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	MNPBEM â€“ A Matlab toolbox for the simulation of plasmonic nanoparticles. Computer Physics Communications, 2012, 183, 370-381.	7.5	644
2	The Optimal Aspect Ratio of Gold Nanorods for Plasmonic Bio-sensing. Plasmonics, 2010, 5, 161-167.	3.4	430
3	Few-Particle Effects in Semiconductor Quantum Dots: Observation of Multicharged Excitons. Physical Review Letters, 2000, 84, 5648-5651.	7.8	239
4	Ultrafast Strong-Field Photoemission from Plasmonic Nanoparticles. Nano Letters, 2013, 13, 674-678.	9.1	238
5	Mapping vibrational surface and bulk modes in a single nanocube. Nature, 2017, 543, 529-532.	27.8	215
6	Strong coupling between a metallic nanoparticle and a single molecule. Physical Review B, 2008, 77, .	3.2	205
7	Dark Plasmonic Breathing Modes in Silver Nanodisks. Nano Letters, 2012, 12, 5780-5783.	9.1	198
8	Simulating electron energy loss spectroscopy with the MNPBEM toolbox. Computer Physics Communications, 2014, 185, 1177-1187.	7.5	183
9	Electron-Energy-Loss Spectra of Plasmonic Nanoparticles. Physical Review Letters, 2009, 103, 106801.	7.8	165
10	Plasmonics simulations with the MNPBEM toolbox: Consideration of substrates and layer structures. Computer Physics Communications, 2015, 193, 138-150.	7.5	165
11	Exploiting exciton-exciton interactions in semiconductor quantum dots for quantum-information processing. Physical Review B, 2000, 62, R2263-R2266.	3.2	163
12	Tailoring Spatiotemporal Light Confinement in Single Plasmonic Nanoantennas. Nano Letters, 2012, 12, 992-996.	9.1	162
13	Twin-atom beams. Nature Physics, 2011, 7, 608-611.	16.7	155
14	High-resolution surface plasmon imaging of gold nanoparticles by energy-filtered transmission electron microscopy. Physical Review B, 2009, 79, .	3.2	154
15	Highly Sensitive Plasmonic Silver Nanorods. ACS Nano, 2011, 5, 6880-6885.	14.6	135
16	Surface plasmon resonances of single and coupled metallic nanoparticles: A boundary integral method approach. Physical Review B, 2005, 72, .	3.2	127
17	FÃ¶rster-Type Resonant Energy Transfer Influenced by Metal Nanoparticles. Nano Letters, 2008, 8, 4128-4133.	9.1	117
18	Nanoantenna-Enhanced Lightâ€“Matter Interaction in Atomically Thin WS₂. ACS Photonics, 2015, 2, 1260-1265.	6.6	114

#	Article	IF	Citations
19	Phonon-assisted transitions from quantum dot excitons to cavity photons. Physical Review B, 2009, 80, .	3.2	112
20	Morphing a Plasmonic Nanodisk into a Nanotriangle. Nano Letters, 2014, 14, 4810-4815.	9.1	112
21	First-principles calculation of hot-electron scattering in metals. Physical Review B, 2004, 70, .	3.2	101
22	Optimal quantum control of Bose-Einstein condensates in magnetic microtraps. Physical Review A, 2007, 75, .	2.5	96
23	Universal dispersion of surface plasmons in flat nanostructures. Nature Communications, 2014, 5, 3604.	12.8	96
24	Cavity quantum electrodynamics with semiconductor quantum dots: Role of phonon-assisted cavity feeding. Physical Review B, 2010, 81, .	3.2	94
25	High-Finesse Optical Quantum Gates for Electron Spins in Artificial Molecules. Physical Review Letters, 2003, 90, 206802.	7.8	91
26	Excitonâ€“exciton annihilation and biexciton stimulated emission in graphene nanoribbons. Nature Communications, 2016, 7, 11010.	12.8	85
27	Optimizing number squeezing when splitting a mesoscopic condensate. Physical Review A, 2009, 79, .	2.5	84
28	Tailoring light emission properties of fluorophores by coupling to resonance-tuned metallic nanostructures. Physical Review B, 2007, 75, .	3.2	80
29	Influence of surface roughness on the optical properties of plasmonic nanoparticles. Physical Review B, 2011, 83, .	3.2	77
30	Coherent population transfer in coupled semiconductor quantum dots. Applied Physics Letters, 2000, 77, 1864.	3.3	69
31	Optimal control of number squeezing in trapped Bose-Einstein condensates. Physical Review A, 2009, 80, .	2.5	60
32	Atom interferometry with trapped Boseâ€“Einstein condensates: impact of atomâ€“atom interactions. New Journal of Physics, 2010, 12, 065036.	2.9	60
33	Quantum Control of Electron-Phonon Scatterings in Artificial Atoms. Physical Review Letters, 2004, 92, 196801.	7.8	57
34	Tomography of Particle Plasmon Fields from Electron Energy Loss Spectroscopy. Physical Review Letters, 2013, 111, 076801.	7.8	56
35	Interaction of Single Molecules With Metallic Nanoparticles. IEEE Journal of Selected Topics in Quantum Electronics, 2008, 14, 1430-1440.	2.9	55
36	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

