

# Dieter H Bimberg

## List of Publications by Year in descending order

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145  
papers

4,612  
citations

126907

33  
h-index

118850

62  
g-index

148  
all docs

148  
docs citations

148  
times ranked

3061  
citing authors

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 1  | Spontaneous ordering of nanostructures on crystal surfaces. <i>Reviews of Modern Physics</i> , 1999, 71, 1125-1171.   | 45.6 | 925       |
| 2  | Quantum dots: promises and accomplishments. <i>Materials Today</i> , 2011, 14, 388-397.   | 14.2 | 157       |
| 3  | Vertical-cavity surface-emitting lasers for data communication and sensing. <i>Photonics Research</i> , 2019, 7, 121.   | 7.0  | 155       |
| 4  | Quantum dots for lasers, amplifiers and computing. <i>Journal Physics D: Applied Physics</i> , 2005, 38, 2055-2058.   | 2.8  | 143       |
| 5  | 1550-nm High-Speed Short-Cavity VCSELs. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2011, 17, 1158-1166.  | 2.9  | 124       |
| 6  | Gain and Threshold of Quantum Dot Lasers: Theory and Comparison to Experiments. <i>Japanese Journal of Applied Physics</i> , 1997, 36, 4181-4187.   | 1.5  | 109       |
| 7  | Metal-cavity surface-emitting microlaser at room temperature. <i>Applied Physics Letters</i> , 2010, 96, .  | 3.3  | 107       |
| 8  | Theoretical and Experimental Study of High-Speed Small-Signal Cross-Gain Modulation of Quantum-Dot Semiconductor Optical Amplifiers. <i>IEEE Journal of Quantum Electronics</i> , 2009, 45, 240-248.                | 1.9  | 95        |
| 9  | Few-particle energies versus geometry and composition of $\ln_x\text{Ga}_{1-x}\text{As}$ quantum dots. <i>Physical Review B</i> , 2009, 79, .   | 3.2  | 92        |
| 10 | Quantum dots: lasers and amplifiers. <i>Journal of Physics Condensed Matter</i> , 2003, 15, R1063-R1076.  | 1.8  | 87        |
| 11 | Ultrafast carrier dynamics in InGaAs quantum dot materials and devices. <i>Journal of Optics</i> , 2006, 8, S33-S46.  | 1.5  | 75        |
| 12 | Static Gain Saturation Model of Quantum-Dot Semiconductor Optical Amplifiers. <i>IEEE Journal of Quantum Electronics</i> , 2008, 44, 658-666.   | 1.9  | 73        |
| 13 | Strain effects and band parameters in MgO, ZnO, and CdO. <i>Applied Physics Letters</i> , 2012, 101, .  | 3.3  | 67        |
| 14 | InGaAs/GaAs Quantum Dot Lasers with Ultrahigh Characteristic Temperature ( $T_0=385\text{K}$ ) Grown by Metal Organic Chemical Vapour Deposition. <i>Japanese Journal of Applied Physics</i> , 1997, 36, 4221-4223. | 1.5  | 60        |
| 15 | Energy Efficiency of Directly Modulated Oxide-Confining High Bit Rate 850-nm VCSELs for Optical Interconnects. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2013, 19, 1702212-1702212.           | 2.9  | 57        |
| 16 | 20 Gb/s 85 $\mu\text{m}$ Error-Free Operation of VCSELs Based on Submonolayer Deposition of Quantum Dots. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2007, 13, 1302-1308.                      | 2.9  | 56        |
| 17 | High-Speed Mode-Locked Quantum-Dot Lasers and Optical Amplifiers. <i>Proceedings of the IEEE</i> , 2007, 95, 1767-1778.   | 21.3 | 53        |
| 18 | Quantum Dots for Single- and Entangled-Photon Emitters. <i>IEEE Photonics Journal</i> , 2009, 1, 58-68.   | 2.0  | 52        |

