Ulrich Hohenester

List of Publications by Year
in descending order

140	6,974	61984	60623
papers	citations	43 h-index	81 g-index

141	141	141	6808
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Nanoscale electromagnetism with the boundary element method. Physical Review B, 2022, 105, .	3.2	4
2	Nanophotonic resonance modes with the nanobem toolbox. Computer Physics Communications, 2022, 276, 108337.	7.5	5
3	Fundamental Limit of Plasmonic Cathodoluminescence. Nano Letters, 2021, 21, 590-596.	9.1	15
4	Three-dimensional vectorial imaging of surface phonon polaritons. Science, 2021, 371, 1364-1367.	12.6	39
5	Imaging Strongly Coupled Plasmonâ€“Phonon Modes in Mid-Infrared Double Antennas. ACS Photonics, 2021, 8, 1293-1300.	6.6	12
6	Three dimensional vectorial imaging of surface phonon polaritons. Microscopy and Microanalysis, 2021, 27, 698-699.	0.4	0
7	Imaging Hybrid Plasmon-Phonon Modes in Mid-Infrared Antennas. Microscopy and Microanalysis, 2021, 27, 1478-1480.	0.4	0
8	The Role of Particle Size in the Dispersion Engineering of Plasmonic Arrays. Journal of Physical Chemistry C, 2020, 124, 2104-2112.	3.1	8
9	Strong Phonon-Plasmon Coupling Between Nanoscale Antennas. Microscopy and Microanalysis, 2020, 26, 1498-1500.	0.4	0
10	Nano and Quantum Optics. Graduate Texts in Physics, 2020, , .	0.2	33
11	Particle Plasmons. Graduate Texts in Physics, 2020, , 207-257.	0.2	1
12	Computational Methods in Nano Optics. Graduate Texts in Physics, 2020, , 297-339.	0.2	0
13	Photonic Local Density of States. Graduate Texts in Physics, 2020, , 259-295.	0.2	0
14	Correlation Functions. Graduate Texts in Physics, 2020, , 407-465.	0.2	0
15	Orbital Angular Momentum and Energy Loss Characterization of Plasmonic Excitations in Metallic Nanostructures in TEM. ACS Photonics, 2019, 6, 620-627.	6.6	16
16	Inelastic vibrational bulk and surface losses of swift electrons in ionic nanostructures. Physical Review B, 2018, 97, .	3.2	18
17	Making simulations with the MNPBEM toolbox big: Hierarchical matrices and iterative solvers. Computer Physics Communications, 2018, 222, 209-228.	7.5	19
18	Plasmonic Dispersion Relations and Intensity Enhancement of Metalâ€“Insulatorâ€“Metal Nanodisks. ACS Photonics, 2018, 5, 4823-4827.	6.6	25

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19	Novel Modal Approximation Scheme for Plasmonic Transmission Problems. Physical Review Letters, 2018, 121, 246802.	7.8	10
20	Excitation of long-wavelength surface optical vibrational modes in films, cubes and film/cube composite system using an atom-sized electron beam. Microscopy (Oxford, England), 2018, 67, i3-i13.	1.5	20
21	Mapping vibrational surface and bulk modes in a single nanocube. Nature, 2017, 543, 529-532.	27.8	215
22	3D Imaging of Gap Plasmons in Vertically Coupled Nanoparticles by EELS Tomography. Nano Letters, 2017, 17, 6773-6777.	9.1	31
23	Plasmonics simulations including nonlocal effects using a boundary element method approach. International Journal of Modern Physics B, 2017, 31, 1740007.	2.0	12
24	Tomographic imaging of the photonic environment of plasmonic nanoparticles. Nature Communications, 2017, 8, 37.	12.8	51
25	Mapping the local particle plasmon sensitivity with a scanning probe. Nanoscale, 2016, 8, 16449-16454.	5.6	7
26	Gap plasmonics of silver nanocube dimers. Physical Review B, 2016, 93, .	3.2	40
27	Edge Mode Coupling within a Plasmonic Nanoparticle. Nano Letters, 2016, 16, 5152-5155.	9.1	15
28	Excitonâ€“exciton annihilation and biexciton stimulated emission in graphene nanoribbons. Nature Communications, 2016, 7, 11010.	12.8	85
29	Ab initioapproach for gap plasmonics. Physical Review B, 2016, 94, .	3.2	14
30	Three dimensional sensitivity characterization of plasmonic nanorods for refractometric biosensors. Nanoscale, 2016, 8, 2974-2981.	5.6	9
31	Parametric-squeezing amplification of Bose-Einstein condensates. Physical Review A, 2015, 92, .	2.5	8
32	Quantum corrected model for plasmonic nanoparticles: A boundary element method implementation. Physical Review B, 2015, 91, .	3.2	36
33	Analytical Electron Tomography: Methods and Applications. Microscopy and Microanalysis, 2015, 21, 2171-2172.	0.4	0
34	Plasmon modes of a silver thin film taper probed with STEM-EELS. Optics Letters, 2015, 40, 5670.	3.3	5
35	Optical excitations of hybrid metal-semiconductor nanoparticles. European Physical Journal B, 2015, 88, 1.	1.5	5
36	Imaging nanowire plasmon modes with two-photon polymerization. Applied Physics Letters, 2015, 106, .	3.3	19

