Markus B Raschke

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/8532689/publications.pdf

Version: 2024-02-01

142 papers	8,842 citations	41627 51 h-index	49824 91 g-index
147 all docs	147 docs citations	147 times ranked	10964 citing authors

#	Article	IF	Citations
1	Electric field control of chirality. Science Advances, 2022, 8, eabj8030.	4.7	35
2	Ultrafast infrared nano-imaging of far-from-equilibrium carrier and vibrational dynamics. Nature Communications, 2022, 13, 1083.	5.8	14
3	Semi-empirical quantum optics for mid-infrared molecular nanophotonics. Journal of Chemical Physics, 2022, 156, 124110.	1.2	8
4	Synthesis of Î³-graphyne using dynamic covalent chemistry. , 2022, 1, 449-454.		106
5	Nanocavity Clock Spectroscopy: Resolving Competing Exciton Dynamics in WSe₂/MoSe₂ Heterobilayers. Nano Letters, 2021, 21, 522-528.	4.5	18
6	Ultrastrong plasmonâ€“phonon coupling via epsilon-near-zero nanocavities. Nature Photonics, 2021, 15, 125-130.	15.6	78
7	Ultrafast Heterodyne Infrared Nano-Imaging of Polaron Dynamics in Lead Halide Perovskites. , 2021, , .		0
8	Ultrafast nano-imaging and control of optical switching in strongly coupled infrared quantum-well heterostructures. , 2021, , .		0
9	2D Vibrational Exciton nano-imaging as a molecular ruler of domain formation in self-assembled monolayers. , 2021, , .		0
10	Tip-Enhanced Strong Coupling of Quantum Dot Single Photon Emitters. , 2021, , .		0
11	Mineralogical classification and crystal water characterisation of beryl from the Wâ€“Snâ€“Be occurrence of Xuebaoding, Sichuan province, western China. Mineralogical Magazine, 2021, 85, 172-188.	0.6	7
12	Substrate-enhanced photothermal nano-imaging of surface polaritons in monolayer graphene. APL Photonics, 2021, 6, 041301.	3.0	7
13	Ultrafast optical switching and power limiting in intersubband polaritonic metasurfaces. Optica, 2021, 8, 606.	4.8	26
14	Inducing and Probing Localized Excitons in Atomically Thin Semiconductors via Tipâ€Enhanced Cavityâ€Spectroscopy. Advanced Functional Materials, 2021, 31, 2102893.	7.8	22
15	Adaptive tip-enhanced nano-spectroscopy. Nature Communications, 2021, 12, 3465.	5.8	25
16	2D Vibrational Exciton Nanoimaging of Domain Formation in Self-Assembled Monolayers. Nano Letters, 2021, 21, 5754-5759.	4.5	7
17	Multidimensional Nano-Imaging of Structure, Coupling, and Disorder in Molecular Materials. Nano Letters, 2021, 21, 6463-6470.	4.5	5
18	Inducing and Probing Localized Excitons in Atomically Thin Semiconductors via Tipâ€Enhanced Cavityâ€Spectroscopy (Adv. Funct. Mater. 33/2021). Advanced Functional Materials, 2021, 31, 2170243.	7.8	1