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|----|---|-----|-----------|
| 19 | Theory of relaxation oscillations in semiconductor quantum dot lasers. Applied Physics Letters, 2006, 89, 101107.   | 3.3 | 50        |
| 20 | Effect of Inhomogeneous Broadening on Gain and Phase Recovery of Quantum-Dot Semiconductor Optical Amplifiers. IEEE Journal of Quantum Electronics, 2010, 46, 1670-1680.                              | 1.9 | 50        |
| 21 | Progress in Quantum Dot Lasers: 1100 nm, 1300 nm, and High Power Applications. Japanese Journal of Applied Physics, 2000, 39, 2341-2343.  | 1.5 | 48        |
| 22 | Theory of excitation transfer in coupled nanostructures "from quantum dots to light harvesting complexes. Physica Status Solidi (B): Basic Research, 2006, 243, 2302-2310.                            | 1.5 | 48        |
| 23 | Coulomb Damped Relaxation Oscillations in Semiconductor Quantum Dot Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2007, 13, 1242-1248.  | 2.9 | 44        |
| 24 | Static gain saturation in quantum dot semiconductor optical amplifiers. Optics Express, 2008, 16, 8269.   | 3.4 | 44        |
| 25 | 22-Gb/s Long Wavelength VCSELs. Optics Express, 2009, 17, 17547.  | 3.4 | 44        |
| 26 | Impact of the Oxide-Aperture Diameter on the Energy Efficiency, Bandwidth, and Temperature Stability of 980-nm VCSELs. Journal of Lightwave Technology, 2015, 33, 825-831.                            | 4.6 | 44        |
| 27 | Progress in Epitaxial Growth and Performance of Quantum Dot and Quantum Wire Lasers. Journal of Lightwave Technology, 2008, 26, 1540-1555.  | 4.6 | 43        |
| 28 | Error-Free Transmission Over 1-km OM4 Multimode Fiber at 25 Gb/s Using a Single Mode Photonic Crystal Vertical-Cavity Surface-Emitting Laser. IEEE Photonics Technology Letters, 2013, 25, 1823-1825. | 2.5 | 40        |
| 29 | Impact of Photon Lifetime on the Temperature Stability of 50 Gb/s 980 nm VCSELs. IEEE Photonics Technology Letters, 2016, 28, 2327-2330.  | 2.5 | 40        |
| 30 | Large-Signal Response of Semiconductor Quantum-Dot Lasers. IEEE Journal of Quantum Electronics, 2010, 46, 1755-1762.  | 1.9 | 37        |
| 31 | Progress on High-Speed 980-nm VCSELs for Short-Reach Optical Interconnects. Advances in Optical Technologies, 2011, 2011, 1-15.   | 0.8 | 37        |
| 32 | Quantum-Dot Semiconductor Mode-Locked Lasers and Amplifiers at 40 GHz. IEEE Journal of Quantum Electronics, 2009, 45, 1429-1435.  | 1.9 | 36        |
| 33 | Energy-Efficient VCSELs for Interconnects. IEEE Photonics Journal, 2012, 4, 652-656.  | 2.0 | 36        |
| 34 | Impact of the Quantum Well Gain-to-Cavity Etalon Wavelength Offset on the High Temperature Performance of High Bit Rate 980-nm VCSELs. IEEE Journal of Quantum Electronics, 2014, 50, 613-621.        | 1.9 | 36        |
| 35 | 80 Gb/s wavelength conversion using a quantum-dot semiconductor optical amplifier and optical filtering. Optics Express, 2011, 19, 5134.  | 3.4 | 32        |
| 36 | Electro-optical resonance modulation of vertical-cavity surface-emitting lasers. Optics Express, 2012, 20, 5099.  | 3.4 | 32        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 37 | Two dimensional analysis of finite size high-contrast gratings for applications in VCSELs. Optics Express, 2014, 22, 11804.   | 3.4 | 32        |
| 38 | Metal-cavity surface-emitting microlaser with hybrid metal-DBR reflectors. Optics Letters, 2011, 36, 2447.  | 3.3 | 30        |
| 39 | Temperature-Dependent Small-Signal Analysis of High-Speed High-Temperature Stable 980-nm VCSELs. IEEE Journal of Selected Topics in Quantum Electronics, 2009, 15, 679-686.   | 2.9 | 29        |
| 40 | Cross-Gain Modulation and Four-Wave Mixing for Wavelength Conversion in Undoped and p-Doped 1.3- $\mu\text{m}$ Quantum Dot Semiconductor Optical Amplifiers. IEEE Photonics Journal, 2010, 2, 141-151.                  | 2.0 | 29        |
| 41 | 40 Gb/s wavelength conversion via four-wave mixing in a quantum-dot semiconductor optical amplifier. Optics Express, 2011, 19, 3788.  | 3.4 | 29        |
| 42 | InGaAs Quantum Dots Coupled to a Reservoir of Nonequilibrium Free Carriers. IEEE Journal of Quantum Electronics, 2009, 45, 1121-1128.   | 1.9 | 28        |
| 43 | Numerical Simulation of Temporal and Spectral Variation of Gain and Phase Recovery in Quantum-Dot Semiconductor Optical Amplifiers. IEEE Journal of Quantum Electronics, 2010, 46, 405-413.                             | 1.9 | 28        |
| 44 | Atomic Structure of Buried InAs Sub-Monolayer Depositions in GaAs. Applied Physics Express, 2010, 3, 105602.  | 2.4 | 28        |
| 45 | Confined States of Individual Type-II GaSb/GaAs Quantum Rings Studied by Cross-Sectional Scanning Tunneling Spectroscopy. Nano Letters, 2010, 10, 3972-3977.  | 9.1 | 28        |
| 46 | Polarization switching and polarization mode hopping in quantum dot vertical-cavity surface-emitting lasers. Optics Express, 2011, 19, 2476.  | 3.4 | 28        |
| 47 | High-Power Low-Beam Divergence Edge-Emitting Semiconductor Lasers with 1- and 2-D Photonic Bandgap Crystal Waveguide. IEEE Journal of Selected Topics in Quantum Electronics, 2008, 14, 1113-1122.                      | 2.9 | 27        |
| 48 | Pulse Broadening in Quantum-Dot Mode-Locked Semiconductor Lasers: Simulation, Analysis, and Experiments. IEEE Journal of Quantum Electronics, 2011, 47, 935-943.  | 1.9 | 27        |
| 49 | High-Speed Small-Signal Cross-Gain Modulation in Quantum-Dot Semiconductor Optical Amplifiers at 1.3 $\mu\text{m}$ . IEEE Journal of Selected Topics in Quantum Electronics, 2009, 15, 749-756.                         | 2.9 | 26        |
| 50 | MOVPE Growth of InGaSb/AlP/GaP(001) Quantum Dots for Nanoscale Memory Applications. Physica Status Solidi (B): Basic Research, 2018, 255, 1800182.  | 1.5 | 24        |
| 51 | 230 ps room-temperature storage time and 1.14 eV hole localization energy in In <sub>0.5</sub> Ga <sub>0.5</sub> As quantum dots on a GaAs interlayer in GaP with an AlP barrier. Applied Physics Letters, 2015, 106, . | 3.3 | 23        |
| 52 | Multimode optical feedback dynamics in InAs/GaAs quantum dot lasers emitting exclusively on ground or excited states: transition from short- to long-delay regimes. Optics Express, 2018, 26, 1743.                     | 3.4 | 23        |
| 53 | Electronic states of (InGa)(AsSb)/GaAs/GaP quantum dots. Physical Review B, 2019, 100, .  | 3.2 | 23        |
| 54 | Self-Organized InGaAs Quantum Dots for Advanced Applications in Optoelectronics. Japanese Journal of Applied Physics, 2002, 41, 949-952.  | 1.5 | 22        |

