Ralph Krupke

List of Publications by Year
in descending order

121 papers	9,680 citations	71102 41 h-index	36028 97 g-index
126 all docs	126 docs citations	126 times ranked	12853 citing authors

#	Article	IF	Citations
1	Tailoring Spectrally Flat Infrared Photodetection with Thickness-Controlled Nanocrystalline Graphite. ACS Applied Materials & Interfaces, 2022, 14, 9525-9534.	8.0	5
2	Physics and applications of nanotubes. Journal of Applied Physics, 2022, 131, .	2.5	9
3	Light Control over Chirality Selective Functionalization of Substrate Supported Carbon Nanotubes. Journal of Physical Chemistry C, 2022, 126, 9803-9812.	3.1	1
4	Electroluminescence from Single-Walled Carbon Nanotubes with Quantum Defects. ACS Nano, 2022, 16, 11742-11754.	14.6	11
5	Principles of carbon nanotube dielectrophoresis. Nano Research, 2021, 14, 2188-2206.	10.4	14
6	Telecom Wavelength Carbon Nanotube Emitter Integrated in Hybrid Photonic Crystal Cavity. , 2021, , .		0
7	Ionic liquid gating of single-walled carbon nanotube devices with ultra-short channel length down to 10â€‰nm. Applied Physics Letters, 2021, 118, .	3.3	5
8	Sensing Molecules with Metalâ€“Organic Framework Functionalized Graphene Transistors. Advanced Materials, 2021, 33, e2103316.	21.0	25
9	Contact spacing controls the on-current for all-carbon field effect transistors. Communications Physics, 2021, 4, .	5.3	2
10	Low-Temperature Electroluminescence Excitation Mapping of Excitons and Trions in Short-Channel Monochiral Carbon Nanotube Devices. ACS Nano, 2020, 14, 2709-2717.	14.6	19
11	Separation of Specific Single-Enantiomer Single-Wall Carbon Nanotubes in the Large-Diameter Regime. ACS Nano, 2020, 14, 948-963.	14.6	75
12	Anomalous Cyclotron Motion in Graphene Superlattice Cavities. Physical Review Letters, 2020, 125, 217701.	7.8	11
13	Vanishing Hysteresis in Carbon Nanotube Transistors Embedded in Boron Nitride/Polytetrafluoroethylene Heterolayers. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000193.	2.4	5
14	Raman Fingerprints of Graphene Produced by Anodic Electrochemical Exfoliation. Nano Letters, 2020, 20, 3411-3419.	9.1	59
15	Nanocrystalline graphene at high temperatures: insight into nanoscale processes. Nanoscale Advances, 2019, 1, 2485-2494.	4.6	10
16	Andreev reflection in ballistic normal metal/graphene/superconductor junctions. Physical Review B, 2019, 100, .	3.2	10
17	Graphene Field-Effect Transistors Employing Different Thin Oxide Films: A Comparative Study. ACS Omega, 2019, 4, 2256-2260.	3.5	18
18	Measuring in Situ Length Distributions of Polymer-Wrapped Monochiral Single-Walled Carbon Nanotubes Dispersed in Toluene with Analytical Ultracentrifugation. Langmuir, 2019, 35, 3790-3796.	3.5	2