#	Article	IF	Citations
19	Genesis of highly fractionated granite and associated W-Sn-Be mineralization in the Xuebaoding area, Sichuan Province, China. Ore Geology Reviews, 2021, 135, 104197.	1.1	2
20	Correlative nano-spectroscopic imaging of heterogeneity in migrated petroleum in unconventional reservoir pores. Fuel, 2021, 300, 120836.	3.4	12
21	Nano-imaging the Few-fs Coherent Dynamics of Graphene. , 2021, , .		0
22	Nanoâ€Cavity QED with Tunable Nanoâ€Tip Interaction. Advanced Quantum Technologies, 2020, 3, 1900087.	1.8	22
23	Smart Scattering Scanning Near-Field Optical Microscopy. ACS Photonics, 2020, 7, 3346-3352.	3.2	9
24	In Liquid Infrared Scattering Scanning Near-Field Optical Microscopy for Chemical and Biological Nanoimaging. Nano Letters, 2020, 20, 4497-4504.	4.5	31
25	Tourmaline as a Recorder of Ore-Forming Processes in the Xuebaoding W-Sn-Be Deposit, Sichuan Province, China: Evidence from the Chemical Composition of Tourmaline. Minerals (Basel,) Tj ETQq1 1 0.784314 rgBT/Overlock 10 Tf 5	2.8	6
26	Heterogeneous Cationâ€“Lattice Interaction and Dynamics in Triple-Cation Perovskites Revealed by Infrared Vibrational Nanoscopy. ACS Energy Letters, 2020, 5, 1636-1643.	8.8	27
27	Synchrotron infrared nano-spectroscopy and -imaging. Surface Science Reports, 2020, 75, 100493.	3.8	40
28	Vibrational exciton nanoimaging of phases and domains in porphyrin nanocrystals. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 7030-7037.	3.3	11
29	Mediatorâ€“Antisolvent Strategy to Stabilize All-Inorganic CsPbI₃ for Perovskite Solar Cells with Efficiency Exceeding 16%. ACS Energy Letters, 2020, 5, 1619-1627.	8.8	46
30	Ultrafast optical switching and power limiting in intersubband polaritonic metasurfaces. , 2020, , .		2
31	Ultrafast nano-imaging of polaron dynamics in lead halide perovskites. , 2020, , .		0
32	Femtosecond nano-imaging of the few-femtosecond coherent dynamics of two-dimensional materials. , 2020, , .		0
33	Beryllium-silicon disorder and rare earth crystal chemistry in gadolinite from the White Cloud pegmatite, Colorado, USA. Canadian Mineralogist, 2020, 58, 829-845.	0.3	4
34	Light-Assisted Diazonium Functionalization of Graphene and Spatial Heterogeneities in Reactivity. Journal of Physical Chemistry Letters, 2019, 10, 4788-4793.	2.1	12
35	Ultrafast coherent nonlinear nanooptics and nanoimaging of graphene. Nature Nanotechnology, 2019, 14, 838-843.	15.6	78
36	Tip-enhanced strong coupling spectroscopy, imaging, and control of a single quantum emitter. Science Advances, 2019, 5, eaav5931.	4.7	107

#	Article	IF	Citations
37	Purcell-Enhanced Spontaneous Emission of Molecular Vibrations. Physical Review Letters, 2019, 123, 153001.	2.9	28
38	Few-cycle laser driven reaction nanoscopy on aerosolized silica nanoparticles. Nature Communications, 2019, 10, 4655.	5.8	19
39	Quantification and coupling of the electromagnetic and chemical contributions in surface-enhanced Raman scattering. Beilstein Journal of Nanotechnology, 2019, 10, 549-556.	1.5	13
40	Anisotropic Flow Control and Gate Modulation of Hybrid Phonon-Polaritons. Nano Letters, 2019, 19, 708-715.	4.5	29
41	Zircon Alteration as a Proxy for Rare Earth Element Mineralization Processes in Carbonatite-Nordmarkite Complexes of the Mianning-Dechang Rare Earth Element Belt, China. Economic Geology, 2019, 114, 719-744.	1.8	39
42	Ultrasensitive Tip- and Antenna-Enhanced Infrared Nanoscopy of Protein Complexes. Journal of Physical Chemistry C, 2019, 123, 17505-17509.	1.5	20
43	Dipole modelling for a robust description of subdiffractional polariton waves. Nanoscale, 2019, 11, 21218-21226.	2.8	11
44	Infrared nanospectroscopic imaging in the rotating frame. Optica, 2019, 6, 424.	4.8	8
45	Nanospectroscopic imaging of vibrational excitons as a molecular ruler. , 2019, , .		0
46	Nonlinear Nanoimaging of Ultrafast Coherent Dynamics of Graphene. , 2019, , .		0
47	Near-Field Enhanced Photochemistry of Single Molecules in a Scanning Tunneling Microscope Junction. Nano Letters, 2018, 18, 152-157.	4.5	32
48	Polarization Control with Plasmonic Antenna Tips: A Universal Approach to Optical Nanocrystallography and Vector-Field Imaging. Nano Letters, 2018, 18, 2912-2917.	4.5	40
49	Nanoimaging of Electronic Heterogeneity in Bi₂Se₃ and Sb₂Te₃ Nanocrystals. Advanced Electronic Materials, 2018, 4, 1700377.	2.6	16
50	Radiative control of dark excitons at room temperature by nano-optical antenna-tip Purcell effect. Nature Nanotechnology, 2018, 13, 59-64.	15.6	186
51	Mechanism of Electric Power Generation from Ionic Droplet Motion on Polymer Supported Graphene. Journal of the American Chemical Society, 2018, 140, 13746-13752.	6.6	87
52	Imaging Nanoscale Heterogeneity in Ultrathin Biomimetic and Biological Crystals. Journal of Physical Chemistry C, 2018, 122, 24891-24895.	1.5	10
53	Enhanced Third-Order Optical Nonlinearity Driven by Surface-Plasmon Field Gradients. Physical Review Letters, 2018, 120, 203903.	2.9	37
54	Far Infrared Synchrotron Near-Field Nanoimaging and Nanospectroscopy. ACS Photonics, 2018, 5, 2773-2779.	3.2	78

