Marten Richter

List of Publications by Year
in descending order

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Version: 2024-02-01

118	2,365	218677	223800
papers	citations	26 h-index	46 g-index

118	118	118	2606
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Trion formation dynamics in monolayer transition metal dichalcogenides. Physical Review B, 2016, 93, .	3.2	159
2	Neutral and charged inter-valley biexcitons in monolayer MoSe2. Nature Communications, 2017, 8, 15552.	12.8	159
3	Quantization of Quasinormal Modes for Open Cavities and Plasmonic Cavity Quantum Electrodynamics. Physical Review Letters, 2019, 122, 213901.	7.8	130
4	Dark and bright exciton formation, thermalization, and photoluminescence in monolayer transition metal dichalcogenides. 2D Materials, 2018, 5, 035017.	4.4	129
5	Two-Dimensional Double-Quantum Spectra Reveal Collective Resonances in an Atomic Vapor. Physical Review Letters, 2012, 108, 193201.	7.8	97
6	Refinement of a Structural Model of a Pigmentâ^'Protein Complex by Accurate Optical Line Shape Theory and Experiments. Journal of Physical Chemistry B, 2007, 111, 10487-10501.	2.6	88
7	Optically Excited Entangled States in Organic Molecules Illuminate the Dark. Journal of Physical Chemistry Letters, 2013, 4, 2046-2052.	4.6	88
8	Tunable Plasmon Coupling in Distance-Controlled Gold Nanoparticles. Langmuir, 2012, 28, 8862-8866.	3.5	85
9	Novel Auâ^'Ag Hybrid Device for Electrochemical SE(R)R Spectroscopy in a Wide Potential and Spectral Range. Nano Letters, 2009, 9, 298-303.	9.1	76
10	Impact of Coulomb Scattering on the Ultrafast Gain Recovery in InGaAs Quantum Dots. Physical Review Letters, 2008, 101, 256803.	7.8	61
11	Acoustic and optical phonon scattering in a single In(Ga)As quantum dot. Physical Review B, 2011, 83, .	3.2	53
12	Theory of excitation transfer in coupled nanostructures â€“ from quantum dots to light harvesting complexes. Physica Status Solidi (B): Basic Research, 2006, 243, 2302-2310.	1.5	48
13	Numerically exact solution of the many emitterâ€“cavity laser problem: Application to the fully quantized spaser emission. Physical Review B, 2015, 91, .	3.2	48
14	Exciton acoustic-phonon coupling in single GaN/AlN quantum dots. Physical Review B, 2012, 85, .	3.2	45
15	Few-Photon Model of the Optical Emission of Semiconductor Quantum Dots. Physical Review Letters, 2009, 103, 087407.	7.8	43
16	Antibunching of Thermal Radiation by a Room-Temperature Phonon Bath: A Numerically Solvable Model for a Strongly Interacting Light-Matter-Reservoir System. Physical Review Letters, 2010, 104, 156801.	7.8	39
17	Theory of carrier and photon dynamics in quantum dot light emitters. Physica Status Solidi (B): Basic Research, 2010, 247, 809-828.	1.5	37
18	Metalâ€“Semiconductor Nanoparticle Hybrids Formed by Self-Organization: A Platform to Address Excitonâ€“Plasmon Coupling. Nano Letters, 2016, 16, 4811-4818.	9.1	37