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|----|--|-----|-----------|
| 55 | Tilted Wave Lasers: A Way to High Brightness Sources of Light. IEEE Journal of Quantum Electronics, 2011, 47, 1014-1027.   | 1.9 | 22        |
| 56 | Generation of ultra-wideband triplet pulses based on four-wave mixing and phase-to-intensity modulation conversion. Optics Express, 2012, 20, 20222.                                       | 3.4 | 22        |
| 57 | Temperature-Dependent Characteristics of Single-Mode InAs Submonolayer Quantum-Dot Lasers. IEEE Photonics Technology Letters, 2012, 24, 906-908.   | 2.5 | 22        |
| 58 | 85-fJ Dissipated Energy Per Bit at 30 Gb/s Across 500-m Multimode Fiber Using 850-nm VCSELs. IEEE Photonics Technology Letters, 2013, 25, 1638-1641.                                       | 2.5 | 22        |
| 59 | High-Brightness and Ultranarrow-Beam 850-nm GaAs/AlGaAs Photonic Band Crystal Lasers and Single-Mode Arrays. IEEE Journal of Selected Topics in Quantum Electronics, 2009, 15, 901-908.    | 2.9 | 21        |
| 60 | Progress on single mode VCSELs for data- and tele-communications. Proceedings of SPIE, 2012, , .   | 0.8 | 21        |
| 61 | InAs/GaAs Quantum Dots Grown by Metalorganic Chemical Vapor Deposition. Japanese Journal of Applied Physics, 1997, 36, 4129-4133.  | 1.5 | 20        |
| 62 | Ultrafast VCSELs for Datacom. IEEE Photonics Journal, 2010, 2, 273-275.  | 2.0 | 20        |
| 63 | Temperature-Stable 980-nm VCSELs for 35-Gb/s Operation at 85 °C With 139-fJ/bit Dissipated Heat. IEEE Photonics Technology Letters, 2014, 26, 2349-2352.                                   | 2.5 | 20        |
| 64 | Large Bandwidth, Small Current Density, and Temperature Stable 980-nm VCSELs. IEEE Journal of Quantum Electronics, 2017, 53, 1-8.  | 1.9 | 20        |
| 65 | VCSEL-Based Light Sources—Scalability Challenges for VCSEL-Based Multi-100-Gb/s Systems. IEEE Photonics Journal, 2012, 4, 1831-1843.   | 2.0 | 19        |
| 66 | Collective Light Emission Revisited: Reservoir Induced Coherence. Physical Review Letters, 2013, 110, 113604.  | 7.8 | 19        |
| 67 | Theory and experiment of submonolayer quantum-dot metal-cavity surface-emitting microlasers. Optics Express, 2013, 21, 30336.  | 3.4 | 19        |
| 68 | Temperature-Stable, Energy-Efficient, and High-Bit Rate Oxide-Confined 980-nm VCSELs for Optical Interconnects. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 405-413. | 2.9 | 19        |
| 69 | Optical response of (InGa)(AsSb)/GaAs quantum dots embedded in a GaP matrix. Physical Review B, 2019, 100, .   | 3.2 | 19        |
| 70 | Uniform GaAs quantum wires formed on vicinal GaAs (110) surfaces by two-step MBE growth. Superlattices and Microstructures, 1997, 22, 43-49.   | 3.1 | 18        |
| 71 | Polarization Switching in Quantum-Dot Vertical-Cavity Surface-Emitting Lasers. IEEE Photonics Technology Letters, 2009, 21, 1008-1010.   | 2.5 | 18        |
| 72 | Strong amplitude-phase coupling in submonolayer quantum dots. Applied Physics Letters, 2016, 109, 201102.  | 3.3 | 18        |