#	Article	IF	Citations
55	Formation by silicateâ€“fluorideâ€‰+â€‰phosphate melt immiscibility of REE-rich globular segregations within aplite dikes. Contributions To Mineralogy and Petrology, 2018, 173, 1.	1.2	5
56	Compressed sensing FTIR nano-spectroscopy and nano-imaging. Optics Express, 2018, 26, 18115.	1.7	20
57	Photoinduced Tipâ€“Sample Forces for Chemical Nanoimaging and Spectroscopy. Nano Letters, 2018, 18, 5499-5505.	4.5	35
58	Nanoimaging and Control of Molecular Vibrations through Electromagnetically Induced Scattering Reaching the Strong Coupling Regime. ACS Photonics, 2018, 5, 3594-3600.	3.2	46
59	Hyperâ€spectral Raman imaging correlating chemical substitution and crystallinity in biogenic hydroxyapatite: Dentin and enamel in normal and hypoplastic human teeth. Journal of Raman Spectroscopy, 2018, 49, 1559-1567.	1.2	12
60	Rare-earth crystal chemistry of thalÃ©nite-(Y) from different environments. Mineralogical Magazine, 2018, 82, 313-327.	0.6	2
61	Graphene: Probing Bilayer Grain Boundaries in Largeâ€Area Graphene with Tipâ€Enhanced Raman Spectroscopy (Adv. Mater. 7/2017). Advanced Materials, 2017, 29, .	11.1	1
62	Probing Bilayer Grain Boundaries in Largeâ€Area Graphene with Tipâ€Enhanced Raman Spectroscopy. Advanced Materials, 2017, 29, 1603601.	11.1	37
63	Chemical Nano-Imaging with Tip-Enhanced Vibrational Spectroscopy. Microscopy and Microanalysis, 2017, 23, 1542-1543.	0.2	0
64	Correlative infrared nanospectroscopic and nanomechanical imaging of block copolymer microdomains. Beilstein Journal of Nanotechnology, 2016, 7, 605-612.	1.5	10
65	Resonant optical gradient force interaction for nano-imaging and -spectroscopy. New Journal of Physics, 2016, 18, 053042.	1.2	39
66	Hybrid Tip-Enhanced Nanospectroscopy and Nanoimaging of Monolayer WSe₂ with Local Strain Control. Nano Letters, 2016, 16, 2621-2627.	4.5	165
67	Optical Nanoantenna Input Impedance. ACS Photonics, 2016, 3, 881-885.	3.2	18
68	Ultrafast Anisotropic Optical Response and Coherent Acoustic Phonon Generation in Polycrystalline BaTiO₃-BiFeO₃. Energy Harvesting and Systems, 2016, 3, 229-236.	1.7	5
69	Ultrafast Nanoimaging of the Photoinduced Phase Transition Dynamics in VO₂. Nano Letters, 2016, 16, 3029-3035.	4.5	84
70	Near-Field Imaging of Cell Membranes in Liquid Enabled by Active Scanning Probe Mechanical Resonance Control. Journal of Physical Chemistry C, 2016, 120, 21138-21144.	1.5	5
71	Infrared vibrational nanocrystallography and nanoimaging. Science Advances, 2016, 2, e1601006.	4.7	55
72	Plasmonic nanofocused four-wave mixing for femtosecond near-field imaging. Nature Nanotechnology, 2016, 11, 459-464.	15.6	180