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19	Asymmetry of resonance Raman profiles in semiconducting single-walled carbon nanotubes at the first excitonic transition. Physical Review B, 2019, 99, .	3.2	8
20	Nearâ€Infrared Photoresponse of Waveguideâ€Integrated Carbon Nanotubeâ€"Silicon Junctions. Advanced Electronic Materials, 2019, 5, 1800265.	5.1	14
21	Tailoring supercurrent confinement in graphene bilayer weak links. Nature Communications, 2018, 9, 1722.	12.8	18
22	Employing Microwave Graphene Field Effect Transistors for Infrared Radiation Detection. IEEE Photonics Journal, 2018, 10, 1-7.	2.0	9
23	Valley Subband Splitting in Bilayer Graphene Quantum Point Contacts. Physical Review Letters, 2018, 121, 257703.	7.8	38
24	Tuning Anti-Klein to Klein Tunneling in Bilayer Graphene. Physical Review Letters, 2018, 121, 127706.	7.8	39
25	Graphene-enabled and directed nanomaterial placement from solution for large-scale device integration. Nature Communications, 2018, 9, 4095.	12.8	30
26	Carbon nanotubes as emerging quantum-light sources. Nature Materials, 2018, 17, 663-670.	27.5	210
27	Formation of nanocrystalline graphene on germanium. Nanoscale, 2018, 10, 12156-12162.	5.6	10
28	Fitting Single-Walled Carbon Nanotube Optical Spectra. ACS Omega, 2017, 2, 1163-1171.	3.5	58
29	Wide dynamic range enrichment method of semiconducting single-walled carbon nanotubes with weak field centrifugation. Scientific Reports, 2017, 7, 44812.	3.3	3
30	Inner- and outer-wall sorting of double-walled carbon nanotubes. Nature Nanotechnology, 2017, 12, 1176-1182.	31.5	32
31	Exploring the upper limit of single-walled carbon nanotube purity by multiple-cycle aqueous two-phase separation. Nanoscale, 2017, 9, 11640-11646.	5.6	28
32	Photocurrent spectroscopy of dye-sensitized carbon nanotubes. Nanoscale, 2017, 9, 11205-11213.	5.6	9
33	Understanding the graphitization and growth of free-standing nanocrystalline graphene using in situ transmission electron microscopy. Nanoscale, 2017, 9, 12835-12842.	5.6	27
34	Resonant anti-Stokes Raman scattering in single-walled carbon nanotubes. Physical Review B, 2017, 96, .	3.2	15
35	Graphitization and Growth of free-standing Nanocrystalline Graphene using In Situ Transmission Electron Microscopy. Microscopy and Microanalysis, 2017, 23, 1722-1723.	0.4	1
36	Sub-nanosecond light-pulse generation with waveguide-coupled carbon nanotube transducers. Beilstein Journal of Nanotechnology, 2017, 8, 38-44.	2.8	6

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37	Chiral-index resolved length mapping of carbon nanotubes in solution using electric-field induced differential absorption spectroscopy. Nanotechnology, 2016, 27, 375706.	2.6	7
38	Highly Efficient and Scalable Separation of Semiconducting Carbon Nanotubes via Weak Field Centrifugation. Scientific Reports, 2016, 6, 26259.	3.3	8
39	Performance Enhancement of Polymerâ€Free Carbon Nanotube Solar Cells via Transfer Matrix Modeling. Advanced Energy Materials, 2016, 6, 1501345.	19.5	25
40	Cavity-enhanced light emission from electrically driven carbon nanotubes. Nature Photonics, 2016, 10, 420-427.	31.4	119
41	Fully integrated quantum photonic circuit with an electrically driven light source. Nature Photonics, 2016, 10, 727-732.	31.4	190
42	Probing the Diameter Limit of Single Walled Carbon Nanotubes in SWCNT: Fullerene Solar Cells. Advanced Energy Materials, 2016, 6, 1600890.	19.5	50
43	Directional couplers with integrated carbon nanotube incandescent light emitters. Optics Express, 2016, 24, 966.	3.4	6
44	Length-Sorted, Large-Diameter, Polyfluorene-Wrapped Semiconducting Single-Walled Carbon Nanotubes for High-Density, Short-Channel Transistors. ACS Nano, 2016, 10, 1888-1895.	14.6	72
45	Light emission, light detection and strain sensing with nanocrystalline graphene. Nanotechnology, 2015, 26, 325202.	2.6	20
46	Sorting of Double-Walled Carbon Nanotubes According to Their Outer Wall Electronic Type <i>via</i> a Gel Permeation Method. ACS Nano, 2015, 9, 3849-3857.	14.6	19
47	Deposition of semiconducting singleâ€walled carbon nanotubes using lightâ€assisted dielectrophoresis. Physica Status Solidi (B): Basic Research, 2014, 251, 2475-2479.	1.5	7
48	Fabrication of carbon nanotube nanogap electrodes by helium ion sputtering for molecular contacts. Applied Physics Letters, 2014, 104, 103102.	3.3	24
49	Klein, schnell, hell. Physik in Unserer Zeit, 2014, 45, 243-248.	0.0	0
50	Nanotube film metallicity and its effect on the performance of carbon nanotubeâ€“silicon solar cells. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 1479-1487.	1.8	36
51	Waveguideâ€Integrated Lightâ€Emitting Carbon Nanotubes. Advanced Materials, 2014, 26, 3465-3472.	21.0	56
52	Photocurrent Spectroscopy of (<i>n</i>, <i>m</i>) Sorted Solution-Processed Single-Walled Carbon Nanotubes. ACS Nano, 2014, 8, 9324-9331.	14.6	19
53	Separation of Double-Walled Carbon Nanotubes by Size Exclusion Column Chromatography. ACS Nano, 2014, 8, 6756-6764.	14.6	33
54	Photocurrent imaging of semiconducting carbon nanotube devices with local mirrors. Physica Status Solidi (B): Basic Research, 2014, 251, 2471-2474.	1.5	0

