Thomas A Klar

List of Publications by Year
in descending order

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122 papers	13,150 citations	53794 45 h-index	49909 87 g-index
124 all docs	124 docs citations	124 times ranked	15783 citing authors

#	Article	IF	Citations
1	Fluorescence microscopy with diffraction resolution barrier broken by stimulated emission. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 8206-8210.	7.1	1,585
2	Fluorescence Quenching of Dye Molecules near Gold Nanoparticles: Radiative and Nonradiative Effects. Physical Review Letters, 2002, 89, 203002.	7.8	1,141
3	Properties and Applications of Colloidal Nonspherical Noble Metal Nanoparticles. Advanced Materials, 2010, 22, 1805-1825.	21.0	909
4	Surface-Plasmon Resonances in Single Metallic Nanoparticles. Physical Review Letters, 1998, 80, 4249-4252.	7.8	746
5	Subdiffraction resolution in far-field fluorescence microscopy. Optics Letters, 1999, 24, 954.	3.3	734
6	Biomolecular Recognition Based on Single Gold Nanoparticle Light Scattering. Nano Letters, 2003, 3, 935-938.	9.1	711
7	Gold Nanoparticles Quench Fluorescence by Phase Induced Radiative Rate Suppression. Nano Letters, 2005, 5, 585-589.	9.1	704
8	Aqueous Synthesis of Thiol-Capped CdTe Nanocrystals:â€‰ State-of-the-Art. Journal of Physical Chemistry C, 2007, 111, 14628-14637.	3.1	703
9	Plasmon emission in photoexcited gold nanoparticles. Physical Review B, 2004, 70, .	3.2	394
10	Shaping Emission Spectra of Fluorescent Molecules with Single Plasmonic Nanoresonators. Physical Review Letters, 2008, 100, 203002.	7.8	391
11	Label-free Biosensing Based on Single Gold Nanostars as Plasmonic Transducers. ACS Nano, 2010, 4, 6318-6322.	14.6	300
12	Exciton Recycling in Graded Gap Nanocrystal Structures. Nano Letters, 2004, 4, 1599-1603.	9.1	267
13	Fluorescence Enhancement in Hot Spots of AFM-Designed Gold Nanoparticle Sandwiches. Nano Letters, 2008, 8, 485-490.	9.1	267
14	Gold Nanoshells Improve Single Nanoparticle Molecular Sensors. Nano Letters, 2004, 4, 1853-1857.	9.1	246
15	Bright White-Light Emission from Semiconductor Nanocrystals: by Chance and by Design. Advanced Materials, 2007, 19, 569-572.	21.0	233
16	Breaking Abbeâ€™s diffraction resolution limit in fluorescence microscopy with stimulated emission depletion beams of various shapes. Physical Review E, 2001, 64, 066613.	2.1	228
17	Energy transfer with semiconductor nanocrystals. Journal of Materials Chemistry, 2009, 19, 1208-1221.	6.7	204
18	Self-Assembled Binary Superlattices of CdSe and Au Nanocrystals and Their Fluorescence Properties. Journal of the American Chemical Society, 2008, 130, 3274-3275.	13.7	197

