Dai-Sik Kim

List of Publications by Year
in descending order

96 papers	2,656 citations	257450 24 h-index	189892 50 g-index
97 all docs	97 docs citations	97 times ranked	2873 citing authors

#	Article	IF	Citations
1	Active Terahertz Nanoantennas Based on VO₂ Phase Transition. Nano Letters, 2010, 10, 2064-2068.	9.1	331
2	Atomic layer lithography of wafer-scale nanogap arrays for extreme confinement of electromagnetic waves. Nature Communications, 2013, 4, 2361.	12.8	286
3	Colossal Absorption of Molecules Inside Single Terahertz Nanoantennas. Nano Letters, 2013, 13, 1782-1786.	9.1	178
4	Enhanced Terahertz Shielding of MXenes with Nanoâ€Metamaterials. Advanced Optical Materials, 2018, 6, 1701076.	7.3	157
5	A Vanadium Dioxide Metamaterial Disengaged from Insulator-to-Metal Transition. Nano Letters, 2015, 15, 6318-6323.	9.1	108
6	Electrical control of terahertz nano antennas on VO_2 thin film. Optics Express, 2011, 19, 21211.	3.4	102
7	The effect of male circumcision on sexuality. BJU International, 2007, 99, 619-622.	2.5	101
8	Controlling Terahertz Radiation with Nanoscale Metal Barriers Embedded in Nano Slot Antennas. ACS Nano, 2011, 5, 8340-8345.	14.6	66
9	Terahertz Quantum Plasmonics of Nanoslot Antennas in Nonlinear Regime. Nano Letters, 2015, 15, 6683-6688.	9.1	63
10	Electromagnetic Saturation of Angstrom-Sized Quantum Barriers at Terahertz Frequencies. Physical Review Letters, 2015, 115, 125501.	7.8	60
11	Dynamic Terahertz Plasmonics Enabled by Phaseâ€Change Materials. Advanced Optical Materials, 2020, 8, 1900548.	7.3	59
12	Terahertz-Triggered Phase Transition and Hysteresis Narrowing in a Nanoantenna Patterned Vanadium Dioxide Film. Nano Letters, 2015, 15, 5893-5898.	9.1	58
13	Terahertz wave interaction with metallic nanostructures. Nanophotonics, 2018, 7, 763-793.	6.0	56
14	Optical magnetic field mapping using a subwavelength aperture. Optics Express, 2013, 21, 5625.	3.4	48
15	Giant nonlinear response of terahertz nanoresonators on VO_2 thin film. Optics Express, 2010, 18, 16452.	3.4	47
16	Colossal Terahertz Field Enhancement Using Split-Ring Resonators with a Sub-10 nm Gap. ACS Photonics, 2018, 5, 278-283.	6.6	44
17	Slot antenna as a bound charge oscillator. Optics Express, 2012, 20, 6521.	3.4	41
18	Ultimate terahertz field enhancement of single nanoslits. Physical Review B, 2017, 95, .	3.2	40

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19	Terahertz Nanoprobing of Semiconductor Surface Dynamics. Nano Letters, 2017, 17, 6397-6401.	9.1	36
20	Anomalous Band Formation in Arrays of Terahertz Nanoresonators. Physical Review Letters, 2011, 106, 013902.	7.8	32
21	Large enhancement of nonlinear terahertz absorption in intrinsic GaAs by plasmonic nano antennas. Applied Physics Letters, 2013, 103, 171109.	3.3	30
22	Optical field enhancement of nanometer-sized gaps at near-infrared frequencies. Optics Express, 2015, 23, 4897.	3.4	29
23	Largeâ€Area Metal Gaps and Their Optical Applications. Advanced Optical Materials, 2019, 7, 1800426.	7.3	27
24	Phonon-Polaritons in Lead Halide Perovskite Film Hybridized with THz Metamaterials. Nano Letters, 2020, 20, 6690-6696.	9.1	27
25	High-throughput fabrication of infinitely long 10 nm slit arrays for terahertz applications. Journal of Infrared, Millimeter, and Terahertz Waves, 2015, 36, 262-268.	2.2	26
26	Enhanced Second Harmonic Generation by Coupling to Exciton Ensembles in Ag-coated ZnO Nanorods. ACS Photonics, 2015, 2, 1314-1319.	6.6	24
27	Topology-Changing Broadband Metamaterials Enabled by Closable Nanotrenches. Nano Letters, 2021, 21, 4202-4208.	9.1	24
28	Topological Control of 2D Perovskite Emission in the Strong Coupling Regime. Nano Letters, 2021, 21, 10076-10085.	9.1	22
29	Nanoscale Single-Element Color Filters. Nano Letters, 2015, 15, 5938-5943.	9.1	21
30	Giant Field Enhancements in Ultrathin Nanoslots above 1 Terahertz. ACS Photonics, 2018, 5, 1885-1890.	6.6	21
31	A Transformative Metasurface Based on Zerogap Embedded Template. Advanced Optical Materials, 2021, 9, 2002164.	7.3	21
32	Terahertz pinch harmonics enabled by single nano rods. Optics Express, 2011, 19, 24775.	3.4	20
33	Electromagnon with Sensitive Terahertz Magnetochromism in a Room-Temperature Magnetoelectric Hexaferrite. Physical Review Letters, 2018, 120, 027202.	7.8	19
34	Terahertz rectification in ring-shaped quantum barriers. Nature Communications, 2018, 9, 4914.	12.8	19
35	Light scattering of rectangular slot antennas: parallel magnetic vector vs perpendicular electric vector. Scientific Reports, 2016, 6, 18935.	3.3	18
36	Tunnelling current-voltage characteristics of Angstrom gaps measured with terahertz time-domain spectroscopy. Scientific Reports, 2016, 6, 29103.	3.3	18