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|----|--|------|-----------|
| 73 | Comparison of optical feedback dynamics of InAs/GaAs quantum-dot lasers emitting solely on ground or excited states. <i>Optics Letters</i> , 2018, 43, 210.  | 3.3  | 18        |
| 74 | Wide-Range Wavelength Conversion of 40-Gb/s NRZ-DPSK Signals Using a 1.3- $\mu\text{m}$ Quantum-Dot Semiconductor Optical Amplifier. <i>IEEE Photonics Technology Letters</i> , 2012, 24, 1163-1165. | 2.5  | 17        |
| 75 | High-Speed and Temperature-Stable, Oxide-Confined 980-nm VCSELs for Optical Interconnects. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2013, 19, 1701207-1701207.                | 2.9  | 17        |
| 76 | Fast gain and phase recovery of semiconductor optical amplifiers based on submonolayer quantum dots. <i>Applied Physics Letters</i> , 2015, 107, .   | 3.3  | 17        |
| 77 | Strain analysis from nano-beam electron diffraction: Influence of specimen tilt and beam convergence. <i>Ultramicroscopy</i> , 2018, 190, 45-57.   | 1.9  | 17        |
| 78 | CW substrate-free metal-cavity surface microemitters at 300 K. <i>Semiconductor Science and Technology</i> , 2011, 26, 014012.   | 2.0  | 16        |
| 79 | High Temperature Operation of 1060-nm High-Brightness Photonic Band Crystal Lasers With Very Low Astigmatism. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2015, 21, 722-727.     | 2.9  | 16        |
| 80 | Spectral Efficiency and Energy Efficiency of Pulse-Amplitude Modulation Using 1.3 $\mu\text{m}$ Wafer-Fusion VCSELs for Optical Interconnects. <i>ACS Photonics</i> , 2017, 4, 2018-2024.            | 6.6  | 16        |
| 81 | Post-growth p-type doping enhancement for ZnSe-based lasers using a Li <sub>3</sub> N interlayer. <i>Applied Physics Letters</i> , 2002, 81, 4916-4918.  | 3.3  | 15        |
| 82 | Cavity-Volume Scaling Law of Quantum-Dot Metal-Cavity Surface-Emitting Microlasers. <i>IEEE Photonics Journal</i> , 2012, 4, 1103-1114.  | 2.0  | 15        |
| 83 | Temperature-Dependent Impedance Characteristics of Temperature-Stable High-Speed 980-nm VCSELs. <i>IEEE Photonics Technology Letters</i> , 2015, 27, 832-835.  | 2.5  | 15        |
| 84 | Astigmatism-free high-brightness 1060 nm edge-emitting lasers with narrow circular beam profile. <i>Optics Express</i> , 2016, 24, 30514.  | 3.4  | 15        |
| 85 | 1.55 $\mu\text{m}$ high-speed VCSELs enabling error-free fiber-transmission up to 25 Gbit/s. , 2010, , .   |      | 14        |
| 86 | Flying qubits and entangled photons. <i>Laser and Photonics Reviews</i> , 2014, 8, 276-290.  | 8.7  | 14        |
| 87 | Thermal analysis of high-bandwidth and energy-efficient 980-nm VCSELs with optimized quantum well gain peak-to-cavity resonance wavelength offset. <i>Applied Physics Letters</i> , 2017, 111, .     | 3.3  | 14        |
| 88 | Semiconductor nanostructures for flying q-bits and green photonics. <i>Nanophotonics</i> , 2018, 7, 1245-1257.   | 6.0  | 14        |
| 89 | Structural and compositional analysis of (InGa)(AsSb)/GaAs/GaP Stranski-Krastanov quantum dots. <i>Light: Science and Applications</i> , 2021, 10, 125.  | 16.6 | 14        |
| 90 | Low Thermal Impedance of Substrate-Free Metal Cavity Surface-Emitting Microlasers. <i>IEEE Photonics Technology Letters</i> , 2011, 23, 1031-1033.   | 2.5  | 13        |