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19	Long-Range Fluorescence Quenching by Gold Nanoparticles in a Sandwich Immunoassay for Cardiac Troponin T. Nano Letters, 2009, 9, 4558-4563.	9.1	191
20	Electrically controlled light scattering with single metal nanoparticles. Applied Physics Letters, 2002, 81, 171-173.	3.3	178
21	120 nm resolution and 55 nm structure size in STED-lithography. Optics Express, 2013, 21, 10831.	3.4	154
22	Gold NanoStoves for Microsecond DNA Melting Analysis. Nano Letters, 2008, 8, 619-623.	9.1	144
23	Fast energy transfer in layer-by-layer assembled CdTe nanocrystal bilayers. Applied Physics Letters, 2004, 84, 2904-2906.	3.3	130
24	Negative-Index Metamaterials: Going Optical. IEEE Journal of Selected Topics in Quantum Electronics, 2006, 12, 1106-1115.	2.9	117
25	Super-Efficient Exciton Funneling in Layer-by-Layer Semiconductor Nanocrystal Structures. Advanced Materials, 2005, 17, 769-773.	21.0	111
26	Negative index metamaterial combining magnetic resonators with metal films. Optics Express, 2006, 14, 7872.	3.4	104
27	A Low Threshold Polymer Laser Based on Metallic Nanoparticle Gratings. Advanced Materials, 2003, 15, 1726-1729.	21.0	92
28	Typeâ€I and Typeâ€II Nanoscale Heterostructures Based on CdTe Nanocrystals: A Comparative Study. Small, 2008, 4, 1148-1152.	10.0	91
29	High-Rate Unidirectional Energy Transfer in Directly Assembled CdTe Nanocrystal Bilayers. Small, 2005, 1, 392-395.	10.0	87
30	Charge Separation in Type II Tunneling Structures of Close-packed CdTe and CdSe Nanocrystals. Nano Letters, 2008, 8, 1482-1485.	9.1	78
31	Spectral and Directional Reshaping of Fluorescence in Large Area Self-Assembled Plasmonicâ€“Photonic Crystals. Nano Letters, 2013, 13, 378-386.	9.1	76
32	Voltage-Induced Adsorbate Damping of Single Gold Nanorod Plasmons in Aqueous Solution. Nano Letters, 2012, 12, 1247-1252.	9.1	75
33	Semiconductor Nanocrystals Photosensitize C60Crystals. Nano Letters, 2006, 6, 1559-1563.	9.1	71
34	Moving Nanoparticles with Raman Scattering. Nano Letters, 2007, 7, 2753-2757.	9.1	68
35	Energy Transfer in Solution-Based Clusters of CdTe Nanocrystals Electrostatically Bound by Calcium Ions. Journal of Physical Chemistry C, 2008, 112, 14589-14594.	3.1	67
36	Radiative and Nonradiative Rates of Phosphors Attached to Gold Nanoparticles. Nano Letters, 2007, 7, 1941-1946.	9.1	61

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37	Gold nanostars for random lasing enhancement. Optics Express, 2015, 23, 15152.	3.4	61
38	Optical Sensing of Small Ions with Colloidal Nanoparticles. Chemistry of Materials, 2012, 24, 738-745.	6.7	60
39	Plasmonic Nanostars as Efficient Broadband Scatterers for Random Lasing. ACS Photonics, 2016, 3, 919-923.	6.6	58
40	DNA Melting in Gold Nanostove Clusters. Journal of Physical Chemistry C, 2010, 114, 7401-7411.	3.1	50
41	Optical Plasmons of Individual Gold Nanosponges. ACS Photonics, 2015, 2, 1436-1442.	6.6	50
42	Random Lasing with Systematic Threshold Behavior in Films of CdSe/CdS Core/Thick-Shell Colloidal Quantum Dots. ACS Nano, 2015, 9, 9792-9801.	14.6	49
43	Anticorrelation of Photoluminescence from Gold Nanoparticle Dimers with Hot-Spot Intensity. Nano Letters, 2016, 16, 7203-7209.	9.1	48
44	Stimulated Emission Depletion Lithography with Mercapto-Functional Polymers. ACS Nano, 2016, 10, 1954-1959.	14.6	48
45	Sub-Abbe resolution: from STED microscopy to STED lithography. Physica Scripta, 2014, T162, 014049.	2.5	47
46	Performance Boost of Organic Lightâ€Emitting Diodes with Plasmonic Nanostars. Advanced Optical Materials, 2016, 4, 772-781.	7.3	45
47	Frequency domain photoacoustic and fluorescence microscopy. Biomedical Optics Express, 2016, 7, 2692.	2.9	44
48	Nano-Anchors with Single Protein Capacity Produced with STED Lithography. Nano Letters, 2013, 13, 5672-5678.	9.1	42
49	Stimulated emission depletion microscopy with an offset depleting beam. Applied Physics Letters, 2001, 78, 393-395.	3.3	41
50	Ultrafast dynamics microscopy. Applied Physics Letters, 2000, 77, 597-599.	3.3	36
51	CdSe:Te Nanocrystals:â€‰ Band-Edge versus Te-Related Emission. Journal of Physical Chemistry C, 2007, 111, 2974-2979.	3.1	35
52	Label free optical sensor for Avidin based on single gold nanoparticles functionalized with aptamers. Journal of Biophotonics, 2009, 2, 227-231.	2.3	33
53	Dual Channel Microfluidics for Mimicking the Bloodâ€“Brain Barrier. ACS Nano, 2021, 15, 2984-2993.	14.6	33
54	Competitive homogeneous digoxigenin immunoassay based on fluorescence quenching by gold nanoparticles. Analytica Chimica Acta, 2009, 646, 119-122.	5.4	32

