Marten Richter

List of Publications by Year
in descending order

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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	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
2	Fermiâ€™s Golden Rule for Spontaneous Emission in Absorptive and Amplifying Media. Physical Review Letters, 2021, 127, 013602.	7.8	23
3	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
4	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
5	Fluctuation-dissipation theorem and fundamental photon commutation relations in lossy nanostructures using quasinormal modes. Physical Review Research, 2020, 2, .	3.6	13
6	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
7	Theory of Spectroscopy and Light Emission of Semiconductors Nanostructures. Springer Series in Solid-state Sciences, 2020, , 203-240.	0.3	0
8	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
9	Size-dependent exciton substructure in CdSe nanoplatelets and its relation to photoluminescence dynamics. Nanoscale, 2019, 11, 12230-12241.	5.6	19
10	Quantization of Quasinormal Modes for Open Cavities and Plasmonic Cavity Quantum Electrodynamics. Physical Review Letters, 2019, 122, 213901.	7.8	130
11	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></mml:math> model system. Physical Review B, 2019, 99, .	3.2	10
12	Excitonic Effects in Single Layer MoS2 Probed by Broadband Two-dimensional Electronic Spectroscopy. , 2019, , .		1
13	Theory of Excitation Transfer between Two-Dimensional Semiconductor and Molecular Layers. Physical Review Applied, 2018, 9, .	3.8	4
14	Superradiant to subradiant phase transition in the open system Dicke model: dark state cascades. New Journal of Physics, 2018, 20, 013006.	2.9	35
15	Dark and bright exciton formation, thermalization, and photoluminescence in monolayer transition metal dichalcogenides. 2D Materials, 2018, 5, 035017.	4.4	129
16	Quantized pseudomodes for plasmonic cavity QED. Optics Letters, 2018, 43, 1834.	3.3	25
17	Deconvolution of optical multidimensional coherent spectra. Science Advances, 2018, 4, eaar7697.	10.3	11
18	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

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19	Neutral and charged inter-valley biexcitons in monolayer MoSe2. Nature Communications, 2017, 8, 15552.	12.8	159
20	Localization dynamics of excitons in disordered semiconductor quantum wells. Physical Review B, 2017, 95, .	3.2	10
21	PsiQuaSPâ€“A library for efficient computation of symmetric open quantum systems. Scientific Reports, 2017, 7, 16304.	3.3	17
22	Nanoplatelets as material system between strong confinement and weak confinement. Physical Review Materials, 2017, 1, .	2.4	25
23	Cavity assisted emission of single, paired and heralded photons from a single quantum dot device. Optics Express, 2016, 24, 25446.	3.4	15
24	Excitonic effects in quantum dot intraband spectroscopy indicating the formation of bound continuum excitons. , 2016, , .		1
25	Semiconductor Quantum Dot Lifetime Near an Atomically Smooth Ag Film Exhibits a Narrow Distribution. ACS Photonics, 2016, 3, 1085-1089.	6.6	13
26	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
27	Poisson Green's function method for increased computational efficiency in numerical calculations of Coulomb coupling elements. Physical Review B, 2016, 93, .	3.2	4
28	Trion formation dynamics in monolayer transition metal dichalcogenides. Physical Review B, 2016, 93, .	3.2	159
29	Theory of coupled hybrid inorganic/organic systems: Excitation transfer at semiconductor/molecule interfaces. Proceedings of SPIE, 2016, , .	0.8	1
30	Efficient numerical method for calculating Coulomb coupling elements and its application to two-dimensional spectroscopy. Proceedings of SPIE, 2016, , .	0.8	0
31	Efficient and exact numerical approach for many multi-level systems in open system CQED. New Journal of Physics, 2016, 18, 043037.	2.9	35
32	Metalâ€“Semiconductor Nanoparticle Hybrids Formed by Self-Organization: A Platform to Address Excitonâ€“Plasmon Coupling. Nano Letters, 2016, 16, 4811-4818.	9.1	37
33	Two-dimensional spectroscopy: An approach to distinguish FÃ¶rster and Dexter transfer processes in coupled nanostructures. Physical Review B, 2015, 91, .	3.2	14
34	Protocol for detection of nonsecular conversion through coherent nanooptical spectroscopy. Physical Review A, 2015, 92, .	2.5	3
35	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
36	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

