | 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. | 0.2 | 1 |
| 83 | Charge Carrier Transport in Quantum Cascade Lasers in Strong Magnetic Field. Acta Physica Polonica A, 2011, 119, 99-102. | 0.2 | 1 |
| 84 | Refined modelling of anisotropy influence on the optical gain in Mid-IR quantum cascade lasers. Optical and Quantum Electronics, 2022, 54, . | 1.5 | 1 |
| 85 | Supersymmetric quantum-well shape optimization for intersubband bound-continuum second harmonic generation. Superlattices and Microstructures, 2000, 28, 143-150. | 1.4 | 0 |
| 86 | Intersubband Nonlinear Optical Susceptibility and Electro-Optical Coefficients in Asymmetric Bragg-Confined Coupled Quantum Wells. Physica Scripta, 2000, 61, 381-384. | 1.2 | 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 (1.3-2.2 μm) intersubband absorption. , 0, , . | | 0 |
| 90 | Mid-infrared semiconductor metamaterials utilizing intersubband transitions in quantum cascade laser structure. Physica Scripta, 2012, T149, 014049. | 1.2 | 0 |

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|-----|---|-----|-----------|
| 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. | 1.2 | 0 |
| 93 | Method for generating a discrete state in the continuum part of the spectrum. Applied Mathematics and Computation, 2014, 246, 514-518. | 1.4 | 0 |
| 94 | Tunneling times in bianisotropic, dispersive and absorptive metamaterials. Physics Letters, Section A: General, Atomic and Solid State Physics, 2016, 380, 4008-4012. | 0.9 | 0 |
| 95 | Advances in the science of light. Optical and Quantum Electronics, 2016, 48, 1. | 1.5 | 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. | 0.2 | 0 |
| 98 | Engineering and Advanced Digitalization of Photonic Structures with Bound Field in the Continuum. Acta Physica Polonica A, 2009, 116, 607-610. | 0.2 | 0 |
| 99 | Spin Precession of Quasi-Bound States in Heterostructures with Spin-Orbit Interaction. Acta Physica Polonica A, 2009, 116, 513-515. | 0.2 | 0 |
| 100 | Inter-Landau Level Scattering Processes in Magnetic Field Assisted THz Quantum Cascade Laser. Acta Physica Polonica A, 2011, 120, 227-230. | 0.2 | 0 |
| 101 | Ellipsometry data analysis and ellipsometric spectra of complex materials. Tehnika, 2014, 69, 185-189. | 0.0 | 0 |
| 102 | Frequency conversion in a-GaN/AlGaIn Bragg-confined structures for applications for solar cells. Tehnika, 2014, 69, 377-381. | 0.0 | 0 |
| 103 | Nonparabolic effects in multiple quantum well structures and influence of external magnetic field on dipole matrix elements. Electronics, 2016, 19, 39. | 0.2 | 0 |