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|-----|---|-----|-----------|
| 91  | Lateral-Longitudinal Modes of High-Power Inhomogeneous Waveguide Lasers. IEEE Journal of Quantum Electronics, 2012, 48, 123-128.  | 1.9 | 13        |
| 92  | Spatial structure of In <sub>0.25</sub> Ga <sub>0.75</sub> As/GaAs/GaP quantum dots on the atomic scale. Applied Physics Letters, 2013, 102, .                                | 3.3 | 13        |
| 93  | Finite element simulation of the optical modes of semiconductor lasers. Physica Status Solidi (B): Basic Research, 2010, 247, 846-853.  | 1.5 | 12        |
| 94  | Fabrication and room temperature operation of semiconductor nano-ring lasers using a general applicable membrane transfer method. Applied Physics Letters, 2017, 110, 171105. | 3.3 | 12        |
| 95  | Comparison between high- and zero-contrast gratings as VCSEL mirrors. Optics Communications, 2017, 389, 35-41.  | 2.1 | 12        |
| 96  | Optimization of VCSEL photon lifetime for minimum energy consumption at varying bit rates. Optics Express, 2020, 28, 18931.   | 3.4 | 12        |
| 97  | GaSb quantum dots on GaAs with high localization energy of 710 meV and an emission wavelength of 1.3 Åµm. Journal of Crystal Growth, 2014, 404, 48-53.                        | 1.5 | 11        |
| 98  | Hole localization energy of 1.18 eV in GaSb quantum dots embedded in GaP. Physica Status Solidi (B): Basic Research, 2016, 253, 1877-1881.                                    | 1.5 | 10        |
| 99  | On the importance of antimony for temporal evolution of emission from self-assembled (InGa)(AsSb)/GaAs quantum dots on GaP(001). New Journal of Physics, 2021, 23, 103029.    | 2.9 | 10        |
| 100 | Demonstration of electrically injected vertical-cavity surface-emitting lasers with post-supported high-contrast gratings. Photonics Research, 2022, 10, 1170.                | 7.0 | 10        |
| 101 | Disordering of CdZnSe/ZnSe Strained Layer Superlattices by Ion Implantation. Japanese Journal of Applied Physics, 1995, 34, 1159-1161.  | 1.5 | 9         |
| 102 | Energy-Efficient 50+ Gb/s VCSELs for 200+ Gb/s Optical Interconnects. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-5.                                  | 2.9 | 9         |
| 103 | Theory of Metal-Cavity Surface-Emitting Microlasers and Comparison With Experiment. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 1681-1692.              | 2.9 | 8         |
| 104 | Antimony-based quantum dot memories. Proceedings of SPIE, 2011, , .   | 0.8 | 8         |
| 105 | Vertical-cavity surface-emitting lasers with nanostructures for optical interconnects. Frontiers of Optoelectronics, 2016, 9, 249-258.  | 3.7 | 8         |
| 106 | Morphology and valence band offset of GaSb quantum dots grown on GaP(001) and their evolution upon capping. Nanotechnology, 2017, 28, 225601.                                 | 2.6 | 8         |
| 107 | Quantum-Dot Semiconductor Optical Amplifiers for Energy-Efficient Optical Communication. Nanoscience and Technology, 2017, , 37-74.   | 1.5 | 8         |
| 108 | Size-dependent luminescence of GaAs quantum wires on vicinal GaAs (110) surfaces with giant steps formed by MBE. Physica B: Condensed Matter, 1996, 227, 291-294.             | 2.7 | 7         |

