Ralph Krupke

List of Publications by Year
in descending order

121 papers	9,680 citations	70961 41 h-index	35952 97 g-index
126 all docs	126 docs citations	126 times ranked	12853 citing authors

#	Article	IF	Citations
1	Probing the Nature of Defects in Graphene by Raman Spectroscopy. Nano Letters, 2012, 12, 3925-3930.	4.5	1,696
2	Separation of Metallic from Semiconducting Single-Walled Carbon Nanotubes. Science, 2003, 301, 344-347.	6.0	1,472
3	Electroluminescence in Single Layer MoS₂. Nano Letters, 2013, 13, 1416-1421.	4.5	905
4	Lightâ€“matter interaction in a microcavity-controlled graphene transistor. Nature Communications, 2012, 3, 906.	5.8	355
5	Ultra-Large-Scale Directed Assembly of Single-Walled Carbon Nanotube Devices. Nano Letters, 2007, 7, 1556-1560.	4.5	306
6	Simultaneous Deposition of Metallic Bundles of Single-walled Carbon Nanotubes Using Ac-dielectrophoresis. Nano Letters, 2003, 3, 1019-1023.	4.5	263
7	The Mechanism of Cavitation-Induced Scission of Single-Walled Carbon Nanotubes. Journal of Physical Chemistry B, 2007, 111, 1932-1937.	1.2	232
8	Surface Conductance Induced Dielectrophoresis of Semiconducting Single-Walled Carbon Nanotubes. Nano Letters, 2004, 4, 1395-1399.	4.5	213
9	Carbon nanotubes as emerging quantum-light sources. Nature Materials, 2018, 17, 663-670.	13.3	210
10	Fully integrated quantum photonic circuit with an electrically driven light source. Nature Photonics, 2016, 10, 727-732.	15.6	190
11	Carbon Nanotubeâ€Silicon Solar Cells. Advanced Energy Materials, 2012, 2, 1043-1055.	10.2	144
12	Electroluminescence from a single nanotubeâ€“moleculeâ€“nanotube junction. Nature Nanotechnology, 2010, 5, 863-867.	15.6	140
13	Thin Films of Metallic Carbon Nanotubes Prepared by Dielectrophoresis. Advanced Materials, 2006, 18, 1468-1470.	11.1	139
14	Raman Spectroscopy of Individual Single-Walled Carbon Nanotubes from Various Sources. Journal of Physical Chemistry B, 2005, 109, 10567-10573.	1.2	133
15	Separation of Single-Walled Carbon Nanotubes by 1-Dodecanol-Mediated Size-Exclusion Chromatography. ACS Nano, 2013, 7, 3557-3564.	7.3	124
16	Cavity-enhanced light emission from electrically driven carbon nanotubes. Nature Photonics, 2016, 10, 420-427.	15.6	119
17	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.	2.9	118
18	Contacting single bundles of carbon nanotubes with alternating electric fields. Applied Physics A: Materials Science and Processing, 2003, 76, 397-400.	1.1	105