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37	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
38	Signatures of FÃ¶rster and Dexter transfer processes in coupled nanostructures for linear and two-dimensional coherent optical spectroscopy. , 2015, , .		0
39	Fully quantized spaser physics: towards exact modeling of mesoscopic CQED systems. , 2015, , .		2
40	Detection of dark-state relaxation through two-dimensional nano-optical spectroscopy. Proceedings of SPIE, 2015, , .	0.8	3
41	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
42	Excitonic effects in intraband quantum dot spectroscopy: Formation of bound continuum excitons. Physical Review B, 2014, 90, .	3.2	9
43	All-optical approach to determine the spatial shape of nanoscale electron wave functions using intraband spectroscopy. Physical Review B, 2014, 89, .	3.2	5
44	Influence of FÃ¶rster interaction on light emission statistics in hybrid systems. Physical Review B, 2013, 87, .	3.2	29
45	2D optical photon echo spectroscopy of a selfâ€assembled quantum dot. Annalen Der Physik, 2013, 525, 31-42.	2.4	11
46	Optically Excited Entangled States in Organic Molecules Illuminate the Dark. Journal of Physical Chemistry Letters, 2013, 4, 2046-2052.	4.6	88
47	Spatially localized spectroscopy for examining the internal structure of coupled nanostructures. Physica Status Solidi (B): Basic Research, 2013, 250, 1760-1767.	1.5	2
48	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
49	Theory of 2D photon echo spectroscopy on quantum well intersubband dynamics. , 2013, , .		0
50	Two-dimensional Fourier spectroscopy applied to electron-phonon correlations in quantum well intersubband systems. Physical Review B, 2012, 86, .	3.2	5
51	Reconstruction of the wave functions of coupled nanoscopic emitters using a coherent optical technique. Physical Review B, 2012, 86, .	3.2	15
52	Two-Dimensional Double-Quantum Spectra Reveal Collective Resonances in an Atomic Vapor. Physical Review Letters, 2012, 108, 193201.	7.8	97
53	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
54	Dissecting biexciton wave functions of self-assembled quantum dots by double-quantum-coherence optical spectroscopy. Physical Review B, 2012, 86, .	3.2	10

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55	Combining nanooptical fields and coherent spectroscopy on systems with delocalized excitons. , 2012, , .		2
56	Phonon-assisted features in the light emission from semiconductor quantum dots. , 2012, , .		0
57	Coherent Nonlinear Spectroscopy with Spatiotemporally Controlled Fields. , 2012, , .		0
58	Tunable Plasmon Coupling in Distance-Controlled Gold Nanoparticles. Langmuir, 2012, 28, 8862-8866.	3.5	85
59	Theory of phonon-assisted intraband transitions in semiconductor quantum dots. Proceedings of SPIE, 2012, , .	0.8	0
60	Exciton acoustic-phonon coupling in single GaN/AlN quantum dots. Physical Review B, 2012, 85, .	3.2	45
61	Theory of Line Narrowing in Nonlinear Polarization Spectroscopy. , 2012, , .		0
62	Quantum optics in a semiconductor quantum dot. Journal of Modern Optics, 2011, 58, 1951-1956.	1.3	1
63	Microscopic equation-of-motion approach to the multiphonon assisted quantum emission of a semiconductor quantum dot. Physical Review B, 2011, 84, .	3.2	22
64	Acoustic and optical phonon scattering in a single In(Ga)As quantum dot. Physical Review B, 2011, 83, .	3.2	53
65	Influence of ground state correlations on the quantum well intersubband absorption at low temperatures. AIP Conference Proceedings, 2011, , .	0.4	0
66	Microscopic Description Of Quantum-Dot Vertical-Cavity Surface-Emitting Lasers (VCSELs) Using Maxwell-Bloch Equations. , 2011, , .		0
67	Microscopic study of relaxation oscillations in quantum-dot VCSELs. Photonics and Nanostructures - Fundamentals and Applications, 2011, 9, 337-344.	2.0	1
68	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
69	Theory of single quantum dot lasers: Pauli-blocking-enhanced anti-bunching. Semiconductor Science and Technology, 2011, 26, 014015.	2.0	5
70	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
71	Analytical description of gain depletion and recovery in quantum dot optical amplifiers. New Journal of Physics, 2011, 13, 079502.	2.9	0
72	Ultrafast nonlinear spectroscopy with spatially confined fields. AIP Conference Proceedings, 2011, , .	0.4	2