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37	Nanoantenna-Enhanced Lightâ€“Matter Interaction in Atomically Thin WS₂. ACS Photonics, 2015, 2, 1260-1265.	6.6	114
38	Plasmonics simulations with the MNPBEM toolbox: Consideration of substrates and layer structures. Computer Physics Communications, 2015, 193, 138-150.	7.5	165
39	Local refractive index sensitivity of gold nanodisks. Optics Express, 2015, 23, 10293.	3.4	15
40	Correlated 3D Nanoscale Mapping and Simulation of Coupled Plasmonic Nanoparticles. Nano Letters, 2015, 15, 7726-7730.	9.1	35
41	Nanoantenna-enhanced light-matter interaction in atomically thin WS2. , 2015, , .		0
42	Full Three-Dimensonal Reconstruction of the Dyadic Green Tensor from Electron Energy Loss Spectroscopy of Plasmonic Nanoparticles. ACS Photonics, 2015, 2, 1429-1435.	6.6	37
43	About the dynamics of strongly coupled surface plasmon polaritons and Sulforhodamine 101. , 2014, , .		0
44	A combined simulation approach using ray-tracing and finite-difference time-domain for optical systems containing refractive and diffractive optical elements. , 2014, , .		1
45	Optimal quantum control of Bose-Einstein condensates in magnetic microtraps: Comparison of gradient-ascent-pulse-engineering and Krotov optimization schemes. Physical Review A, 2014, 90, .	2.5	46
46	Probing plasmonic breathing modes optically. Applied Physics Letters, 2014, 105, 171103.	3.3	35
47	Effect of multipole excitations in electron energy-loss spectroscopy of surface plasmon modes in silver nanowires. Journal of Applied Physics, 2014, 116, 223101.	2.5	12
48	Simulating electron energy loss spectroscopy with the MNPBEM toolbox. Computer Physics Communications, 2014, 185, 1177-1187.	7.5	183
49	OCTBECâ€”A Matlab toolbox for optimal quantum control of Boseâ€“Einstein condensates. Computer Physics Communications, 2014, 185, 194-216.	7.5	24
50	A Simulation Procedure Interfacing Ray-Tracing and Finite-Difference Time-Domain Methods for a Combined Simulation of Diffractive and Refractive Optical Elements. Journal of Lightwave Technology, 2014, 32, 1054-1062.	4.6	10
51	Optical near-field excitation at commercial scanning probe microscopy tips: a theoretical and experimental investigation. Physical Chemistry Chemical Physics, 2014, 16, 2289-2296.	2.8	40
52	Plasmon Mapping in Au@Ag Nanocube Assemblies. Journal of Physical Chemistry C, 2014, 118, 15356-15362.	3.1	45
53	Morphing a Plasmonic Nanodisk into a Nanotriangle. Nano Letters, 2014, 14, 4810-4815.	9.1	112
54	Near-field and SERS enhancement from rough plasmonic nanoparticles. Physical Review B, 2014, 89, .	3.2	35