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19	Photon statistics as a probe for exciton correlations in coupled nanostructures. Physical Review B, 2009, 79, .	3.2	36
20	Efficient and exact numerical approach for many multi-level systems in open system CQED. New Journal of Physics, 2016, 18, 043037.	2.9	35
21	Superradiant to subradiant phase transition in the open system Dicke model: dark state cascades. New Journal of Physics, 2018, 20, 013006.	2.9	35
22	Quantized quasinormal-mode description of nonlinear cavity-QED effects from coupled resonators with a Fano-like resonance. Physical Review Research, 2020, 2, .	3.6	35
23	Formation dynamics of an entangled photon pair: A temperature-dependent analysis. Physical Review B, 2010, 81, .	3.2	32
24	Ultrafast double-quantum-coherence spectroscopy of excitons with entangled photons. Physical Review A, 2010, 82, 138201-138207.	2.5	29
25	Influence of FÃ¶rster interaction on light emission statistics in hybrid systems. Physical Review B, 2013, 87, .	3.2	29
26	Two-dimensional electron gases: Theory of ultrafast dynamics of electron-phonon interactions in graphene, surfaces, and quantum wells. Journal of Applied Physics, 2009, 105, 122409.	2.5	28
27	Theory and Limits of On-Demand Single-Photon Sources Using Plasmonic Resonators: A Quantized Quasinormal Mode Approach. ACS Photonics, 2019, 6, 2168-2180.	6.6	26
28	Multidimensional phase-sensitive single-molecule spectroscopy with time-and-frequency-gated fluorescence detection. Physical Review A, 2011, 83, .	2.5	25
29	Quantized pseudomodes for plasmonic cavity QED. Optics Letters, 2018, 43, 1834.	3.3	25
30	Nanoplatelets as material system between strong confinement and weak confinement. Physical Review Materials, 2017, 1, .	2.4	25
31	A Bloch equation approach to intensity dependent optical spectra of light harvesting complex II. Photosynthesis Research, 2008, 95, 119-127.	2.9	23
32	Inductive equation of motion approach for a semiconductor QDâ€QED: Coherence induced control of photon statistics. Physica Status Solidi (B): Basic Research, 2011, 248, 872-878.	1.5	23
33	Fermiâ€™s Golden Rule for Spontaneous Emission in Absorptive and Amplifying Media. Physical Review Letters, 2021, 127, 013602.	7.8	23
34	Coulomb effects in singleâ€walled carbon nanotubes. Physica Status Solidi (B): Basic Research, 2008, 245, 2155-2158.	1.5	22
35	Microscopic equation-of-motion approach to the multiphonon assisted quantum emission of a semiconductor quantum dot. Physical Review B, 2011, 84, .	3.2	22
36	A time convolution less density matrix approach to the nonlinear optical response of a coupled systemâ€“bath complex. Annals of Physics, 2010, 325, 711-747.	2.8	20

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37	Image dipoles approach to the local field enhancement in nanostructured Agâ€“Au hybrid devices. Journal of Chemical Physics, 2010, 132, 024712.	3.0	20
38	Collective two-particle resonances induced by photon entanglement. Physical Review A, 2011, 83, .	2.5	20
39	Nonperturbative theory for the optical response to strong light of the light harvesting complex II of plants: Saturation of the fluorescence quantum yield. Journal of Chemical Physics, 2007, 127, 075105.	3.0	19
40	Size-dependent exciton substructure in CdSe nanoplatelets and its relation to photoluminescence dynamics. Nanoscale, 2019, 11, 12230-12241.	5.6	19
41	Theory of time-resolved Raman scattering and fluorescence emission from semiconductor quantum dots. Physical Review B, 2010, 81, .	3.2	18
42	PsiQuaSPâ€“A library for efficient computation of symmetric open quantum systems. Scientific Reports, 2017, 7, 16304.	3.3	17
43	Near-field to far-field transformations of optical quasinormal modes and efficient calculation of quantized quasinormal modes for open cavities and plasmonic resonators. Physical Review B, 2020, 101, .	3.2	17
44	Maxwellâ€“Bloch Equation Approach for Describing the Microscopic Dynamics of Quantum-Dot Surface-Emitting Structures. IEEE Journal of Quantum Electronics, 2010, 46, 1115-1126.	1.9	16
45	Coherent coupling of individual quantum dots measured with phase-referenced two-dimensional spectroscopy: Photon echo versus double quantum coherence. Physical Review B, 2017, 96, .	3.2	16
46	Carrier heating in light-emitting quantum-dot heterostructures at low injection currents. Physical Review B, 2009, 80, .	3.2	15
47	Reconstruction of the wave functions of coupled nanoscopic emitters using a coherent optical technique. Physical Review B, 2012, 86, .	3.2	15
48	Cavity assisted emission of single, paired and heralded photons from a single quantum dot device. Optics Express, 2016, 24, 25446.	3.4	15
49	Two-dimensional spectroscopy: An approach to distinguish FÃ¶rster and Dexter transfer processes in coupled nanostructures. Physical Review B, 2015, 91, .	3.2	14
50	Using localized double-quantum-coherence spectroscopy to reconstruct the two-exciton wave function of coupled quantum emitters. New Journal of Physics, 2013, 15, 025004.	2.9	13
51	Semiconductor Quantum Dot Lifetime Near an Atomically Smooth Ag Film Exhibits a Narrow Distribution. ACS Photonics, 2016, 3, 1085-1089.	6.6	13
52	Fluctuation-dissipation theorem and fundamental photon commutation relations in lossy nanostructures using quasinormal modes. Physical Review Research, 2020, 2, .	3.6	13
53	Analytical description of gain depletion and recovery in quantum dot optical amplifiers. New Journal of Physics, 2010, 12, 063012.	2.9	12
54	2D optical photon echo spectroscopy of a selfâ€assembled quantum dot. Annalen Der Physik, 2013, 525, 31-42.	2.4	11