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73	Collective two-particle resonances induced by photon entanglement. Physical Review A, 2011, 83, .	2.5	20
74	Multidimensional phase-sensitive single-molecule spectroscopy with time-and-frequency-gated fluorescence detection. Physical Review A, 2011, 83, .	2.5	25
75	Decay dynamics of excitonic polarons in InAs/GaAs quantum dots. Journal of Applied Physics, 2011, 110, 074303.	2.5	2
76	Photon statistics and phonon signatures in the quantum light emission from semiconductor quantum dots. Proceedings of SPIE, 2011, , .	0.8	0
77	Theory of few photon dynamics in electrically pumped light emitting quantum dot devices. Proceedings of SPIE, 2010, , .	0.8	0
78	Lasing dynamics of quantum-dot vertical-cavity surface-emitting lasers using microscopically calculated Maxwell-Bloch equations. , 2010, , .		0
79	Ultrafast double-quantum-coherence spectroscopy of excitons with entangled photons. Physical Review A, 2010, 82, 138201-138207.	2.5	29
80	Photon statistics of a single quantum dot in a microcavity. Physica Status Solidi - Rapid Research Letters, 2010, 4, 289-291.	2.4	3
81	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
82	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
83	Theory of carrier and photon dynamics in quantum dot light emitters. Physica Status Solidi (B): Basic Research, 2010, 247, 809-828.	1.5	37
84	Image dipoles approach to the local field enhancement in nanostructured Agâ€“Au hybrid devices. Journal of Chemical Physics, 2010, 132, 024712.	3.0	20
85	Distance-dependent electron transfer rate of immobilized redox proteins: A statistical physics approach. Physical Review E, 2010, 81, 046101.	2.1	9
86	Analytical description of gain depletion and recovery in quantum dot optical amplifiers. New Journal of Physics, 2010, 12, 063012.	2.9	12
87	Influence of Coulomb correlations on the quantum well intersubband absorption at low temperatures. Physical Review B, 2010, 82, .	3.2	3
88	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
89	Theory of time-resolved Raman scattering and fluorescence emission from semiconductor quantum dots. Physical Review B, 2010, 81, .	3.2	18
90	Formation dynamics of an entangled photon pair: A temperature-dependent analysis. Physical Review B, 2010, 81, .	3.2	32

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91	Relaxation processes in systems strongly coupled to a harmonic bath. Journal of Modern Optics, 2010, 57, 2004-2008.	1.3	2
92	Room-temperature nonclassical light generation in a microcavity-single-quantum-dot system. , 2010, , .		0
93	Quantum light emission from cavity enhanced LEDs. , 2010, , .		0
94	Theory of few photon dynamics in light emitting quantum dot devices. , 2009, , .		0
95	Carrier heating in light-emitting quantum-dot heterostructures at low injection currents. Physical Review B, 2009, 80, .	3.2	15
96	Ultrafast electron dynamics in metals: Real-time analysis of a reflected light field using photoelectrons. Physical Review B, 2009, 79, .	3.2	9
97	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
98	Photon statistics as a probe for exciton correlations in coupled nanostructures. Physical Review B, 2009, 79, .	3.2	36
99	Theory of time-resolved Raman and fluorescence emission of semiconductor quantum dots. , 2009, , .		0
100	Theory of electron dynamics in light emitting quantum dot devices. , 2009, , .		0
101	Few-Photon Model of the Optical Emission of Semiconductor Quantum Dots. Physical Review Letters, 2009, 103, 087407.	7.8	43
102	Optical Bloch equations for light harvesting complexes: pump probe spectra and saturation dynamics at high light intensity excitation. , 2009, , .		0
103	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
104	Effective Hamiltonian Approach to Multiphonon Effects in Self Assembled Quantum Dots. , 2009, , .		2
105	Phonon Interaction on a Single Quantum Dot Emission Line. , 2009, , .		1
106	Self-Consistent Description of Time-Resolved Raman and Fluorescence Emission of Semiconductor Quantum Dots. , 2009, , .		0
107	Coupled Carrier-Phonon Dynamics in Light Emitting Quantum-Dot Heterostructures: Switch on Dynamics and Carrier Heating. , 2009, , .		0
108	A Bloch equation approach to intensity dependent optical spectra of light harvesting complex II. Photosynthesis Research, 2008, 95, 119-127.	2.9	23

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109	Coulomb effects in singleâ€walled carbon nanotubes. Physica Status Solidi (B): Basic Research, 2008, 245, 2155-2158.	1.5	22
110	Theory of the Optical Response of Singleand Coupled Semiconductor Quantum Dots. Nanoscience and Technology, 2008, , 189-210.	1.5	3
111	Quantum-dot vertical-cavity surface-emitting lasers (VCSELs): Combining finite-difference time-domain (FDTD) calcualtion with microscopic material models. , 2008, , .		0
112	Theory of transport and photon-statistics in a biased nanostructure. , 2008, , .		0
113	Impact of Coulomb Scattering on the Ultrafast Gain Recovery in InGaAs Quantum Dots. Physical Review Letters, 2008, 101, 256803.	7.8	61
114	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
115	Linear and nonlinear optics of light harvesting complexes: TCL- and Bloch Equations for linear spectra and saturation dynamics. , 2007, , .		0
116	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
117	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
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