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55	Creating Î» /3 focal holes with a Machâ€“Zehnder interferometer. Applied Physics B: Lasers and Optics, 2003, 77, 11-17.	2.2	30
56	Negative permittivity of ZnO thin films prepared from aluminum and gallium doped ceramics via pulsed-laser deposition. Applied Physics A: Materials Science and Processing, 2013, 110, 929-934.	2.3	27
57	Spasers with retardation and gain saturation: electrodynamic description of fields and optical cross-sections. Optical Materials Express, 2015, 5, 2546.	3.0	26
58	Boneâ€forming cells with pronounced spread into the third dimension in polymer scaffolds fabricated by twoâ€photon polymerization. Journal of Biomedical Materials Research - Part A, 2017, 105, 891-899.	4.0	26
59	Plasmonic Horizon in Gold Nanosponges. Nano Letters, 2018, 18, 1269-1273.	9.1	26
60	Functional photoresists for sub-diffraction stimulated emission depletion lithography. Optical Materials Express, 2017, 7, 2538.	3.0	25
61	Multiphoton-Polymerized 3D Protein Assay. ACS Applied Materials & Interfaces, 2018, 10, 1474-1479.	8.0	25
62	Bioinspired polymer microstructures for directional transport of oily liquids. Royal Society Open Science, 2017, 4, 160849.	2.4	23
63	Sub-Microsecond Molecular Thermometry Using Thermal Spin Flips. Advanced Materials, 2004, 16, 2170-2174.	21.0	18
64	Multiâ€photon structuring of native polymers: A case study for structuring natural proteins. Engineering in Life Sciences, 2013, 13, 368-375.	3.6	18
65	Dye-doped spheres with plasmonic semi-shells: Lasing modes and scattering at realistic gain levels. Beilstein Journal of Nanotechnology, 2013, 4, 974-987.	2.8	18
66	Minimal spaser threshold within electrodynamic framework: Shape, size and modes. Annalen Der Physik, 2016, 528, 295-306.	2.4	18
67	3D multiphoton lithography using biocompatible polymers with specific mechanical properties. Nanoscale Advances, 2020, 2, 2422-2428.	4.6	17
68	Optical properties of InN grown on Si(111) substrate. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 1066-1069.	1.8	16
69	Streptavidin functionalized polymer nanodots fabricated by visible light lithography. Journal of Nanobiotechnology, 2015, 13, 27.	9.1	15
70	Hybrid Multilayered Plasmonic Nanostars for Coherent Random Lasing. Journal of Physical Chemistry C, 2016, 120, 23707-23715.	3.1	15
71	Localization STED (LocSTED) microscopy with 15 nm resolution. Nanophotonics, 2020, 9, 783-792.	6.0	14
72	Localized-Plasmon Voltammetry to Detect pH Dependent Gold Oxidation. Journal of Physical Chemistry C, 2018, 122, 4565-4571.	3.1	12

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73	Proteins on Supported Lipid Bilayers Diffusing around Proteins Fixed on Acrylate Anchors. Analytical Chemistry, 2018, 90, 12372-12376.	6.5	12
74	Reply to â€œComment on â€˜Gold Nanoshells Improve Single Nanoparticle Molecular Sensors'â€• Nano Letters, 2005, 5, 811-812.	9.1	11
75	Plasmon-Assisted Direction- and Polarization-Sensitive Organic Thin-Film Detector. Nanomaterials, 2020, 10, 1866.	4.1	10
76	Streptavidin Reduces Oxygen Quenching of Biotinylated Ruthenium(II) and Palladium(II) Complexes. Journal of Physical Chemistry B, 2008, 112, 12824-12826.	2.6	9
77	Exploring Timeâ€Resolved Multiphysics of Active Plasmonic Systems with Experimentâ€Based Gain Models. Laser and Photonics Reviews, 2019, 13, 1800071.	8.7	9
78	Power Balance and Temperature in Optically Pumped Spasers and Nanolasers. ACS Photonics, 2018, 5, 3695-3703.	6.6	8
79	Spectral tuning of the phosphorescence from metalloporphyrins attached to gold nanorods. Optics Express, 2012, 20, 19374.	3.4	7
80	Biofunctionalization of Sub-Diffractionally Patterned Polymer Structures by Photobleaching. ACS Applied Materials & Interfaces, 2018, 10, 31850-31854.	8.0	6
81	STED lithography in microfluidics for 3D thrombocyte aggregation testing. Journal of Nanobiotechnology, 2021, 19, 23.	9.1	6
82	Gold Nanoislands Grown on Multiphoton Polymerized Structures as Substrate for Enzymatic Reactions. , 2019, 1, 399-403.		5
83	Numerical modeling of active plasmonic metamaterials. Proceedings of SPIE, 2011, , .	0.8	4
84	Photodoping with CdSe nanocrystals as a tool to probe trap-state distributions in C60 crystals. Applied Physics B: Lasers and Optics, 2008, 93, 239-243.	2.2	3
85	STED controlled photobleaching for sub-diffractional optical nanopatterning. JPhys Photonics, 2020, 2, 044003.	4.6	3
86	Optical Coulomb blockade lifting in plasmonic nanoparticle dimers. Optics Express, 2020, 28, 4115.	3.4	3
87	From low-loss to lossless optical negative-index materials. , 2006, , .		2
88	Giant cross polarization in a nanoimprinted metamaterial combining a fishnet with its Babinet complement. Optics Express, 2015, 23, 19034.	3.4	2
89	Time Resolved Fluorescence Measurements of Fluorophores Close to Metal Nanoparticles. , 2005, , 249-273.		1
90	Introduction to the Special Issue on Metamaterials. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 363-366.	2.9	1