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19	The Grapheneâ€"Gold Interface and Its Implications for Nanoelectronics. Nano Letters, 2011, 11, 3833-3837.	4.5	101
20	High-frequency performance of scaled carbon nanotube array field-effect transistors. Applied Physics Letters, 2012, 101, 053123.	1.5	94
21	Controlled modification of mono- and bilayer graphene in O₂, H₂and CF₄plasmas. Nanotechnology, 2013, 24, 355705.	1.3	89
22	FTIR-luminescence mapping of dispersed single-walled carbon nanotubes. New Journal of Physics, 2003, 5, 140-140.	1.2	84
23	Phonon-Assisted Electroluminescence from Metallic Carbon Nanotubes and Graphene. Nano Letters, 2010, 10, 1589-1594.	4.5	77
24	Dielectrophoretic Assembly of High-Density Arrays of Individual Graphene Devices for Rapid Screening. ACS Nano, 2009, 3, 1729-1734.	7.3	76
25	Separation of Specific Single-Enantiomer Single-Wall Carbon Nanotubes in the Large-Diameter Regime. ACS Nano, 2020, 14, 948-963.	7.3	75
26	Length-Sorted, Large-Diameter, Polyfluorene-Wrapped Semiconducting Single-Walled Carbon Nanotubes for High-Density, Short-Channel Transistors. ACS Nano, 2016, 10, 1888-1895.	7.3	72
27	Raman Spectroscopic Evidence for Hot-Phonon Generation in Electrically Biased Carbon Nanotubes. Physical Review Letters, 2008, 100, 127401.	2.9	67
28	Toward Single-Chirality Carbon Nanotube Device Arrays. ACS Nano, 2010, 4, 2748-2754.	7.3	67
29	Separation Techniques for Carbon Nanotubes. Advanced Engineering Materials, 2005, 7, 111-116.	1.6	62
30	Hydrogen Sensing with Diameter- and Chirality-Sorted Carbon Nanotubes. ACS Nano, 2011, 5, 1670-1676.	7.3	60
31	Raman Fingerprints of Graphene Produced by Anodic Electrochemical Exfoliation. Nano Letters, 2020, 20, 3411-3419.	4.5	59
32	Fitting Single-Walled Carbon Nanotube Optical Spectra. ACS Omega, 2017, 2, 1163-1171.	1.6	58
33	Waveguideâ€Integrated Lightâ€Emitting Carbon Nanotubes. Advanced Materials, 2014, 26, 3465-3472.	11.1	56
34	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.	6.6	55
35	On the Electronâˆ'Phonon Coupling of Individual Single-Walled Carbon Nanotubes. Nano Letters, 2005, 5, 1761-1767.	4.5	53
36	Probing the Diameter Limit of Single Walled Carbon Nanotubes in SWCNT: Fullerene Solar Cells. Advanced Energy Materials, 2016, 6, 1600890.	10.2	50

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37	Singleâ€•and Doubleâ€Sided Chemical Functionalization of Bilayer Graphene. Small, 2013, 9, 631-639.	5.2	49
38	The Role of Nanotubes in Carbon Nanotubeâ€"Silicon Solar Cells. Advanced Energy Materials, 2013, 3, 1091-1097.	10.2	49
39	Catalytic subsurface etching of nanoscale channels in graphite. Nature Communications, 2013, 4, 1379.	5.8	46
40	Near-Infrared Absorbance of Single-Walled Carbon Nanotubes Dispersed in Dimethylformamide. Journal of Physical Chemistry B, 2003, 107, 5667-5669.	1.2	45
41	The polarized carbon nanotube thin film LED. Optics Express, 2010, 18, 25738.	1.7	43
42	Influence of Structural and Dielectric Anisotropy on the Dielectrophoresis of Single-Walled Carbon Nanotubes. Nano Letters, 2007, 7, 1960-1966.	4.5	41
43	Patterning and Visualizing Self-Assembled Monolayers with Low-Energy Electrons. Nano Letters, 2002, 2, 1161-1164.	4.5	39
44	Length separation studies of single walled carbon nanotube dispersions. Physica Status Solidi (B): Basic Research, 2006, 243, 3073-3076.	0.7	39
45	Tuning Anti-Klein to Klein Tunneling in Bilayer Graphene. Physical Review Letters, 2018, 121, 127706.	2.9	39
46	Antenna-Enhanced Photocurrent Microscopy on Single-Walled Carbon Nanotubes at 30 nm Resolution. ACS Nano, 2012, 6, 6416-6421.	7.3	38
47	Valley Subband Splitting in Bilayer Graphene Quantum Point Contacts. Physical Review Letters, 2018, 121, 257703.	2.9	38
48	Silver nanowires growth via branch fragmentation of electrochemically grown silver dendrites. Chemical Communications, 2009, , 1130.	2.2	37
49	Electron-beam-induced direct etching of graphene. Carbon, 2013, 64, 84-91.	5.4	36
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.	0.8	36
51	A Scalable, CMOSâ€Compatible Assembly of Ambipolar Semiconducting Singleâ€Walled Carbon Nanotube Devices. Advanced Materials, 2011, 23, 1734-1738.	11.1	34
52	Shape-persistent macrocycles comprising perfluorinated benzene subunits: synthesis, aggregation behaviour and unexpected Î¼-rod formation. Organic and Biomolecular Chemistry, 2009, 7, 1081.	1.5	33
53	Separation of Double-Walled Carbon Nanotubes by Size Exclusion Column Chromatography. ACS Nano, 2014, 8, 6756-6764.	7.3	33
54	Determination of the superconducting gap in YBa2Cu3O7-Î´ by tunneling experiments under magnetic fields. Physical Review B, 2000, 62, 146-149.	1.1	32