#	Article	IF	Citations
37	Tomographic imaging of the photonic environment of plasmonic nanoparticles. Nature Communications, 2017, 8, 37.	12.8	51
38	Quantum phases in artificial molecules. Solid State Communications, 2001, 119, 309-321.	1.9	49
39	Optimal quantum control in nanostructures: Theory and application to a generic three-level system. Physical Review A, 2002, 66, .	2.5	49
40	Spin Decoherence in Superconducting Atom Chips. Physical Review Letters, 2006, 97, 070401.	7.8	49
41	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
42	Plasmon Mapping in Au@Ag Nanocube Assemblies. Journal of Physical Chemistry C, 2014, 118, 15356-15362.	3.1	45
43	Self-induced transparency in semiconductor quantum dots. Physical Review B, 2002, 65, .	3.2	44
44	Spin-flip lifetimes in superconducting atom chips: Bardeen-Cooper-Schrieffer versus Eliashberg theory. Physical Review A, 2007, 76, .	2.5	44
45	Biexciton Stability in Carbon Nanotubes. Physical Review Letters, 2007, 99, 126806.	7.8	44
46	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
47	Electron-hole localization in coupled quantum dots. Physical Review B, 2002, 65, .	3.2	41
48	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
49	Gap plasmonics of silver nanocube dimers. Physical Review B, 2016, 93, .	3.2	40
50	Three-dimensional vectorial imaging of surface phonon polaritons. Science, 2021, 371, 1364-1367.	12.6	39
51	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
52	Optimal quantum gates for semiconductor qubits. Physical Review B, 2006, 74, .	3.2	36
53	Quantum corrected model for plasmonic nanoparticles: A boundary element method implementation. Physical Review B, 2015, 91, .	3.2	36
54	Spectral Modifications and Polarization Dependent Coupling in Tailored Assemblies of Quantum Dots and Plasmonic Nanowires. Nano Letters, 2013, 13, 4257-4262.	9.1	35

#	Article	IF	Citations
55	Probing plasmonic breathing modes optically. Applied Physics Letters, 2014, 105, 171103.	3.3	35
56	Near-field and SERS enhancement from rough plasmonic nanoparticles. Physical Review B, 2014, 89, .	3.2	35
57	Correlated 3D Nanoscale Mapping and Simulation of Coupled Plasmonic Nanoparticles. Nano Letters, 2015, 15, 7726-7730.	9.1	35
58	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
59	Nano and Quantum Optics. Graduate Texts in Physics, 2020, , .	0.2	33
60	3D Imaging of Gap Plasmons in Vertically Coupled Nanoparticles by EELS Tomography. Nano Letters, 2017, 17, 6773-6777.	9.1	31
61	Entangled photon sources based on semiconductor quantum dots: The role of pure dephasing. Physical Review B, 2008, 78, .	3.2	30
62	Hot-electron lifetimes in metals:â€ƒA combinedab initiocalculation and ballistic electron emission spectroscopy analysis. Physical Review B, 2003, 68, .	3.2	29
63	Superresolution MoirÃ© Mapping of Particle Plasmon Modes. Physical Review Letters, 2010, 104, 143901.	7.8	29
64	Entanglement distillation by adiabatic passage in coupled quantum dots. Physical Review B, 2005, 72, .	3.2	28
65	Mach-Zehnder interferometry with interacting trapped Bose-Einstein condensates. Physical Review A, 2011, 84, .	2.5	28
66	The Shapiro effect in atomchip-based bosonic Josephson junctions. New Journal of Physics, 2011, 13, 065026.	2.9	26
67	Plasmonic Dispersion Relations and Intensity Enhancement of Metalâ€“Insulatorâ€“Metal Nanodisks. ACS Photonics, 2018, 5, 4823-4827.	6.6	25
68	OCTBECâ€”A Matlab toolbox for optimal quantum control of Boseâ€“Einstein condensates. Computer Physics Communications, 2014, 185, 194-216.	7.5	24
69	Optical near-field mapping of excitons and biexcitons in naturally occurring semiconductor quantum dots. Applied Physics Letters, 2004, 84, 3963-3965.	3.3	23
70	Adiabatic passage schemes in coupled semiconductor nanostructures. Optics Communications, 2006, 264, 426-434.	2.1	22
71	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
72	Dark-State Luminescence of Macroatoms at the Near Field. Physical Review Letters, 2005, 95, 216802.	7.8	21