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37	Colossal Terahertz Nonlinearity in Angstrom- and Nanometer-Sized Gaps. ACS Photonics, 2016, 3, 1440-1445.	6.6	18
38	Broadband Surface Plasmon Lasing in One-dimensional Metallic Gratings on Semiconductor. Scientific Reports, 2017, 7, 7907.	3.3	17
39	Anomalous extinction in index-matched terahertz nanogaps. Nanophotonics, 2018, 7, 347-354.	6.0	17
40	Selective enhanced resonances of two asymmetric terahertz nano resonators. Optics Express, 2012, 20, 25644.	3.4	16
41	Highâ€Q Metallic Fano Metamaterial for Highly Efficient Cerenkov Lasing. Advanced Optical Materials, 2018, 6, 1800041.	7.3	16
42	High Contrast Detection of Waterâ€Filled Terahertz Nanotrenches. Advanced Optical Materials, 2018, 6, 1800582.	7.3	16
43	Terahertz field confinement and enhancement in various sub-wavelength structures. Journal of Applied Physics, 2019, 126, .	2.5	16
44	Sub-10â€‰nm feature chromium photomasks for contact lithography patterning of square metal ring arrays. Scientific Reports, 2016, 6, 23823.	3.3	15
45	Terahertz quantum plasmonics at nanoscales and angstrom scales. Nanophotonics, 2020, 9, 435-451.	6.0	15
46	Microwave Funneling through Sub-10 nm Nanogaps. ACS Photonics, 2016, 3, 537-542.	6.6	14
47	Strongly Localized ohmic Absorption of Terahertz Radiation in Nanoslot Antennas. Nano Letters, 2019, 19, 9062-9068.	9.1	14
48	Rectangular plasmonic interferometer for high sensitive glycerol sensor. Scientific Reports, 2019, 9, 1378.	3.3	14
49	Decline in male circumcision in South Korea. BMC Public Health, 2012, 12, 1067.	2.9	13
50	Quantum dots-nanogap metamaterials fabrication by self-assembly lithography and photoluminescence studies. Optics Express, 2015, 23, 14937.	3.4	13
51	Resonance tuning of electric field enhancement of nanogaps. Applied Physics Express, 2015, 8, 092003.	2.4	12
52	Terahertz field enhancement in asymmetric and tapered nano-gaps. Optics Express, 2016, 24, 2065.	3.4	12
53	Nonresonant 104 Terahertz Field Enhancement with 5-nm Slits. Scientific Reports, 2017, 7, 45638.	3.3	11
54	Enhanced Surface Carrier Response by Field Overlapping in Metal Nanopatterned Semiconductor. ACS Photonics, 2018, 5, 4739-4744.	6.6	10