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55	Multiple interfacing between classical ray-tracing and wave-optical simulation approaches: a study on applicability and accuracy. Optics Express, 2014, 22, 16048.	3.4	10
56	Universal dispersion of surface plasmons in flat nanostructures. Nature Communications, 2014, 5, 3604.	12.8	96
57	Directional coupling of plasmonic disk modes to an edge waveguide. , 2014, , .		1
58	Electron energy-loss spectroscopy of surface plasmon modes in silver nanowires: reconciling experiment and theory. , 2014, , .		0
59	Multi-scale simulation of an optical device using a novel approach for combining ray-tracing and FDTD. Proceedings of SPIE, 2013, , .	0.8	11
60	Absence of mutual polariton scattering for strongly coupled surface plasmon polaritons and dye molecules with a large Stokes shift. Physical Review B, 2013, 88, .	3.2	18
61	Spectral Modifications and Polarization Dependent Coupling in Tailored Assemblies of Quantum Dots and Plasmonic Nanowires. Nano Letters, 2013, 13, 4257-4262.	9.1	35
62	Surface plasmons in doped topological insulators. Physical Review B, 2013, 88, .	3.2	20
63	Ultrafast Strong-Field Photoemission from Plasmonic Nanoparticles. Nano Letters, 2013, 13, 674-678.	9.1	238
64	Tomography of Particle Plasmon Fields from Electron Energy Loss Spectroscopy. Physical Review Letters, 2013, 111, 076801.	7.8	56
65	Vibrational state inversion of a Boseâ€“Einstein condensate: optimal control and state tomography. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 104012.	1.5	54
66	Optimal quantum control of Bose-Einstein condensates in magnetic microtraps: Consideration of filter effects. Physical Review A, 2013, 88, .	2.5	18
67	Plasmonic Silver Nanorod Sensitivity: Experiment and Simple Theoretical Treatment. , 2013, , .		0
68	A simulation procedure for light-matter interaction at different length scales. , 2012, , .		1
69	Nonlinear pulse propagation phenomena in ion-doped dielectric crystals. Physical Review A, 2012, 85, .	2.5	3
70	Dynamics of parametric matter-wave amplification. Physical Review A, 2012, 86, .	2.5	14
71	Dark Plasmonic Breathing Modes in Silver Nanodisks. Nano Letters, 2012, 12, 5780-5783.	9.1	198
72	Tailoring Spatiotemporal Light Confinement in Single Plasmonic Nanoantennas. Nano Letters, 2012, 12, 992-996.	9.1	162

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73	MNPBEM â€“ A Matlab toolbox for the simulation of plasmonic nanoparticles. Computer Physics Communications, 2012, 183, 370-381.	7.5	644
74	Highly Sensitive Plasmonic Silver Nanorods. ACS Nano, 2011, 5, 6880-6885.	14.6	135
75	Mach-Zehnder interferometry with interacting trapped Bose-Einstein condensates. Physical Review A, 2011, 84, .	2.5	28
76	Influence of surface roughness on the optical properties of plasmonic nanoparticles. Physical Review B, 2011, 83, .	3.2	77
77	Twin-atom beams. Nature Physics, 2011, 7, 608-611.	16.7	155
78	Mapping excitons in semiconducting carbon nanotubes with plasmonic nanoparticles. Physical Review B, 2011, 83, .	3.2	4
79	Controlled cavity-assisted generation of single and entangled photons in semiconductor quantum dots. European Physical Journal B, 2011, 82, 29-35.	1.5	5
80	The Shapiro effect in atomchip-based bosonic Josephson junctions. New Journal of Physics, 2011, 13, 065026.	2.9	26
81	The Optimal Aspect Ratio of Gold Nanorods for Plasmonic Bio-sensing. Plasmonics, 2010, 5, 161-167.	3.4	430
82	Shaking the condensates: Optimal number squeezing in the dynamic splitting of a Boseâ€“Einstein condensate. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 432-435.	2.7	1
83	Superresolution MoirÃ© Mapping of Particle Plasmon Modes. Physical Review Letters, 2010, 104, 143901.	7.8	29
84	Atom interferometry with trapped Boseâ€“Einstein condensates: impact of atomâ€“atom interactions. New Journal of Physics, 2010, 12, 065036.	2.9	60
85	Cavity quantum electrodynamics with semiconductor quantum dots: Role of phonon-assisted cavity feeding. Physical Review B, 2010, 81, .	3.2	94
86	Optimal control of number squeezing in trapped Bose-Einstein condensates. Physical Review A, 2009, 80, .	2.5	60
87	Optimizing number squeezing when splitting a mesoscopic condensate. Physical Review A, 2009, 79, .	2.5	84
88	Electron-Energy-Loss Spectra of Plasmonic Nanoparticles. Physical Review Letters, 2009, 103, 106801.	7.8	165
89	Entangled photons from quantum dot devices: efficiency of postâ€selection. Physica Status Solidi (B): Basic Research, 2009, 246, 289-292.	1.5	2
90	Optimizing atom interferometry on atom chips. Fortschritte Der Physik, 2009, 57, 1121-1132.	4.4	6