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55	Inner- and outer-wall sorting of double-walled carbon nanotubes. Nature Nanotechnology, 2017, 12, 1176-1182.	15.6	32
56	Graphene-enabled and directed nanomaterial placement from solution for large-scale device integration. Nature Communications, 2018, 9, 4095.	5.8	30
57	Imaging electronic structure of carbon nanotubes by voltage-contrast scanning electron microscopy. Nano Research, 2008, 1, 321-332.	5.8	29
58	Reversible Metalâˆ’Insulator Transitions in Metallic Single-Walled Carbon Nanotubes. Nano Letters, 2008, 8, 2767-2772.	4.5	28
59	Electroluminescence from chirality-sorted (9,7)-semiconducting carbon nanotube devices. Optics Express, 2011, 19, A1184.	1.7	28
60	Exploring the upper limit of single-walled carbon nanotube purity by multiple-cycle aqueous two-phase separation. Nanoscale, 2017, 9, 11640-11646.	2.8	28
61	Understanding the graphitization and growth of free-standing nanocrystalline graphene using in situ transmission electron microscopy. Nanoscale, 2017, 9, 12835-12842.	2.8	27
62	Ultraviolet photodetector arrays assembled by dielectrophoresis of ZnO nanoparticles. Nanotechnology, 2010, 21, 115501.	1.3	26
63	Spatially Resolved Electrostatic Potential and Photocurrent Generation in Carbon Nanotube Array Devices. ACS Nano, 2012, 6, 7303-7310.	7.3	25
64	Performance Enhancement of Polymerâ€Free Carbon Nanotube Solar Cells via Transfer Matrix Modeling. Advanced Energy Materials, 2016, 6, 1501345.	10.2	25
65	Sensing Molecules with Metalâ€"Organic Framework Functionalized Graphene Transistors. Advanced Materials, 2021, 33, e2103316.	11.1	25
66	Fabrication of carbon nanotube nanogap electrodes by helium ion sputtering for molecular contacts. Applied Physics Letters, 2014, 104, 103102.	1.5	24
67	Probing dielectrophoretic force fields with metallic carbon nanotubes. Applied Physics Letters, 2006, 89, 183117.	1.5	23
68	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.	1.2	22
69	Imaging defects and junctions in single-walled carbon nanotubes by voltage-contrast scanning electron microscopy. Carbon, 2010, 48, 494-500.	5.4	21
70	Light emission, light detection and strain sensing with nanocrystalline graphene. Nanotechnology, 2015, 26, 325202.	1.3	20
71	Controlled fabrication of single-walled carbon nanotube electrodes by electron-beam-induced oxidation. Applied Physics Letters, 2011, 99, .	1.5	19
72	Photocurrent Spectroscopy of (<i>n</i>, <i>m</i>) Sorted Solution-Processed Single-Walled Carbon Nanotubes. ACS Nano, 2014, 8, 9324-9331.	7.3	19