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|-----|---|-----|-----------|
| 109 | ZnMgCdSe structures on InP grown by MOVPE. Journal of Crystal Growth, 2000, 221, 416-420.   | 1.5 | 6         |
| 110 | Direct Evidence of Nanoscale Carrier Localization in InGaN/GaN Structures Grown on Si Substrates. Japanese Journal of Applied Physics, 2003, 42, L1057-L1060.   | 1.5 | 6         |
| 111 | Novel energy-efficient designs of vertical-cavity surface emitting lasers for the next generations of photonic systems. Japanese Journal of Applied Physics, 0, , .   | 1.5 | 6         |
| 112 | GRen Data And Computer Communication. , 2011, , .   |     | 5         |
| 113 | Leakage-Assisted Transverse Mode Selection in Vertical-Cavity Surface-Emitting Lasers With Thick Large-Diameter Oxide Apertures. IEEE Journal of Quantum Electronics, 2013, 49, 1034-1039.  | 1.9 | 5         |
| 114 | Quantum-Dot Mode-Locked Lasers: Sources for Tunable Optical and Electrical Pulse Combs. Nanoscience and Technology, 2017, , 75-106.   | 1.5 | 5         |
| 115 | Cathodoluminescence of strained quantum wells and layers. Superlattices and Microstructures, 1991, 9, 65-75.  | 3.1 | 4         |
| 116 | Modeling Highly Efficient RCLED-Type Quantum-Dot-Based Single Photon Emitters. IEEE Journal of Quantum Electronics, 2009, 45, 1084-1088.  | 1.9 | 4         |
| 117 | Room-Temperature Hysteresis in a Hole-Based Quantum Dot Memory Structure. Journal of Nanotechnology, 2013, 2013, 1-4.   | 3.4 | 4         |
| 118 | Novel types of photonic band crystal high power and high brightness semiconductor lasers. Frontiers of Optoelectronics, 2016, 9, 225-237.   | 3.7 | 4         |
| 119 | Formation of AlGaAs quantum wires on vicinal GaAs(110) surfaces misoriented $3\text{\AA}^\circ$ toward (111)A by molecular beam epitaxy. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1995, 35, 295-298. | 3.5 | 3         |
| 120 | Energy-efficient 1.3 &#x03BC;m short-cavity VCSELs for 30 Gb/s error-free optical links. , 2012, , .  |     | 3         |
| 121 | Energy-efficient VCSELs for 200+ Gb/s optical interconnects. , 2019, , .  |     | 3         |
| 122 | GaAs-based subwavelength grating on an AlOx layer for a vertical-cavity surface-emitting laser. OSA Continuum, 2020, 3, 317.  | 1.8 | 3         |
| 123 | Effects of growth interruption on uniformity of GaAs quantum wires formed on vicinal GaAs(110) surfaces by MBE. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1998, 51, 229-232.                          | 3.5 | 2         |
| 124 | Onion-like growth of and inverted many-particle energies in quantum dots. Materials Science and Engineering C, 2005, 25, 698-704.   | 7.3 | 2         |
| 125 | Single-Lobe Single-Wavelength Lasing in Ultrabroad-Area Vertical-Cavity Surface-Emitting Lasers Based on the Integrated Filter Concept. IEEE Journal of Quantum Electronics, 2008, 44, 724-731.   | 1.9 | 2         |
| 126 | Linear and nonlinear semiconductor optical amplifiers. , 2010, , .  |     | 2         |