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91	High-resolution surface plasmon imaging of gold nanoparticles by energy-filtered transmission electron microscopy. Physical Review B, 2009, 79, .	3.2	154
92	Phonon-assisted transitions from quantum dot excitons to cavity photons. Physical Review B, 2009, 80, .	3.2	112
93	Fewâ€particle electron dynamics in coupled quantum dots with phonon interaction. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 158-161.	0.8	1
94	Exact biexciton binding energy in carbon nanotubes using a quantum Monte Carlo approach. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 1997-1999.	2.7	4
95	Interaction of Single Molecules With Metallic Nanoparticles. IEEE Journal of Selected Topics in Quantum Electronics, 2008, 14, 1430-1440.	2.9	55
96	Strong coupling between a metallic nanoparticle and a single molecule. Physical Review B, 2008, 77, .	3.2	205
97	Entangled photon sources based on semiconductor quantum dots: The role of pure dephasing. Physical Review B, 2008, 78, .	3.2	30
98	FÃ¶rster-Type Resonant Energy Transfer Influenced by Metal Nanoparticles. Nano Letters, 2008, 8, 4128-4133.	9.1	117
99	Optimal quantum control of Bose-Einstein condensates in magnetic microtraps. Physical Review A, 2007, 75, .	2.5	96
100	Phonon-Assisted Decoherence in the Production of Polarization-Entangled Photons in a Single Semiconductor Quantum Dot. Physical Review Letters, 2007, 99, 047402.	7.8	43
101	Spin-flip lifetimes in superconducting atom chips: Bardeen-Cooper-Schrieffer versus Eliashberg theory. Physical Review A, 2007, 76, .	2.5	44
102	Signatures of molecular correlations in few-electron dynamics of coupled quantum dots. Physical Review B, 2007, 76, .	3.2	2
103	Biexciton Stability in Carbon Nanotubes. Physical Review Letters, 2007, 99, 126806.	7.8	44
104	Quantum control of polaron states in semiconductor quantum dots. Journal of Physics B: Atomic, Molecular and Optical Physics, 2007, 40, S315-S330.	1.5	22
105	Tailoring light emission properties of fluorophores by coupling to resonance-tuned metallic nanostructures. Physical Review B, 2007, 75, .	3.2	80
106	Optical near-field mapping of bright and dark quantum dot states. AIP Conference Proceedings, 2007, , .	0.4	0
107	Optical near-field mapping of bright and dark quantum dot states. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 35, 229-233.	2.7	1
108	Adiabatic passage schemes in coupled semiconductor nanostructures. Optics Communications, 2006, 264, 426-434.	2.1	22