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73	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.	7.3	19
74	Low-Temperature Electroluminescence Excitation Mapping of Excitons and Trions in Short-Channel Monochiral Carbon Nanotube Devices. ACS Nano, 2020, 14, 2709-2717.	7.3	19
75	Tailoring supercurrent confinement in graphene bilayer weak links. Nature Communications, 2018, 9, 1722.	5.8	18
76	Graphene Field-Effect Transistors Employing Different Thin Oxide Films: A Comparative Study. ACS Omega, 2019, 4, 2256-2260.	1.6	18
77	Field induced and spontaneous sub-gap in [110] and [100] oriented YBCO films: indication for a dx2âˆ’y2 + idxy order parameter. Physica C: Superconductivity and Its Applications, 2000, 341-348, 1629-1632.	0.6	15
78	[110] tunneling under applied magnetic fields into Y 1 Ba 2 Cu 3 O 7 âˆ’ Î´ : Possible evidence for a field-induced id xy gap component. Europhysics Letters, 2000, 51, 116-121.	0.7	15
79	Frequency Dependence of the Dielectrophoretic Separation of Single-Walled Carbon Nanotubes. Journal of Nanoscience and Nanotechnology, 2005, 5, 1166-1171.	0.9	15
80	Resonant anti-Stokes Raman scattering in single-walled carbon nanotubes. Physical Review B, 2017, 96, .	1.1	15
81	Nearâ€Infrared Photoresponse of Waveguideâ€Integrated Carbon Nanotubeâ€“Silicon Junctions. Advanced Electronic Materials, 2019, 5, 1800265.	2.6	14
82	Principles of carbon nanotube dielectrophoresis. Nano Research, 2021, 14, 2188-2206.	5.8	14
83	On the origin of hole formation in YBCO films. Physica C: Superconductivity and Its Applications, 1997, 289, 146-150.	0.6	13
84	Growth of non-branching Ag nanowiresvia ion migrational-transport controlled 3D electrodeposition. CrystEngComm, 2012, 14, 875-879.	1.3	13
85	Fermi energy shift in deposited metallic nanotubes: A Raman scattering study. Physical Review B, 2013, 87, .	1.1	12
86	A systematic approach to reduce macroscopic defects in c-axis oriented YBCO films. Physica C: Superconductivity and Its Applications, 1999, 315, 99-106.	0.6	11
87	Anomalous Cyclotron Motion in Graphene Superlattice Cavities. Physical Review Letters, 2020, 125, 217701.	2.9	11
88	Electroluminescence from Single-Walled Carbon Nanotubes with Quantum Defects. ACS Nano, 2022, 16, 11742-11754.	7.3	11
89	Imaging conduction pathways in carbon nanotube network transistors by voltage-contrast scanning electron microscopy. Nanotechnology, 2011, 22, 265715.	1.3	10
90	Formation of nanocrystalline graphene on germanium. Nanoscale, 2018, 10, 12156-12162.	2.8	10