#	Article	IF	Citations
73	Nanofocused Plasmon-Driven Sub-10 fs Electron Point Source. ACS Photonics, 2016, 3, 611-619.	3.2	87
74	Infrared Vibrational Nanospectroscopy by Self-Referenced Interferometry. Nano Letters, 2016, 16, 55-61.	4.5	59
75	Variable-Temperature Tip-Enhanced Raman Spectroscopy of Single-Molecule Fluctuations and Dynamics. Nano Letters, 2016, 16, 479-487.	4.5	73
76	Crystal chemistry of brannockite, KLi3Sn2 Si12O30, from a new occurrence in the Golden Horn Batholith, Washington State, USA. European Journal of Mineralogy, 2016, 28, 153-161.	0.4	1
77	Single-step sub-200â€‰â€‰fs mid-infrared generation from an optical parametric oscillator synchronously pumped by an erbium fiber laser. Optics Letters, 2016, 41, 4383.	1.7	9
78	Optical dielectric function of silver. Physical Review B, 2015, 91, .	1.1	399
79	Phase transition in bulk single crystals and thin films of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">V</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> by nanoscale infrared spectroscopy and imaging. Physical Review B, 2015, 91, .	1.1	88
80	Nanoscale Probing of Dynamics in Local Molecular Environments. Journal of Physical Chemistry Letters, 2015, 6, 4616-4621.	2.1	22
81	Broadband infrared vibrational nano-spectroscopy using thermal blackbody radiation. Optics Express, 2015, 23, 32063.	1.7	17
82	Quantum Confined Electronâ€“Phonon Interaction in Silicon Nanocrystals. Nano Letters, 2015, 15, 1511-1516.	4.5	50
83	Amplitude- and Phase-Resolved Nanospectral Imaging of Phonon Polaritons in Hexagonal Boron Nitride. ACS Photonics, 2015, 2, 790-796.	3.2	115
84	Infrared Chemical Nano-Imaging: Accessing Structure, Coupling, and Dynamics on Molecular Length Scales. Journal of Physical Chemistry Letters, 2015, 6, 1275-1284.	2.1	114
85	Inhomogeneity of the ultrafast insulator-to-metal transition dynamics of VO2. Nature Communications, 2015, 6, 6849.	5.8	134
86	Near-field investigation of the effect of the array edge on the resonance of loop frequency selective surface elements at mid-infrared wavelengths. Optics Express, 2015, 23, 10974.	1.7	3
87	Age, petrochemistry, and origin of a REE-rich mineralization in the Longs Peak-St. Vrain batholith, near Jamestown, Colorado (U.S.A.). American Mineralogist, 2015, 100, 2123-2140.	0.9	8
88	Array truncation effects in infrared frequency selective surfaces. Optics Express, 2014, 22, 16645.	1.7	11
89	Nano-Focused Vibrational Spectroscopy Reaching the Single Quantum Level: Imaging Structure, Function, and Dynamics on the Nanoscale. Microscopy and Microanalysis, 2014, 20, 2096-2097.	0.2	0
90	Vibrational nano-spectroscopic imaging correlating structure with intermolecular coupling and dynamics. Nature Communications, 2014, 5, 3587.	5.8	80