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55	Deconvolution of optical multidimensional coherent spectra. Science Advances, 2018, 4, eaar7697.	10.3	11
56	Dissecting biexciton wave functions of self-assembled quantum dots by double-quantum-coherence optical spectroscopy. Physical Review B, 2012, 86, .	3.2	10
57	Localization dynamics of excitons in disordered semiconductor quantum wells. Physical Review B, 2017, 95, .	3.2	10
58	Combined tensor network/cluster expansion method using logic gates: Illustrated for (bi)excitons by a single-layer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mm model system. Physical Review B, 2019, 99, .	3.2	10
59	Ultrafast electron dynamics in metals: Real-time analysis of a reflected light field using photoelectrons. Physical Review B, 2009, 79, .	3.2	9
60	Distance-dependent electron transfer rate of immobilized redox proteins: A statistical physics approach. Physical Review E, 2010, 81, 046101.	2.1	9
61	Theory of optical excitations in dipole-coupled hybrid molecule-semiconductor layers: Coupling of a molecular resonance to semiconductor continuum states. Physical Review B, 2014, 89, .	3.2	9
62	Excitonic effects in intraband quantum dot spectroscopy: Formation of bound continuum excitons. Physical Review B, 2014, 90, .	3.2	9
63	Tensor network strategies for calculating biexcitons and trions in monolayer two-dimensional materials beyond the ground state. Physical Review B, 2020, 101, .	3.2	9
64	Line Narrowing of Excited-State Transitions in Nonlinear Polarization Spectroscopy: Application to Water-Soluble Chlorophyll-Binding Protein. Physical Review Letters, 2012, 108, 178104.	7.8	7
65	Enhanced TEMPO Algorithm for Quantum Path Integrals with Off-Diagonal System-Bath Coupling: Applications to Photonic Quantum Networks. Physical Review Letters, 2022, 128, 167403.	7.8	7
66	Theory of single quantum dot lasers: Pauli-blocking-enhanced anti-bunching. Semiconductor Science and Technology, 2011, 26, 014015.	2.0	5
67	Two-dimensional Fourier spectroscopy applied to electron-phonon correlations in quantum well intersubband systems. Physical Review B, 2012, 86, .	3.2	5
68	All-optical approach to determine the spatial shape of nanoscale electron wave functions using intraband spectroscopy. Physical Review B, 2014, 89, .	3.2	5
69	Hybrid density matrix approach as a factorization scheme for many-body systems: Illustrated by a quantum dotâ€“continuum system. Physical Review B, 2015, 91, .	3.2	5
70	Poisson Green's function method for increased computational efficiency in numerical calculations of Coulomb coupling elements. Physical Review B, 2016, 93, .	3.2	4
71	Theory of Excitation Transfer between Two-Dimensional Semiconductor and Molecular Layers. Physical Review Applied, 2018, 9, .	3.8	4
72	Theory of the Optical Response of Singleand Coupled Semiconductor Quantum Dots. Nanoscience and Technology, 2008, , 189-210.	1.5	3

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73	Photon statistics of a single quantum dot in a microcavity. Physica Status Solidi - Rapid Research Letters, 2010, 4, 289-291.	2.4	3
74	Influence of Coulomb correlations on the quantum well intersubband absorption at low temperatures. Physical Review B, 2010, 82, .	3.2	3
75	Protocol for detection of nonsecular conversion through coherent nanooptical spectroscopy. Physical Review A, 2015, 92, .	2.5	3
76	Detection of dark-state relaxation through two-dimensional nano-optical spectroscopy. Proceedings of SPIE, 2015, , .	0.8	3
77	Relaxation processes in systems strongly coupled to a harmonic bath. Journal of Modern Optics, 2010, 57, 2004-2008.	1.3	2
78	Theory of light scattering from semiconductor quantum dots: Excitation frequency dependent emission dynamics. Photonics and Nanostructures - Fundamentals and Applications, 2011, 9, 296-301.	2.0	2
79	Ultrafast nonlinear spectroscopy with spatially confined fields. AIP Conference Proceedings, 2011, , .	0.4	2
80	Decay dynamics of excitonic polarons in InAs/GaAs quantum dots. Journal of Applied Physics, 2011, 110, 074303.	2.5	2
81	Combining nanooptical fields and coherent spectroscopy on systems with delocalized excitons. , 2012, , .		2
82	Spatially localized spectroscopy for examining the internal structure of coupled nanostructures. Physica Status Solidi (B): Basic Research, 2013, 250, 1760-1767.	1.5	2
83	Fully quantized spaser physics: towards exact modeling of mesoscopic CQED systems. , 2015, , .		2
84	Reconstruction of exciton wave functions of coupled quantum emitters including spin with ultrafast spectroscopy using localized nanooptical fields. Applied Physics B: Lasers and Optics, 2016, 122, 1.	2.2	2
85	Effective Hamiltonian Approach to Multiphonon Effects in Self Assembled Quantum Dots. , 2009, , .		2
86	Quantum optics in a semiconductor quantum dot. Journal of Modern Optics, 2011, 58, 1951-1956.	1.3	1
87	Microscopic study of relaxation oscillations in quantum-dot VCSELs. Photonics and Nanostructures - Fundamentals and Applications, 2011, 9, 337-344.	2.0	1
88	Excitonic effects in quantum dot intraband spectroscopy indicating the formation of bound continuum excitons. , 2016, , .		1
89	Theory of coupled hybrid inorganic/organic systems: Excitation transfer at semiconductor/molecule interfaces. Proceedings of SPIE, 2016, , .	0.8	1
90	Phonon Interaction on a Single Quantum Dot Emission Line. , 2009, , .		1