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109	Spin Decoherence in Superconducting Atom Chips. Physical Review Letters, 2006, 97, 070401.	7.8	49
110	Optimal quantum gates for semiconductor qubits. Physical Review B, 2006, 74, .	3.2	36
111	Optimal quantum control of electronâ€“phonon scatterings in artificial atoms. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 29, 320-324.	2.7	2
112	Dark-State Luminescence of Macroatoms at the Near Field. Physical Review Letters, 2005, 95, 216802.	7.8	21
113	Entanglement distillation by adiabatic passage in coupled quantum dots. Physical Review B, 2005, 72, .	3.2	28
114	Surface plasmon resonances of single and coupled metallic nanoparticles: A boundary integral method approach. Physical Review B, 2005, 72, .	3.2	127
115	Collective Properties of Electrons and Holes in Coupled Quantum Dots. , 2005, , 269-283.		1
116	Optically triggered spin entanglement of electrons in semiconductors. Semiconductor Science and Technology, 2004, 19, S403-S404.	2.0	0
117	Quantum Control of Electron-Phonon Scatterings in Artificial Atoms. Physical Review Letters, 2004, 92, 196801.	7.8	57
118	Optical near-field mapping of excitons and biexcitons in naturally occurring semiconductor quantum dots. Applied Physics Letters, 2004, 84, 3963-3965.	3.3	23
119	Entanglement-buildup through charged-exciton decay in a semiconductor quantum dot. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 466-469.	0.8	0
120	First-principles calculation of hot-electron scattering in metals. Physical Review B, 2004, 70, .	3.2	101
121	Four-wave mixing in coupled semiconductor quantum dots. Solid State Communications, 2003, 125, 529-532.	1.9	1
122	Hot-electron lifetimes in metals:â€ƒA combinedab initiocalculation and ballistic electron emission spectroscopy analysis. Physical Review B, 2003, 68, .	3.2	29
123	A turnstile electron-spin entangler in semiconductors. Applied Physics Letters, 2003, 83, 153-155.	3.3	3
124	High-Finesse Optical Quantum Gates for Electron Spins in Artificial Molecules. Physical Review Letters, 2003, 90, 206802.	7.8	91
125	Single scatterings in single artificial atoms: Quantum coherence and entanglement. Physical Review B, 2003, 68, .	3.2	7
126	Self-induced transparency in semiconductor quantum dots. Physical Review B, 2002, 65, .	3.2	44

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127	Optimal quantum control in nanostructures: Theory and application to a generic three-level system. Physical Review A, 2002, 66, .	2.5	49
128	Massive creation of entangled exciton states in semiconductor quantum dots. Physical Review B, 2002, 66, .	3.2	11
129	Electron-hole localization in coupled quantum dots. Physical Review B, 2002, 65, .	3.2	41
130	Monitoring single scattering events in single quantum dots. Solid State Communications, 2001, 118, 151-155.	1.9	5
131	Quantum phases in artificial molecules. Solid State Communications, 2001, 119, 309-321.	1.9	49
132	Ab initio calculation of optical absorption in semiconductors: A density-matrix description. Physical Review B, 2001, 64, .	3.2	9
133	Optical Spectroscopy on Single Quantum Dots: Charged Excitons. , 2001, , 63-74.		3
134	Theoretical analysis of the optical spectra of InxGa1â^'xN quantum dots in InyGa1â^'yN layers. Physica E: Low-Dimensional Systems and Nanostructures, 2000, 7, 934-938.	2.7	2
135	Effects of few-particle interaction on the atomiclike levels of a single strain-induced quantum dot. Physical Review B, 2000, 62, 1592-1595.	3.2	33
136	Coherent population transfer in coupled semiconductor quantum dots. Applied Physics Letters, 2000, 77, 1864.	3.3	69
137	Few-Particle Effects in Semiconductor Quantum Dots: Observation of Multicharged Excitons. Physical Review Letters, 2000, 84, 5648-5651.	7.8	239
138	Exploiting exciton-exciton interactions in semiconductor quantum dots for quantum-information processing. Physical Review B, 2000, 62, R2263-R2266.	3.2	163
139	Excitonic and biexcitonic effects in the coherent optical response of semiconductor quantum dots. Physica B: Condensed Matter, 1999, 272, 1-4.	2.7	6
140	Optical spectra of nitride quantum dots: Quantum confinement and electronâ€“hole coupling. Applied Physics Letters, 1999, 75, 3449-3451.	3.3	17