

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	STED lithography in microfluidics for 3D thrombocyte aggregation testing. <i>Journal of Nanobiotechnology</i> , 2021, 19, 23.	9.1	6
2	Dual Channel Microfluidics for Mimicking the Blood-Brain Barrier. <i>ACS Nano</i> , 2021, 15, 2984-2993.	14.6	33
3	Plasmon-Assisted Direction- and Polarization-Sensitive Organic Thin-Film Detector. <i>Nanomaterials</i> , 2020, 10, 1866.	4.1	10
4	3D multiphoton lithography using biocompatible polymers with specific mechanical properties. <i>Nanoscale Advances</i> , 2020, 2, 2422-2428.	4.6	17
5	Localization STED (LocSTED) microscopy with 15 nm resolution. <i>Nanophotonics</i> , 2020, 9, 783-792.	6.0	14
6	STED controlled photobleaching for sub-diffractive optical nanopatterning. <i>JPhys Photonics</i> , 2020, 2, 044003.	4.6	3
7	Optical Coulomb blockade lifting in plasmonic nanoparticle dimers. <i>Optics Express</i> , 2020, 28, 4115.	3.4	3
8	Gold Nanoislands Grown on Multiphoton Polymerized Structures as Substrate for Enzymatic Reactions. , 2019, 1, 399-403.		5
9	Exploring Time-Resolved Multiphysics of Active Plasmonic Systems with Experiment-Based Gain Models. <i>Laser and Photonics Reviews</i> , 2019, 13, 1800071.	8.7	9
10	Resolution-enhancement of photoacoustic microscopy by modulation quenching of nanoparticles. , 2019, , .		0
11	Superresolution fluorescence microscopy using saturated modulation quenching (SMoQ). , 2019, , .		0
12	Optical nanoscopy turns coherent. <i>Nature Photonics</i> , 2018, 12, 63-65.	31.4	0
13	Localized-Plasmon Voltammetry to Detect pH Dependent Gold Oxidation. <i>Journal of Physical Chemistry C</i> , 2018, 122, 4565-4571.	3.1	12
14	Plasmonic Horizon in Gold Nanosponges. <i>Nano Letters</i> , 2018, 18, 1269-1273.	9.1	26
15	Multiphoton-Polymerized 3D Protein Assay. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 1474-1479.	8.0	25
16	Proteins on Supported Lipid Bilayers Diffusing around Proteins Fixed on Acrylate Anchors. <i>Analytical Chemistry</i> , 2018, 90, 12372-12376.	6.5	12
17	Biofunctionalization of Sub-Diffractively Patterned Polymer Structures by Photobleaching. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 31850-31854.	8.0	6
18	Power Balance and Temperature in Optically Pumped Spasers and Nanolasers. <i>ACS Photonics</i> , 2018, 5, 3695-3703.	6.6	8

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19	Photoacoustic microscopy of single cells employing an intensity-modulated diode laser. , 2018, , .		0
20	Frequency-domain photoacoustic and fluorescence microscopy: application on labeled and unlabeled cells. , 2018, , .		0
21	Multimodal fluorescence and photoacoustic microscopy in the frequency domain. Proceedings of SPIE, 2017, , .	0.8	0
22	Frequency domain optical resolution photoacoustic and fluorescence microscopy using a modulated laser diode. , 2017, , .		1
23	Bioinspired polymer microstructures for directional transport of oily liquids. Royal Society Open Science, 2017, 4, 160849.	2.4	23
24	Nanostructured Functional Polymers for Selective Protein Binding. Biophysical Journal, 2017, 112, 306a.	0.5	0
25	Multimodal Optical Resolution Photoacoustic and Fluorescence Microscopy in the Frequency Domain. Biophysical Journal, 2017, 112, 581a.	0.5	0
26	Sub-Diffraction STED Lithography using Orthogonally Functionalized Resins. Biophysical Journal, 2017, 112, 157a.	0.5	0
27	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
28	Nanostructured functional polymers for selective protein binding. , 2017, , .		0
29	Unpolarized photoluminescence from d-band holes versus polarized scattering of single gold nanospheres. , 2017, , .		0
30	Anticorrelation of photoluminescence from d-band holes with hot-spot strength between two gold bipyramids. , 2017, , .		0
31	Functional photoresists for sub-diffraction stimulated emission depletion lithography. Optical Materials Express, 2017, 7, 2538.	3.0	25
32	Strangely Shaped Plasmonic Nanoparticles and Luminescence. , 2017, , .		0
33	Photon management in organic light-emitting diodes with multilayered plasmonic nanostars. , 2017, , .		0
34	Nano-Confined Polymer Structures for Protein Binding. Biophysical Journal, 2016, 110, 505a.	0.5	0
35	Plasmonic Nanostars as Efficient Broadband Scatterers for Random Lasing. ACS Photonics, 2016, 3, 919-923.	6.6	58
36	Hybrid Multilayered Plasmonic Nanostars for Coherent Random Lasing. Journal of Physical Chemistry C, 2016, 120, 23707-23715.	3.1	15