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|-----|--|-----|-----------|
| 127 | Static and Dynamic Characteristics of In(AsSb)/ GaAs Submonolayer Lasers. IEEE Journal of Quantum Electronics, 2019, 55, 1-7.  | 1.9 | 2         |
| 128 | 910 nm Single-Mode VCSELs and its Application for Few-Mode Transmission over Graded-Index Single-Mode Fibers. , 2020, , .  |     | 2         |
| 129 | Multi-aperture VCSELs: high power, low resistance, single mode. , 2021, , .  |     | 2         |
| 130 | First observation of symmetry breaking in strained In <sub>0.7</sub> Ga <sub>0.3</sub> As/InP V-groove quantum wires. Physica E: Low-Dimensional Systems and Nanostructures, 1998, 2, 969-973.                               | 2.7 | 1         |
| 131 | Dual Semiconductor Laser System With Rapid Time-Delay for Ultrafast Measurements. IEEE Photonics Technology Letters, 2006, 18, 2338-2340.  | 2.5 | 1         |
| 132 | Quantum Dots: Genesis, the Excitonic Zoo, and its Applications. , 2007, , .  |     | 1         |
| 133 | Nanophotonics for a green internet. , 2019, , .  |     | 1         |
| 134 | Novel VCSEL Designs for the next generation of photonic systems. , 2021, , .   |     | 1         |
| 135 | High-power, single-mode, multi-aperture VCSELs for long-reach optical interconnects. , 2021, , .   |     | 1         |
| 136 | Collaborative Research Programs in Germany and the EU. , 2007, , .   |     | 0         |
| 137 | Epitaxy of multimodal InAs/GaAs quantum dot ensembles. Journal of Crystal Growth, 2007, 298, 567-569.  | 1.5 | 0         |
| 138 | Magneto-optical properties of quantum dots: Influence of the piezoelectric field. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 1163-1165.  | 2.7 | 0         |
| 139 | Correction to "Energy Efficiency of Directly Modulated Oxide-confined High Bit Rate 850nm VCSELs for Optical Interconnects" [Jul/Aug 13 1702212]. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 335-335. | 2.9 | 0         |
| 140 | Nanophotonics for future data communication and ethernet networks. , 2015, , .   |     | 0         |
| 141 | High-contrast-grating-based Fabry-Pérot filter array for monolithic multiwavelength VCSEL arrays. , 2016, , .  |     | 0         |
| 142 | 1060-nm High Brightness Picosecond Pulse Generation in Photonic Band Crystal Lasers. IEEE Photonics Technology Letters, 2016, 28, 2086-2089.   | 2.5 | 0         |
| 143 | How can we accommodate the rapidly increasing power consumption of the internet? "Green" optical interconnects based on novel VCSELs. , 2017, , .  |     | 0         |
| 144 | Cathodoluminescence observation of GaAs-AlGaAs heterointerfaces.. Hyomen Kagaku, 1989, 10, 697-702.  | 0.0 | 0         |

| #   | ARTICLE   | IF | CITATIONS |
|-----|---|----|-----------|
| 145 | High-power, low resistance, single-mode, multi-aperture VCSELs. , 2021, , . |    | 0         |