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55	Electron-beam-induced direct etching of graphene. Carbon, 2013, 64, 84-91.	10.3	36
56	Enhancing Raman signals with an interferometrically controlled AFM tip. Nanotechnology, 2013, 24, 415701.	2.6	2
57	Electroluminescence in Single Layer MoS₂. Nano Letters, 2013, 13, 1416-1421.	9.1	905
58	Catalytic subsurface etching of nanoscale channels in graphite. Nature Communications, 2013, 4, 1379.	12.8	46
59	Separation of Single-Walled Carbon Nanotubes by 1-Dodecanol-Mediated Size-Exclusion Chromatography. ACS Nano, 2013, 7, 3557-3564.	14.6	124
60	Singleâ€•and Doubleâ€Sided Chemical Functionalization of Bilayer Graphene. Small, 2013, 9, 631-639.	10.0	49
61	The Role of Nanotubes in Carbon Nanotubeâ€"Silicon Solar Cells. Advanced Energy Materials, 2013, 3, 1091-1097.	19.5	49
62	Fermi energy shift in deposited metallic nanotubes: A Raman scattering study. Physical Review B, 2013, 87, .	3.2	12
63	Publisher's Note: Fermi energy shift in deposited metallic nanotubes: A Raman scattering study [Phys. Rev. B87, 165442 (2013)]. Physical Review B, 2013, 87, .	3.2	0
64	Controlled modification of mono- and bilayer graphene in O₂, H₂and CF₄plasmas. Nanotechnology, 2013, 24, 355705.	2.6	89
65	Probing the Nature of Defects in Graphene by Raman Spectroscopy. Nano Letters, 2012, 12, 3925-3930.	9.1	1,696
66	Leuchtendes Graphen. Physik in Unserer Zeit, 2012, 43, 268-269.	0.0	0
67	High-frequency performance of scaled carbon nanotube array field-effect transistors. Applied Physics Letters, 2012, 101, 053123.	3.3	94
68	Growth of non-branching Ag nanowiresvia ion migrational-transport controlled 3D electrodeposition. CrystEngComm, 2012, 14, 875-879.	2.6	13
69	Spatially Resolved Electrostatic Potential and Photocurrent Generation in Carbon Nanotube Array Devices. ACS Nano, 2012, 6, 7303-7310.	14.6	25
70	Antenna-Enhanced Photocurrent Microscopy on Single-Walled Carbon Nanotubes at 30 nm Resolution. ACS Nano, 2012, 6, 6416-6421.	14.6	38
71	Anisotropic Organization and Microscopic Manipulation of Self-Assembling Synthetic Porphyrin Microrods That Mimic Chlorosomes: Bacterial Light-Harvesting Systems. Journal of the American Chemical Society, 2012, 134, 944-954.	13.7	55
72	Lightâ€"matter interaction in a microcavity-controlled graphene transistor. Nature Communications, 2012, 3, 906.	12.8	355