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37	Anticorrelation of Photoluminescence from Gold Nanoparticle Dimers with Hot-Spot Intensity. Nano Letters, 2016, 16, 7203-7209.	9.1	48
38	Three-dimensional photonic structures on transparent substrates fabricated by two-photon polymerization for use as cell substrates and for wetting experiments. , 2016, , .		1
39	Nanosopic structuring with STED lithography (Conference Presentation). , 2016, , .		0
40	Performance Boost of Organic Light-Emitting Diodes with Plasmonic Nanostars. Advanced Optical Materials, 2016, 4, 772-781.	7.3	45
41	Minimal spaser threshold within electrodynamic framework: Shape, size and modes. Annalen Der Physik, 2016, 528, 295-306.	2.4	18
42	Lasing boosted with plasmonic nanostructures. , 2016, , .		0
43	Frequency domain photoacoustic and fluorescence microscopy. Biomedical Optics Express, 2016, 7, 2692.	2.9	44
44	Stimulated Emission Depletion Lithography with Mercapto-Functional Polymers. ACS Nano, 2016, 10, 1954-1959.	14.6	48
45	Confinement of Lipid Membranes by Nanostructured Polymer Patterns for Cell to Cell Mimicking. Biophysical Journal, 2016, 110, 40a.	0.5	0
46	Spasers with retardation and gain saturation: electrodynamic description of fields and optical cross-sections. Optical Materials Express, 2015, 5, 2546.	3.0	26
47	Streptavidin functionalized polymer nanodots fabricated by visible light lithography. Journal of Nanobiotechnology, 2015, 13, 27.	9.1	15
48	Gold nanostars for random lasing enhancement. Optics Express, 2015, 23, 15152.	3.4	61
49	Giant cross polarization in a nanoimprinted metamaterial combining a fishnet with its Babinet complement. Optics Express, 2015, 23, 19034.	3.4	2
50	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
51	Optical Plasmons of Individual Gold Nanosponges. ACS Photonics, 2015, 2, 1436-1442.	6.6	50
52	Sub-Abbe resolution: from STED microscopy to STED lithography. Physica Scripta, 2014, T162, 014049.	2.5	47
53	Nano-Anchors with Single Protein Capacity Produced with STED Lithography. Nano Letters, 2013, 13, 5672-5678.	9.1	42
54	120 nm resolution and 55nm line width achieved in visible light STED-lithography. , 2013, , .		0