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91	Nanocrystalline graphene at high temperatures: insight into nanoscale processes. Nanoscale Advances, 2019, 1, 2485-2494.	2.2	10
92	Andreev reflection in ballistic normal metal/graphene/superconductor junctions. Physical Review B, 2019, 100, .	1.1	10
93	Photocurrent spectroscopy of dye-sensitized carbon nanotubes. Nanoscale, 2017, 9, 11205-11213.	2.8	9
94	Employing Microwave Graphene Field Effect Transistors for Infrared Radiation Detection. IEEE Photonics Journal, 2018, 10, 1-7.	1.0	9
95	Physics and applications of nanotubes. Journal of Applied Physics, 2022, 131, .	1.1	9
96	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.	1.2	8
97	Highly Efficient and Scalable Separation of Semiconducting Carbon Nanotubes via Weak Field Centrifugation. Scientific Reports, 2016, 6, 26259.	1.6	8
98	Asymmetry of resonance Raman profiles in semiconducting single-walled carbon nanotubes at the first excitonic transition. Physical Review B, 2019, 99, .	1.1	8
99	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.	0.6	7
100	Separation of Metallic from Semiconducting Single-Walled Carbon Nanotubes.. ChemInform, 2003, 34, no.	0.1	7
101	Deposition of semiconducting singleâ€walled carbon nanotubes using lightâ€assisted dielectrophoresis. Physica Status Solidi (B): Basic Research, 2014, 251, 2475-2479.	0.7	7
102	Chiral-index resolved length mapping of carbon nanotubes in solution using electric-field induced differential absorption spectroscopy. Nanotechnology, 2016, 27, 375706.	1.3	7
103	Directional couplers with integrated carbon nanotube incandescent light emitters. Optics Express, 2016, 24, 966.	1.7	6
104	Sub-nanosecond light-pulse generation with waveguide-coupled carbon nanotube transducers. Beilstein Journal of Nanotechnology, 2017, 8, 38-44.	1.5	6
105	Vanishing Hysteresis in Carbon Nanotube Transistors Embedded in Boron Nitride/Polytetrafluoroethylene Heterolayers. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000193.	1.2	5
106	Ionic liquid gating of single-walled carbon nanotube devices with ultra-short channel length down to 10â€‰nm. Applied Physics Letters, 2021, 118, .	1.5	5
107	Tailoring Spectrally Flat Infrared Photodetection with Thickness-Controlled Nanocrystalline Graphite. ACS Applied Materials & Interfaces, 2022, 14, 9525-9534.	4.0	5
108	A systematic approach to reduce macroscopic defects in c-axis-oriented YBCO films. Physica C: Superconductivity and Its Applications, 1999, 317-318, 536-539.	0.6	3

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109	Title is missing!. Journal of Low Temperature Physics, 1999, 117, 533-537.	0.6	3
110	Wide dynamic range enrichment method of semiconducting single-walled carbon nanotubes with weak field centrifugation. Scientific Reports, 2017, 7, 44812.	1.6	3
111	Enhancing Raman signals with an interferometrically controlled AFM tip. Nanotechnology, 2013, 24, 415701.	1.3	2
112	Measuring in Situ Length Distributions of Polymer-Wrapped Monochiral Single-Walled Carbon Nanotubes Dispersed in Toluene with Analytical Ultracentrifugation. Langmuir, 2019, 35, 3790-3796.	1.6	2
113	Contact spacing controls the on-current for all-carbon field effect transistors. Communications Physics, 2021, 4, .	2.0	2
114	Graphitization and Growth of free-standing Nanocrystalline Graphene using In Situ Transmission Electron Microscopy. Microscopy and Microanalysis, 2017, 23, 1722-1723.	0.2	1
115	Light Control over Chirality Selective Functionalization of Substrate Supported Carbon Nanotubes. Journal of Physical Chemistry C, 2022, 126, 9803-9812.	1.5	1
116	Correlation between Transport Measurements and Resonant Raman Spectroscopy on site-deposited Individual Carbon Nanotubes. AIP Conference Proceedings, 2005, , .	0.3	0
117	Leuchtendes Graphen. Physik in Unserer Zeit, 2012, 43, 268-269.	0.0	0
118	Publisher's Note: Fermi energy shift in deposited metallic nanotubes: A Raman scattering study [Phys. Rev. B87, 165442 (2013)]. Physical Review B, 2013, 87, .	1.1	0
119	Klein, schnell, hell. Physik in Unserer Zeit, 2014, 45, 243-248.	0.0	0
120	Photocurrent imaging of semiconducting carbon nanotube devices with local mirrors. Physica Status Solidi (B): Basic Research, 2014, 251, 2471-2474.	0.7	0
121	Telecom Wavelength Carbon Nanotube Emitter Integrated in Hybrid Photonic Crystal Cavity. , 2021, , .		0