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91	Excitonic Effects in Single Layer MoS2 Probed by Broadband Two-dimensional Electronic Spectroscopy. , 2019, , .		1
92	Linear and nonlinear optics of light harvesting complexes: TCL- and Bloch Equations for linear spectra and saturation dynamics. , 2007, , .		0
93	Quantum-dot vertical-cavity surface-emitting lasers (VCSELs): Combining finite-difference time-domain (FDTD) calcualtion with microscopic material models. , 2008, , .		0
94	Theory of transport and photon-statistics in a biased nanostructure. , 2008, , .		0
95	Theory of few photon dynamics in light emitting quantum dot devices. , 2009, , .		0
96	Theory of time-resolved Raman and fluorescence emission of semiconductor quantum dots. , 2009, , .		0
97	Theory of electron dynamics in light emitting quantum dot devices. , 2009, , .		0
98	Optical Bloch equations for light harvesting complexes: pump probe spectra and saturation dynamics at high light intensity excitation. , 2009, , .		0
99	Theory of few photon dynamics in electrically pumped light emitting quantum dot devices. Proceedings of SPIE, 2010, , .	0.8	0
100	Lasing dynamics of quantum-dot vertical-cavity surface-emitting lasers using microscopically calculated Maxwell-Bloch equations. , 2010, , .		0
101	Room-temperature nonclassical light generation in a microcavity-single-quantum-dot system. , 2010, , .		0
102	Quantum light emission from cavity enhanced LEDs. , 2010, , .		0
103	Influence of ground state correlations on the quantum well intersubband absorption at low temperatures. AIP Conference Proceedings, 2011, , .	0.4	0
104	Microscopic Description Of Quantum-Dot Vertical-Cavity Surface-Emitting Lasers (VCSELs) Using Maxwell-Bloch Equations. , 2011, , .		0
105	Analytical description of gain depletion and recovery in quantum dot optical amplifiers. New Journal of Physics, 2011, 13, 079502.	2.9	0
106	Photon statistics and phonon signatures in the quantum light emission from semiconductor quantum dots. Proceedings of SPIE, 2011, , .	0.8	0
107	Phonon-assisted features in the light emission from semiconductor quantum dots. , 2012, , .		0
108	Coherent Nonlinear Spectroscopy with Spatiotemporally Controlled Fields. , 2012, , .		0

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109	Theory of phonon-assisted intraband transitions in semiconductor quantum dots. Proceedings of SPIE, 2012, , .	0.8	0
110	Publisher's Note: Excitonic effects in intraband quantum dot spectroscopy: Formation of bound continuum excitons [Phys. Rev. B90, 125308 (2014)]. Physical Review B, 2015, 91, .	3.2	0
111	Signatures of FÃ¶rster and Dexter transfer processes in coupled nanostructures for linear and two-dimensional coherent optical spectroscopy. , 2015, , .		0
112	Efficient numerical method for calculating Coulomb coupling elements and its application to two-dimensional spectroscopy. Proceedings of SPIE, 2016, , .	0.8	0
113	Self-Consistent Description of Time-Resolved Raman and Fluorescence Emission of Semiconductor Quantum Dots. , 2009, , .		0
114	Coupled Carrier-Phonon Dynamics in Light Emitting Quantum-Dot Heterostructures: Switch on Dynamics and Carrier Heating. , 2009, , .		0
115	Theory of Line Narrowing in Nonlinear Polarization Spectroscopy. , 2012, , .		0
116	Theory of 2D photon echo spectroscopy on quantum well intersubband dynamics. , 2013, , .		0
117	Theory of Spectroscopy and Light Emission of Semiconductors Nanostructures. Springer Series in Solid-state Sciences, 2020, , 203-240.	0.3	0
118	Theory of Ultrafast Dynamics of Electron-Phonon Interactions in Two Dimensional Electron Gases: Semiconductor Quantum Wells, Surfaces and Graphene. Advances in Solid State Physics, 0, , 281-292.	0.8	0