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55	Spectral and Directional Reshaping of Fluorescence in Large Area Self-Assembled Plasmonic Photonic Crystals. <i>Nano Letters</i> , 2013, 13, 378-386.	9.1	76
56	Negative permittivity of ZnO thin films prepared from aluminum and gallium doped ceramics via pulsed-laser deposition. <i>Applied Physics A: Materials Science and Processing</i> , 2013, 110, 929-934.	2.3	27
57	120 nm resolution and 55 nm structure size in STED-lithography. <i>Optics Express</i> , 2013, 21, 10831.	3.4	154
58	Large area self-assembled plasmonic-photonic crystals for spectral and directional reshaping of fluorescence. , 2013, , .		0
59	Multi-photon structuring of native polymers: A case study for structuring natural proteins. <i>Engineering in Life Sciences</i> , 2013, 13, 368-375.	3.6	18
60	Reflection, transmission, absorption, diffraction and gain in plasmonic-photonic Ag-capped monolayers of dye-doped nanospheres. , 2013, , .		0
61	Dye-doped spheres with plasmonic semi-shells: Lasing modes and scattering at realistic gain levels. <i>Beilstein Journal of Nanotechnology</i> , 2013, 4, 974-987.	2.8	18
62	Metal Nanostructures and Active Materials. <i>Springer Proceedings in Physics</i> , 2013, , 171-202.	0.2	0
63	Spectral tuning of the phosphorescence from metalloporphyrins attached to gold nanorods. <i>Optics Express</i> , 2012, 20, 19374.	3.4	7
64	Optical Sensing of Small Ions with Colloidal Nanoparticles. <i>Chemistry of Materials</i> , 2012, 24, 738-745.	6.7	60
65	Voltage-Induced Adsorbate Damping of Single Gold Nanorod Plasmons in Aqueous Solution. <i>Nano Letters</i> , 2012, 12, 1247-1252.	9.1	75
66	Numerical modeling of active plasmonic metamaterials. <i>Proceedings of SPIE</i> , 2011, , .	0.8	4
67	Introduction to the Special Issue on Metamaterials. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2010, 16, 363-366.	2.9	1
68	Properties and Applications of Colloidal Nonspherical Noble Metal Nanoparticles. <i>Advanced Materials</i> , 2010, 22, 1805-1825.	21.0	909
69	Optical properties of InN grown on Si(111) substrate. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2010, 207, 1066-1069.	1.8	16
70	DNA Melting in Gold Nanostove Clusters. <i>Journal of Physical Chemistry C</i> , 2010, 114, 7401-7411.	3.1	50
71	Label-free Biosensing Based on Single Gold Nanostars as Plasmonic Transducers. <i>ACS Nano</i> , 2010, 4, 6318-6322.	14.6	300
72	Fundamental investigations and applications of gold nanoparticles interacting with their immediate nanoenvironment. , 2010, , .		0

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73	Label free optical sensor for Avidin based on single gold nanoparticles functionalized with aptamers. Journal of Biophotonics, 2009, 2, 227-231.	2.3	33
74	Competitive homogeneous digoxigenin immunoassay based on fluorescence quenching by gold nanoparticles. Analytica Chimica Acta, 2009, 646, 119-122.	5.4	32
75	Long-Range Fluorescence Quenching by Gold Nanoparticles in a Sandwich Immunoassay for Cardiac Troponin T. Nano Letters, 2009, 9, 4558-4563.	9.1	191
76	Energy transfer with semiconductor nanocrystals. Journal of Materials Chemistry, 2009, 19, 1208-1221.	6.7	204
77	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
78	Type-I and Type-II Nanoscale Heterostructures Based on CdTe Nanocrystals: A Comparative Study. Small, 2008, 4, 1148-1152.	10.0	91
79	Gold NanoStoves for Microsecond DNA Melting Analysis. Nano Letters, 2008, 8, 619-623.	9.1	144
80	Fluorescence Enhancement in Hot Spots of AFM-Designed Gold Nanoparticle Sandwiches. Nano Letters, 2008, 8, 485-490.	9.1	267
81	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
82	Shaping Emission Spectra of Fluorescent Molecules with Single Plasmonic Nanoresonators. Physical Review Letters, 2008, 100, 203002.	7.8	391
83	Streptavidin Reduces Oxygen Quenching of Biotinylated Ruthenium(II) and Palladium(II) Complexes. Journal of Physical Chemistry B, 2008, 112, 12824-12826.	2.6	9
84	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
85	Charge Separation in Type II Tunneling Structures of Close-packed CdTe and CdSe Nanocrystals. Nano Letters, 2008, 8, 1482-1485.	9.1	78
86	Single Negative, Double Negative, Low Loss Negative. , 2007, , .		0
87	Radiative and Nonradiative Rates of Phosphors Attached to Gold Nanoparticles. Nano Letters, 2007, 7, 1941-1946.	9.1	61
88	Moving Nanoparticles with Raman Scattering. Nano Letters, 2007, 7, 2753-2757.	9.1	68
89	Bright White-Light Emission from Semiconductor Nanocrystals: by Chance and by Design. Advanced Materials, 2007, 19, 569-572.	21.0	233
90	CdSe:Te Nanocrystals: Band-Edge versus Te-Related Emission. Journal of Physical Chemistry C, 2007, 111, 2974-2979.	3.1	35