#	Article	IF	Citations
91	Ultrabroadband infrared nanospectroscopic imaging. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 7191-7196.	3.3	252
92	Accessing the Optical Magnetic Near-Field through Babinetâ€™s Principle. ACS Photonics, 2014, 1, 894-899.	3.2	39
93	Phase-Resolved Surface Plasmon Interferometry of Graphene. Physical Review Letters, 2014, 113, 055502.	2.9	116
94	Control of Plasmon Emission and Dynamics at the Transition from Classical to Quantum Coupling. Nano Letters, 2014, 14, 5270-5275.	4.5	78
95	Tipâ€enhanced Raman spectroscopy â€“ an interlaboratory reproducibility and comparison study. Journal of Raman Spectroscopy, 2014, 45, 22-31.	1.2	94
96	Nano-Chemical Infrared Imaging of Membrane Proteins in Lipid Bilayers. Journal of the American Chemical Society, 2013, 135, 18292-18295.	6.6	99
97	The thermal near-field: Coherence, spectroscopy, heat-transfer, and optical forces. Progress in Surface Science, 2013, 88, 349-392.	3.8	69
98	Highâ€harmonic generation with plasmonics: feasible or unphysical?. Annalen Der Physik, 2013, 525, A40.	0.9	28
99	A cryogenic scattering-type scanning near-field optical microscope. Review of Scientific Instruments, 2013, 84, 023701.	0.6	41
100	Optical spectroscopy goes intramolecular. Nature, 2013, 498, 44-45.	13.7	25
101	Ultrafast and Nonlinear Plasmon Dynamics. Challenges and Advances in Computational Chemistry and Physics, 2013, , 237-281.	0.6	15
102	Near-Field Infrared Vibrational Dynamics and Tip-Enhanced Decoherence. Nano Letters, 2013, 13, 1588-1595.	4.5	38
103	Group delay and dispersion in adiabatic plasmonic nanofocusing. Optics Letters, 2013, 38, 1322.	1.7	73
104	Near- and far-field spectroscopic imaging investigation of resonant square-loop infrared metasurfaces. Optics Express, 2013, 21, 17150.	1.7	17
105	Infrared near-field spectroscopy of trace explosives using an external cavity quantum cascade laser. Optics Express, 2013, 21, 30401.	1.7	30
106	Near-field mapping of dipole nano-antenna-coupled bolometers. Journal of Applied Physics, 2013, 114, 033109.	1.1	10
107	Phase resolved near-field mode imaging for the design of frequency-selective surfaces. Optics Express, 2012, 20, 11986.	1.7	16
108	Strain and temperature dependence of the insulating phases of VO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>near the metal-insulator transition. Physical Review B, 2012, 85, .	1.1	192

#	Article	IF	Citations
109	Optical dielectric function of gold. Physical Review B, 2012, 86, .	1.1	704
110	Nano-optical imaging and spectroscopy of order, phases, and domains in complex solids. Advances in Physics, 2012, 61, 745-842.	35.9	196
111	Phase resolved near-field imaging of propagating waves in infrared tapered slot antennas. Infrared Physics and Technology, 2012, 55, 449-453.	1.3	3
112	Thermal Infrared Near-Field Spectroscopy. Nano Letters, 2012, 12, 1475-1481.	4.5	179
113	Pushing the Sample-Size Limit of Infrared Vibrational Nanospectroscopy: From Monolayer toward Single Molecule Sensitivity. Journal of Physical Chemistry Letters, 2012, 3, 1836-1841.	2.1	109
114	Light on the Tip of a Needle: Plasmonic Nanofocusing for Spectroscopy on the Nanoscale. Journal of Physical Chemistry Letters, 2012, 3, 945-952.	2.1	159
115	Femtosecond Nanofocusing with Full Optical Waveform Control. Nano Letters, 2011, 11, 4309-4313.	4.5	134
116	Signal limitations in tip-enhanced Raman scattering: the challenge to become a routine analytical technique. Analytical and Bioanalytical Chemistry, 2010, 396, 115-123.	1.9	42
117	Nano-optical Investigations of the Metalâ^'Insulator Phase Behavior of Individual VO₂ Microcrystals. Nano Letters, 2010, 10, 1574-1581.	4.5	230
118	Determination of Electric-Field, Magnetic-Field, and Electric-Current Distributions of Infrared Optical Antennas: A Near-Field Optical Vector Network Analyzer. Physical Review Letters, 2010, 105, 167403.	2.9	70
119	Adiabatic Tip-Plasmon Focusing for Nano-Raman Spectroscopy. Journal of Physical Chemistry Letters, 2010, 1, 3427-3432.	2.1	154
120	Near-Field Localization in Plasmonic Superfocusing: A Nanoemitter on a Tip. Nano Letters, 2010, 10, 592-596.	4.5	174
121	Near-field measurement of infrared coplanar strip transmission line attenuation and propagation constants. Optics Express, 2010, 18, 21678.	1.7	38
122	Few-Femtosecond Plasmon Dephasing of a Single Metallic Nanostructure from Optical Response Function Reconstruction by Interferometric Frequency Resolved Optical Gating. Nano Letters, 2010, 10, 2519-2524.	4.5	128
123	Synthesis of single-crystalline one-dimensional LiNbO3 nanowires. CrystEngComm, 2010, 12, 2675.	1.3	44
124	Second-harmonic near-field imaging of ferroelectric domain structure of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>YMnO</mml:mtext></mml:mrow><mml:mn>3</mml:mn></mml:r Physical Review B, 2009, 79, .	1.1	62
125	Polar phonon mode selection rules in tipâ€enhanced Raman scattering. Journal of Raman Spectroscopy, 2009, 40, 1413-1419.	1.2	36
126	Optical nanocrystallography with tip-enhanced phonon Raman spectroscopy. Nature Nanotechnology, 2009, 4, 496-499.	15.6	106