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91	Three-dimensional photonic structures on transparent substrates fabricated by two-photon polymerization for use as cell substrates and for wetting experiments. , 2016, , .		1
92	Frequency domain optical resolution photoacoustic and fluorescence microscopy using a modulated laser diode. , 2017, , .		1
93	Near-field optical studies of surface plasmons in single metal nanoparticles. , 0, , .		0
94	Diffraction Resolution Barrier Fundamentally Broken in Far-Field Fluorescence Microscopy. Optics and Photonics News, 2000, 11, 42.	0.5	0
95	Breaking the diffraction limit in far-field light microscopy by stimulated emission. , 0, , .		0
96	Electrically controlled light scattering with metal nanoparticles. , 0, , .		0
97	Radiative and nonradiative decay rates of chromophores bound to differently sized gold nanoparticles. , 0, , .		0
98	Single Negative, Double Negative, Low Loss Negative. , 2007, , .		0
99	120 nm resolution and 55nm line width achieved in visible light STED-lithography. , 2013, , .		0
100	Large area self-assembled plasmonic-photonic crystals for spectral and directional reshaping of fluorescence. , 2013, , .		0
101	Reflection, transmission, absorption, diffraction and gain in plasmonic-photonic Ag-capped monolayers of dye-doped nanospheres. , 2013, , .		0
102	Nano-Confined Polymer Structures for Protein Binding. Biophysical Journal, 2016, 110, 505a.	0.5	0
103	Nanoscopic structuring with STED lithography (Conference Presentation). , 2016, , .		0
104	Lasing boosted with plasmonic nanostructures. , 2016, , .		0
105	Confinement of Lipid Membranes by Nanostructured Polymer Patterns for Cell to Cell Mimicking. Biophysical Journal, 2016, 110, 40a.	0.5	0
106	Multimodal fluorescence and photoacoustic microscopy in the frequency domain. Proceedings of SPIE, 2017, , .	0.8	0
107	Nanostructured Functional Polymers for Selective Protein Binding. Biophysical Journal, 2017, 112, 306a.	0.5	0
108	Multimodal Optical Resolution Photoacoustic and Fluorescence Microscopy in the Frequency Domain. Biophysical Journal, 2017, 112, 581a.	0.5	0

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109	Sub-Diffraction STED Lithography using Orthogonally Functionalized Resins. Biophysical Journal, 2017, 112, 157a.	0.5	0
110	Nanostructured functional polymers for selective protein binding. , 2017, , .		0
111	Unpolarized photoluminescence from d-band holes versus polarized scattering of single gold nanosponges. , 2017, , .		0
112	Anticorrelation of photoluminescence from d-band holes with hot-spot strength between two gold bipyramids. , 2017, , .		0
113	Strangely Shaped Plasmonic Nanoparticles and Luminescence. , 2017, , .		0
114	Photon management in organic light-emitting diodes with multilayered plasmonic nanostars. , 2017, , .		0
115	Optical nanoscopy turns coherent. Nature Photonics, 2018, 12, 63-65.	31.4	0
116	WHITE LIGHT EMITTING NANOSTRUCTURES. , 2007, , .		0
117	Fundamental investigations and applications of gold nanoparticles interacting with their immediate nanoenvironment. , 2010, , .		0
118	Metal Nanostructures and Active Materials. Springer Proceedings in Physics, 2013, , 171-202.	0.2	0
119	Photoacoustic microscopy of single cells employing an intensity-modulated diode laser. , 2018, , .		0
120	Frequency-domain photoacoustic and fluorescence microscopy: application on labeled and unlabeled cells. , 2018, , .		0
121	Resolution-enhancement of photoacoustic microscopy by modulation quenching of nanoparticles. , 2019, , .		0
122	Superresolution fluorescence microscopy using saturated modulation quenching (SMoQ). , 2019, , .		0