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55	Ultrasensitive molecular absorption detection using metal slot antenna arrays. Optics Express, 2015, 23, 19047.	3.4	9
56	Augmented Allâ€Optical Active Terahertz Device Using Grapheneâ€Based Metasurface. Advanced Optical Materials, 2021, 9, 2100462.	7.3	9
57	Gaptronics: multilevel photonics applications spanning zero-nanometer limits. Nanophotonics, 2022, 11, 1231-1260.	6.0	9
58	Terahertz transmission through rings of quantum dots-nanogap. Applied Physics Express, 2016, 9, 032001.	2.4	7
59	Active Thermal Control of 5 nm Gap Terahertz Antennas. Advanced Optical Materials, 2019, 7, 1800856.	7.3	7
60	Control of optical nanometer gap shapes made via standard lithography using atomic layer deposition. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2018, 17, 1.	0.9	7
61	Spatially Controlled Fabrication of Surface-Enhanced Raman Scattering Hot Spots through Photoinduced Dewetting of Silver Thin Films. Journal of Physical Chemistry Letters, 2022, 13, 2969-2975.	4.6	7
62	Optical responses of a metal with sub-nm gaps. Scientific Reports, 2016, 6, 22981.	3.3	6
63	Three-Dimensionally Coupled THz Octagrams as Isotropic Metamaterials. ACS Photonics, 2017, 4, 2436-2445.	6.6	6
64	Magnetic Nature of Light Transmission through a 5-nm Gap. Scientific Reports, 2018, 8, 2751.	3.3	6
65	Ultra-Narrow Metallic Nano-Trenches Realized by Wet Etching and Critical Point Drying. Nanomaterials, 2021, 11, 783.	4.1	6
66	Twofold Plasmonic Resonator Based on Polyethylene Terephthalate Thin Films for Terahertz Sensing Applications. ACS Applied Nano Materials, 2021, 4, 8753-8760.	5.0	6
67	Beyond-hot-spot absorption enhancement on top of terahertz nanotrenches. Nanophotonics, 2022, 11, 3159-3167.	6.0	5
68	Terahertz-driven polymerization of resists in nanoantennas. Scientific Reports, 2018, 8, 7762.	3.3	4
69	Enhanced terahertz conductivity in ultra-thin gold film deposited onto (3-mercaptopropyl) trimethoxysilane (MPTMS)-coated Si substrates. Scientific Reports, 2019, 9, 15025.	3.3	4
70	Effective terahertz shielding properties of extreme graphene-silver nanowire surfaces investigated by nanoprobing. IScience, 2022, 25, 104033.	4.1	4
71	High sensitivity bolometers based on metal nanoantenna dimers with a nanogap filled with vanadium dioxide. Scientific Reports, 2021, 11, 15863.	3.3	3
72	Angstrom-Scale Active Width Control of Nano Slits for Variable Plasmonic Cavity. Nanomaterials, 2021, 11, 2463.	4.1	3

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73	Efficient Control of THz Transmission of PEDOT:PSS with Resonant Nano-Metamaterials. Scientific Reports, 2019, 9, 17681.	3.3	2
74	Fabrication of vertical van der Waals gap array using single-and multi-layer graphene. Nanotechnology, 2020, 31, 035304.	2.6	2
75	Relaxation and Excitation Rate Modifications by Metal Nanostructures for Solar Energy Conversion Applications. Journal of Physical Chemistry C, 2021, 125, 8090-8097.	3.1	2
76	High performance terahertz polarizer based on super-aligned carbon nanotube sheet. , 2011, , .		1
77	Terahertz funneling-induced quantum tunneling at angstrom scale. , 2016, , .		1
78	Active Thermal Control of 5 nm Gap Terahertz Antennas. , 2018, , .		1
79	Effective-zero-thickness terahertz slot antennas using stepped structures. Optics Express, 2021, 29, 21262.	3.4	1
80	Near-field photoreflectance spectroscopy of quantum well structures. Applied Physics Letters, 2001, 78, 2306-2308.	3.3	0
81	Terahertz nanoresonators: Control and measurements. , 2009, , .		0
82	Surface plasmon-enhanced terahertz emission from single layer graphene. , 2012, , .		0
83	Huge field enhancement in microwave range achieved by λ/2000-width antennas. , 2014, , .		0
84	Quantum dot nano gap metamaterial terahertz resonators. , 2015, , .		0
85	Colossal terahertz nonlinearity of angstrom-sized infinite gaps. , 2015, , .		0
86	Electromagnetic wave funneling through λ/10,000,000 nanogaps for microwave regime. , 2015, , .		0
87	Transmission characteristic of terahertz waves modulated by film thickness of nano-gaps. , 2017, , .		0
88	Semiconductor THz nanoscopy of subliminal surface dynamics. , 2017, , .		0
89	Terahertz rectification in a triangular ring of quantum barriers. , 2018, , .		0
90	Tunneling Rectification in Ring Shaped Nanogaps. , 2018, , .		0

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91	Copper-based etalon filter using antioxidant graphene layer. Nanotechnology, 2020, 31, 445206.	2.6	0
92	Metallic nanotrenches for terahertz studies on nano-confined molecules. , 2021, , .		0
93	Cross sectional enhancements in terahertz nano antennas. , 2018, , .		0
94	Terahertz nanospectroscopy of surface carrier dynamics in metal-nanopatterned semiconductors. , 2019, , .		0
95	Colossal Terahertz Field Enhancement in Slant Nano-Antennas. , 2020, , .		0
96	Perspective on future applications with lights concentrated in zero-nanometer gaps. Journal of the Korean Physical Society, 0, , 1.	0.7	0