#	Article	IF	Citations
127	Mid-IR Plasmonics: Near-Field Imaging of Coherent Plasmon Modes of Silver Nanowires. Nano Letters, 2009, 9, 2553-2558.	4.5	98
128	Absorption, luminescence, and Raman spectroscopic properties of thin films of benzo-annelated metal-free porphyrazines. Journal of Luminescence, 2008, 128, 661-672.	1.5	24
129	Optical Antenna Properties of Scanning Probe Tips:â€‰ Plasmonic Light Scattering, Tipâ^'Sample Coupling, and Near-Field Enhancement. Journal of Physical Chemistry C, 2008, 112, 3766-3773.	1.5	85
130	Near-field imaging of optical antenna modes in the mid-infrared. Optics Express, 2008, 16, 20295.	1.7	136
131	Optical Near-Field Mapping of Plasmonic Nanoprisms. Nano Letters, 2008, 8, 3357-3363.	4.5	233
132	Reply to â€œComment on â€˜Scanning-probe Raman spectroscopy with single-molecule sensitivity' â€• Physical Review B, 2007, 75, .	1.1	26
133	Tip-Enhanced Raman Imaging and Nanospectroscopy: Sensitivity, Symmetry, and Selection Rules. Nanobiotechnology, 2007, 3, 172-196.	1.2	52
134	Scanning-probe Raman spectroscopy with single-molecule sensitivity. Physical Review B, 2006, 73, .	1.1	225
135	Resonant-plasmon field enhancement from asymmetrically illuminated conical metallic-probe tips. Optics Express, 2006, 14, 2921.	1.7	141
136	Electron Dynamics of Silicon Surface States: Second-Harmonic Hole Burning onSi(111)â^'(7Ã—7). Physical Review Letters, 2006, 96, 087401.	2.9	4
137	Apertureless Near-Field Vibrational Imaging of Block-Copolymer Nanostructures with Ultrahigh Spatial Resolution. ChemPhysChem, 2005, 6, 2197-2203.	1.0	87
138	Exponential Decay Lifetimes of Excitons in Individual Single-Walled Carbon Nanotubes. Physical Review Letters, 2005, 95, 197401.	2.9	203
139	Second-harmonic generation from nanoscopic metal tips: Symmetry selection rules for single asymmetric nanostructures. Physical Review B, 2005, 71, .	1.1	101
140	Nonlinear optical spectroscopy of solid interfaces. Current Opinion in Solid State and Materials Science, 2004, 8, 343-352.	5.6	44
141	Apertureless near-field optical microscopy: Tipâ€“sample coupling in elastic light scattering. Applied Physics Letters, 2003, 83, 5089-5091.	1.5	162
142	Transmission of low-energy(<~10â€‚eV)H+andD+ions through ultrathin rare-gas films. Physical Review B, 1998, 58, 15832-15837.	1.1	6