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73	Carbon Nanotubeâ€Silicon Solar Cells. Advanced Energy Materials, 2012, 2, 1043-1055.	19.5	144
74	Electroluminescence from chirality-sorted (9,7)-semiconducting carbon nanotube devices. Optics Express, 2011, 19, A1184.	3.4	28
75	The Grapheneâ€"Gold Interface and Its Implications for Nanoelectronics. Nano Letters, 2011, 11, 3833-3837.	9.1	101
76	Hydrogen Sensing with Diameter- and Chirality-Sorted Carbon Nanotubes. ACS Nano, 2011, 5, 1670-1676.	14.6	60
77	A Scalable, CMOSâ€Compatible Assembly of Ambipolar Semiconducting Singleâ€Walled Carbon Nanotube Devices. Advanced Materials, 2011, 23, 1734-1738.	21.0	34
78	Synthesis and Optical Properties of Molecular Rods Comprising a Central Coreâ€Substituted Naphthalenediimide Chromophore for Carbon Nanotube Junctions. European Journal of Organic Chemistry, 2011, 2011, 478-496.	2.4	22
79	Imaging conduction pathways in carbon nanotube network transistors by voltage-contrast scanning electron microscopy. Nanotechnology, 2011, 22, 265715.	2.6	10
80	Controlled fabrication of single-walled carbon nanotube electrodes by electron-beam-induced oxidation. Applied Physics Letters, 2011, 99, .	3.3	19
81	Imaging defects and junctions in single-walled carbon nanotubes by voltage-contrast scanning electron microscopy. Carbon, 2010, 48, 494-500.	10.3	21
82	Electroluminescence from a single nanotubeâ€"moleculeâ€"nanotube junction. Nature Nanotechnology, 2010, 5, 863-867.	31.5	140
83	Phonon-Assisted Electroluminescence from Metallic Carbon Nanotubes and Graphene. Nano Letters, 2010, 10, 1589-1594.	9.1	77
84	The polarized carbon nanotube thin film LED. Optics Express, 2010, 18, 25738.	3.4	43
85	Ultraviolet photodetector arrays assembled by dielectrophoresis of ZnO nanoparticles. Nanotechnology, 2010, 21, 115501.	2.6	26
86	Toward Single-Chirality Carbon Nanotube Device Arrays. ACS Nano, 2010, 4, 2748-2754.	14.6	67
87	Dielectrophoretic Assembly of High-Density Arrays of Individual Graphene Devices for Rapid Screening. ACS Nano, 2009, 3, 1729-1734.	14.6	76
88	Silver nanowires growth via branch fragmentation of electrochemically grown silver dendrites. Chemical Communications, 2009, , 1130.	4.1	37
89	Shape-persistent macrocycles comprising perfluorinated benzene subunits: synthesis, aggregation behaviour and unexpected Î¼-rod formation. Organic and Biomolecular Chemistry, 2009, 7, 1081.	2.8	33
90	Imaging electronic structure of carbon nanotubes by voltage-contrast scanning electron microscopy. Nano Research, 2008, 1, 321-332.	10.4	29