#	Article	IF	Citations
73	Surface plasmons in doped topological insulators. Physical Review B, 2013, 88, .	3.2	20
74	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
75	Imaging nanowire plasmon modes with two-photon polymerization. Applied Physics Letters, 2015, 106, .	3.3	19
76	Making simulations with the MNPBEM toolbox big: Hierarchical matrices and iterative solvers. Computer Physics Communications, 2018, 222, 209-228.	7.5	19
77	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
78	Optimal quantum control of Bose-Einstein condensates in magnetic microtraps: Consideration of filter effects. Physical Review A, 2013, 88, .	2.5	18
79	Inelastic vibrational bulk and surface losses of swift electrons in ionic nanostructures. Physical Review B, 2018, 97, .	3.2	18
80	Optical spectra of nitride quantum dots: Quantum confinement and electronâ€“hole coupling. Applied Physics Letters, 1999, 75, 3449-3451.	3.3	17
81	Orbital Angular Momentum and Energy Loss Characterization of Plasmonic Excitations in Metallic Nanostructures in TEM. ACS Photonics, 2019, 6, 620-627.	6.6	16
82	Local refractive index sensitivity of gold nanodisks. Optics Express, 2015, 23, 10293.	3.4	15
83	Edge Mode Coupling within a Plasmonic Nanoparticle. Nano Letters, 2016, 16, 5152-5155.	9.1	15
84	Fundamental Limit of Plasmonic Cathodoluminescence. Nano Letters, 2021, 21, 590-596.	9.1	15
85	Dynamics of parametric matter-wave amplification. Physical Review A, 2012, 86, .	2.5	14
86	Ab initioapproach for gap plasmonics. Physical Review B, 2016, 94, .	3.2	14
87	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
88	Plasmonics simulations including nonlocal effects using a boundary element method approach. International Journal of Modern Physics B, 2017, 31, 1740007.	2.0	12
89	Imaging Strongly Coupled Plasmonâ€“Phonon Modes in Mid-Infrared Double Antennas. ACS Photonics, 2021, 8, 1293-1300.	6.6	12
90	Massive creation of entangled exciton states in semiconductor quantum dots. Physical Review B, 2002, 66, .	3.2	11

#	Article	IF	Citations
91	Multi-scale simulation of an optical device using a novel approach for combining ray-tracing and FDTD. Proceedings of SPIE, 2013, , .	0.8	11
92	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
93	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
94	Novel Modal Approximation Scheme for Plasmonic Transmission Problems. Physical Review Letters, 2018, 121, 246802.	7.8	10
95	Ab initio calculation of optical absorption in semiconductors: A density-matrix description. Physical Review B, 2001, 64, .	3.2	9
96	Three dimensional sensitivity characterization of plasmonic nanorods for refractometric biosensors. Nanoscale, 2016, 8, 2974-2981.	5.6	9
97	Parametric-squeezing amplification of Bose-Einstein condensates. Physical Review A, 2015, 92, .	2.5	8
98	The Role of Particle Size in the Dispersion Engineering of Plasmonic Arrays. Journal of Physical Chemistry C, 2020, 124, 2104-2112.	3.1	8
99	Single scatterings in single artificial atoms: Quantum coherence and entanglement. Physical Review B, 2003, 68, .	3.2	7
100	Mapping the local particle plasmon sensitivity with a scanning probe. Nanoscale, 2016, 8, 16449-16454.	5.6	7
101	Excitonic and biexcitonic effects in the coherent optical response of semiconductor quantum dots. Physica B: Condensed Matter, 1999, 272, 1-4.	2.7	6
102	Optimizing atom interferometry on atom chips. Fortschritte Der Physik, 2009, 57, 1121-1132.	4.4	6
103	Monitoring single scattering events in single quantum dots. Solid State Communications, 2001, 118, 151-155.	1.9	5
104	Controlled cavity-assisted generation of single and entangled photons in semiconductor quantum dots. European Physical Journal B, 2011, 82, 29-35.	1.5	5
105	Plasmon modes of a silver thin film taper probed with STEM-EELS. Optics Letters, 2015, 40, 5670.	3.3	5
106	Optical excitations of hybrid metal-semiconductor nanoparticles. European Physical Journal B, 2015, 88, 1.	1.5	5
107	Nanophotonic resonance modes with the nanobem toolbox. Computer Physics Communications, 2022, 276, 108337.	7.5	5
108	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