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91	Aqueous Synthesis of Thiol-Capped CdTe Nanocrystals:â€‰ State-of-the-Art. Journal of Physical Chemistry C, 2007, 111, 14628-14637.	3.1	703
92	WHITE LIGHT EMITTING NANOSTRUCTURES. , 2007, , .		0
93	Negative-Index Metamaterials: Going Optical. IEEE Journal of Selected Topics in Quantum Electronics, 2006, 12, 1106-1115.	2.9	117
94	Semiconductor Nanocrystals Photosensitize C60Crystals. Nano Letters, 2006, 6, 1559-1563.	9.1	71
95	Negative index metamaterial combining magnetic resonators with metal films. Optics Express, 2006, 14, 7872.	3.4	104
96	From low-loss to lossless optical negative-index materials. , 2006, , .		2
97	Super-Efficient Exciton Funneling in Layer-by-Layer Semiconductor Nanocrystal Structures. Advanced Materials, 2005, 17, 769-773.	21.0	111
98	High-Rate Unidirectional Energy Transfer in Directly Assembled CdTe Nanocrystal Bilayers. Small, 2005, 1, 392-395.	10.0	87
99	Time Resolved Fluorescence Measurements of Fluorophores Close to Metal Nanoparticles. , 2005, , 249-273.		1
100	Reply to â€œComment on â€˜Gold Nanoshells Improve Single Nanoparticle Molecular Sensors'â€• Nano Letters, 2005, 5, 811-812.	9.1	11
101	Gold Nanoparticles Quench Fluorescence by Phase Induced Radiative Rate Suppression. Nano Letters, 2005, 5, 585-589.	9.1	704
102	Sub-Microsecond Molecular Thermometry Using Thermal Spin Flips. Advanced Materials, 2004, 16, 2170-2174.	21.0	18
103	Exciton Recycling in Graded Gap Nanocrystal Structures. Nano Letters, 2004, 4, 1599-1603.	9.1	267
104	Gold Nanoshells Improve Single Nanoparticle Molecular Sensors. Nano Letters, 2004, 4, 1853-1857.	9.1	246
105	Fast energy transfer in layer-by-layer assembled CdTe nanocrystal bilayers. Applied Physics Letters, 2004, 84, 2904-2906.	3.3	130
106	Plasmon emission in photoexcited gold nanoparticles. Physical Review B, 2004, 70, .	3.2	394
107	Creating $\frac{1}{3}$ focal holes with a Machâ€ˆZehnder interferometer. Applied Physics B: Lasers and Optics, 2003, 77, 11-17.	2.2	30
108	A Low Threshold Polymer Laser Based on Metallic Nanoparticle Gratings. Advanced Materials, 2003, 15, 1726-1729.	21.0	92

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109	Biomolecular Recognition Based on Single Gold Nanoparticle Light Scattering. Nano Letters, 2003, 3, 935-938.	9.1	711
110	Electrically controlled light scattering with single metal nanoparticles. Applied Physics Letters, 2002, 81, 171-173.	3.3	178
111	Fluorescence Quenching of Dye Molecules near Gold Nanoparticles: Radiative and Nonradiative Effects. Physical Review Letters, 2002, 89, 203002.	7.8	1,141
112	Stimulated emission depletion microscopy with an offset depleting beam. Applied Physics Letters, 2001, 78, 393-395.	3.3	41
113	Breaking Abbe's diffraction resolution limit in fluorescence microscopy with stimulated emission depletion beams of various shapes. Physical Review E, 2001, 64, 066613.	2.1	228
114	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
115	Diffraction Resolution Barrier Fundamentally Broken in Far-Field Fluorescence Microscopy. Optics and Photonics News, 2000, 11, 42.	0.5	0
116	Ultrafast dynamics microscopy. Applied Physics Letters, 2000, 77, 597-599.	3.3	36
117	Subdiffraction resolution in far-field fluorescence microscopy. Optics Letters, 1999, 24, 954.	3.3	734
118	Surface-Plasmon Resonances in Single Metallic Nanoparticles. Physical Review Letters, 1998, 80, 4249-4252.	7.8	746
119	Near-field optical studies of surface plasmons in single metal nanoparticles. , 0, , .		0
120	Breaking the diffraction limit in far-field light microscopy by stimulated emission. , 0, , .		0
121	Electrically controlled light scattering with metal nanoparticles. , 0, , .		0
122	Radiative and nonradiative decay rates of chromophores bound to differently sized gold nanoparticles. , 0, , .		0