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91	Reversible Metalâˆ'Insulator Transitions in Metallic Single-Walled Carbon Nanotubes. Nano Letters, 2008, 8, 2767-2772.	9.1	28
92	Raman Spectroscopic Evidence for Hot-Phonon Generation in Electrically Biased Carbon Nanotubes. Physical Review Letters, 2008, 100, 127401.	7.8	67
93	The Mechanism of Cavitation-Induced Scission of Single-Walled Carbon Nanotubes. Journal of Physical Chemistry B, 2007, 111, 1932-1937.	2.6	232
94	Ultra-Large-Scale Directed Assembly of Single-Walled Carbon Nanotube Devices. Nano Letters, 2007, 7, 1556-1560.	9.1	306
95	Influence of Structural and Dielectric Anisotropy on the Dielectrophoresis of Single-Walled Carbon Nanotubes. Nano Letters, 2007, 7, 1960-1966.	9.1	41
96	Length separation studies of single walled carbon nanotube dispersions. Physica Status Solidi (B): Basic Research, 2006, 243, 3073-3076.	1.5	39
97	Thin Films of Metallic Carbon Nanotubes Prepared by Dielectrophoresis. Advanced Materials, 2006, 18, 1468-1470.	21.0	139
98	Probing dielectrophoretic force fields with metallic carbon nanotubes. Applied Physics Letters, 2006, 89, 183117.	3.3	23
99	Separation Techniques for Carbon Nanotubes. Advanced Engineering Materials, 2005, 7, 111-116.	3.5	62
100	Correlation between Transport Measurements and Resonant Raman Spectroscopy on site-deposited Individual Carbon Nanotubes. AIP Conference Proceedings, 2005, , .	0.4	0
101	Frequency Dependence of the Dielectrophoretic Separation of Single-Walled Carbon Nanotubes. Journal of Nanoscience and Nanotechnology, 2005, 5, 1166-1171.	0.9	15
102	On the Electronâˆ'Phonon Coupling of Individual Single-Walled Carbon Nanotubes. Nano Letters, 2005, 5, 1761-1767.	9.1	53
103	Raman Spectroscopy of Individual Single-Walled Carbon Nanotubes from Various Sources. Journal of Physical Chemistry B, 2005, 109, 10567-10573.	2.6	133
104	Comment on â€œUsing the Selective Functionalization of Metallic Single-Walled Carbon Nanotubes to Control Dielectrophoretic Mobilityâ€• Journal of Physical Chemistry B, 2005, 109, 17014-17015.	2.6	8
105	Surface Conductance Induced Dielectrophoresis of Semiconducting Single-Walled Carbon Nanotubes. Nano Letters, 2004, 4, 1395-1399.	9.1	213
106	Contacting single bundles of carbon nanotubes with alternating electric fields. Applied Physics A: Materials Science and Processing, 2003, 76, 397-400.	2.3	105
107	Separation of Metallic from Semiconducting Single-Walled Carbon Nanotubes.. ChemInform, 2003, 34, no.	0.0	7
108	Separation of Metallic from Semiconducting Single-Walled Carbon Nanotubes. Science, 2003, 301, 344-347.	12.6	1,472

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109	Near-Infrared Absorbance of Single-Walled Carbon Nanotubes Dispersed in Dimethylformamide. Journal of Physical Chemistry B, 2003, 107, 5667-5669.	2.6	45
110	Simultaneous Deposition of Metallic Bundles of Single-walled Carbon Nanotubes Using Ac-dielectrophoresis. Nano Letters, 2003, 3, 1019-1023.	9.1	263
111	FTIR-luminescence mapping of dispersed single-walled carbon nanotubes. New Journal of Physics, 2003, 5, 140-140.	2.9	84
112	Patterning and Visualizing Self-Assembled Monolayers with Low-Energy Electrons. Nano Letters, 2002, 2, 1161-1164.	9.1	39
113	Field induced and spontaneous sub-gap in [110] and [100] oriented YBCO films: indication for a dx2â^'y2 + idxy order parameter. Physica C: Superconductivity and Its Applications, 2000, 341-348, 1629-1632.	1.2	15
114	[110] tunneling under applied magnetic fields into Y 1 Ba 2 Cu 3 O 7 â^' Î´ : Possible evidence for a field-induced id xy gap component. Europhysics Letters, 2000, 51, 116-121.	2.0	15
115	Determination of the superconducting gap in YBa2Cu3O7-Î´ by tunneling experiments under magnetic fields. Physical Review B, 2000, 62, 146-149.	3.2	32
116	Anisotropic Magnetic Field Dependence of the Zero-Bias Anomaly on In-Plane Oriented [100]Y1Ba2Cu3O7â^'x/InTunnel Junctions. Physical Review Letters, 1999, 83, 4634-4637.	7.8	118
117	A systematic approach to reduce macroscopic defects in c-axis oriented YBCO films. Physica C: Superconductivity and Its Applications, 1999, 315, 99-106.	1.2	11
118	A systematic approach to reduce macroscopic defects in c-axis-oriented YBCO films. Physica C: Superconductivity and Its Applications, 1999, 317-318, 536-539.	1.2	3
119	Title is missing!. Journal of Low Temperature Physics, 1999, 117, 533-537.	1.4	3
120	On the origin of hole formation in YBCO films. Physica C: Superconductivity and Its Applications, 1997, 289, 146-150.	1.2	13
121	Superconducting, structural and surface properties of GdBaCuO thin films deposited by electron cyclotron resonance supported sputtering. Physica C: Superconductivity and Its Applications, 1997, 279, 153-164.	1.2	7