#	Article	IF	Citations
109	Mapping excitons in semiconducting carbon nanotubes with plasmonic nanoparticles. Physical Review B, 2011, 83, .	3.2	4
110	Nanoscale electromagnetism with the boundary element method. Physical Review B, 2022, 105, .	3.2	4
111	A turnstile electron-spin entangler in semiconductors. Applied Physics Letters, 2003, 83, 153-155.	3.3	3
112	Nonlinear pulse propagation phenomena in ion-doped dielectric crystals. Physical Review A, 2012, 85, .	2.5	3
113	Optical Spectroscopy on Single Quantum Dots: Charged Excitons. , 2001, , 63-74.		3
114	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
115	Optimal quantum control of electronâ€“phonon scatterings in artificial atoms. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 29, 320-324.	2.7	2
116	Signatures of molecular correlations in few-electron dynamics of coupled quantum dots. Physical Review B, 2007, 76, .	3.2	2
117	Entangled photons from quantum dot devices: efficiency of postâ€selection. Physica Status Solidi (B): Basic Research, 2009, 246, 289-292.	1.5	2
118	Four-wave mixing in coupled semiconductor quantum dots. Solid State Communications, 2003, 125, 529-532.	1.9	1
119	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
120	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
121	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
122	A simulation procedure for light-matter interaction at different length scales. , 2012, , .		1
123	A combined simulation approach using ray-tracing and finite-difference time-domain for optical systems containing refractive and diffractive optical elements. , 2014, , .		1
124	Collective Properties of Electrons and Holes in Coupled Quantum Dots. , 2005, , 269-283.		1
125	Particle Plasmons. Graduate Texts in Physics, 2020, , 207-257.	0.2	1
126	Directional coupling of plasmonic disk modes to an edge waveguide. , 2014, , .		1

#	Article	IF	Citations
127	Optically triggered spin entanglement of electrons in semiconductors. Semiconductor Science and Technology, 2004, 19, S403-S404.	2.0	0
128	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
129	Optical near-field mapping of bright and dark quantum dot states. AIP Conference Proceedings, 2007, , .	0.4	0
130	Plasmonic Silver Nanorod Sensitivity: Experiment and Simple Theoretical Treatment. , 2013, , .		0
131	About the dynamics of strongly coupled surface plasmon polaritons and Sulforhodamine 101. , 2014, , .		0
132	Analytical Electron Tomography: Methods and Applications. Microscopy and Microanalysis, 2015, 21, 2171-2172.	0.4	0
133	Nanoantenna-enhanced light-matter interaction in atomically thin WS2. , 2015, , .		0
134	Strong Phonon-Plasmon Coupling Between Nanoscale Antennas. Microscopy and Microanalysis, 2020, 26, 1498-1500.	0.4	0
135	Three dimensional vectorial imaging of surface phonon polaritons. Microscopy and Microanalysis, 2021, 27, 698-699.	0.4	0
136	Imaging Hybrid Plasmon-Phonon Modes in Mid-Infrared Antennas. Microscopy and Microanalysis, 2021, 27, 1478-1480.	0.4	0
137	Electron energy-loss spectroscopy of surface plasmon modes in silver nanowires: reconciling experiment and theory. , 2014, , .		0
138	Computational Methods in Nano Optics. Graduate Texts in Physics, 2020, , 297-339.	0.2	0
139	Photonic Local Density of States. Graduate Texts in Physics, 2020, , 259-295.	0.2	0
140	Correlation Functions. Graduate Texts in Physics, 2020, , 407-465.	0.2	0