

Ralph Krupke

List of Publications by Year in descending order

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121
papers

9,680
citations

70961

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35952

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126
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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.	4.0	5
2	Physics and applications of nanotubes. Journal of Applied Physics, 2022, 131, .	1.1	9
3	Light Control over Chirality Selective Functionalization of Substrate Supported Carbon Nanotubes. Journal of Physical Chemistry C, 2022, 126, 9803-9812.	1.5	1
4	Electroluminescence from Single-Walled Carbon Nanotubes with Quantum Defects. ACS Nano, 2022, 16, 11742-11754.	7.3	11
5	Principles of carbon nanotube dielectrophoresis. Nano Research, 2021, 14, 2188-2206.	5.8	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 10 nm. Applied Physics Letters, 2021, 118, .	1.5	5
8	Sensing Molecules with Metal-Organic Framework Functionalized Graphene Transistors. Advanced Materials, 2021, 33, e2103316.	11.1	25
9	Contact spacing controls the on-current for all-carbon field effect transistors. Communications Physics, 2021, 4, .	2.0	2
10	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
11	Separation of Specific Single-Enantiomer Single-Wall Carbon Nanotubes in the Large-Diameter Regime. ACS Nano, 2020, 14, 948-963.	7.3	75
12	Anomalous Cyclotron Motion in Graphene Superlattice Cavities. Physical Review Letters, 2020, 125, 217701.	2.9	11
13	Vanishing Hysteresis in Carbon Nanotube Transistors Embedded in Boron Nitride/Polytetrafluoroethylene Heterolayers. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000193.	1.2	5
14	Raman Fingerprints of Graphene Produced by Anodic Electrochemical Exfoliation. Nano Letters, 2020, 20, 3411-3419.	4.5	59
15	Nanocrystalline graphene at high temperatures: insight into nanoscale processes. Nanoscale Advances, 2019, 1, 2485-2494.	2.2	10
16	Andreev reflection in ballistic normal metal/graphene/superconductor junctions. Physical Review B, 2019, 100, .	1.1	10
17	Graphene Field-Effect Transistors Employing Different Thin Oxide Films: A Comparative Study. ACS Omega, 2019, 4, 2256-2260.	1.6	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.	1.6	2

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19	Asymmetry of resonance Raman profiles in semiconducting single-walled carbon nanotubes at the first excitonic transition. <i>Physical Review B</i> , 2019, 99, .	1.1	8
20	Near-Infrared Photoresponse of Waveguide-Integrated Carbon Nanotube-Silicon Junctions. <i>Advanced Electronic Materials</i> , 2019, 5, 1800265.	2.6	14
21	Tailoring supercurrent confinement in graphene bilayer weak links. <i>Nature Communications</i> , 2018, 9, 1722.	5.8	18
22	Employing Microwave Graphene Field Effect Transistors for Infrared Radiation Detection. <i>IEEE Photonics Journal</i> , 2018, 10, 1-7.	1.0	9
23	Valley Subband Splitting in Bilayer Graphene Quantum Point Contacts. <i>Physical Review Letters</i> , 2018, 121, 257703.	2.9	38
24	Tuning Anti-Klein to Klein Tunneling in Bilayer Graphene. <i>Physical Review Letters</i> , 2018, 121, 127706.	2.9	39
25	Graphene-enabled and directed nanomaterial placement from solution for large-scale device integration. <i>Nature Communications</i> , 2018, 9, 4095.	5.8	30
26	Carbon nanotubes as emerging quantum-light sources. <i>Nature Materials</i> , 2018, 17, 663-670.	13.3	210
27	Formation of nanocrystalline graphene on germanium. <i>Nanoscale</i> , 2018, 10, 12156-12162.	2.8	10
28	Fitting Single-Walled Carbon Nanotube Optical Spectra. <i>ACS Omega</i> , 2017, 2, 1163-1171.	1.6	58
29	Wide dynamic range enrichment method of semiconducting single-walled carbon nanotubes with weak field centrifugation. <i>Scientific Reports</i> , 2017, 7, 44812.	1.6	3
30	Inner- and outer-wall sorting of double-walled carbon nanotubes. <i>Nature Nanotechnology</i> , 2017, 12, 1176-1182.	15.6	32
31	Exploring the upper limit of single-walled carbon nanotube purity by multiple-cycle aqueous two-phase separation. <i>Nanoscale</i> , 2017, 9, 11640-11646.	2.8	28
32	Photocurrent spectroscopy of dye-sensitized carbon nanotubes. <i>Nanoscale</i> , 2017, 9, 11205-11213.	2.8	9
33	Understanding the graphitization and growth of free-standing nanocrystalline graphene using in situ transmission electron microscopy. <i>Nanoscale</i> , 2017, 9, 12835-12842.	2.8	27
34	Resonant anti-Stokes Raman scattering in single-walled carbon nanotubes. <i>Physical Review B</i> , 2017, 96, .	1.1	15
35	Graphitization and Growth of free-standing Nanocrystalline Graphene using In Situ Transmission Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2017, 23, 1722-1723.	0.2	1
36	Sub-nanosecond light-pulse generation with waveguide-coupled carbon nanotube transducers. <i>Beilstein Journal of Nanotechnology</i> , 2017, 8, 38-44.	1.5	6

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37	Chiral-index resolved length mapping of carbon nanotubes in solution using electric-field induced differential absorption spectroscopy. <i>Nanotechnology</i> , 2016, 27, 375706.	1.3	7
38	Highly Efficient and Scalable Separation of Semiconducting Carbon Nanotubes via Weak Field Centrifugation. <i>Scientific Reports</i> , 2016, 6, 26259.	1.6	8
39	Performance Enhancement of Polymer-Free Carbon Nanotube Solar Cells via Transfer Matrix Modeling. <i>Advanced Energy Materials</i> , 2016, 6, 1501345.	10.2	25
40	Cavity-enhanced light emission from electrically driven carbon nanotubes. <i>Nature Photonics</i> , 2016, 10, 420-427.	15.6	119
41	Fully integrated quantum photonic circuit with an electrically driven light source. <i>Nature Photonics</i> , 2016, 10, 727-732.	15.6	190
42	Probing the Diameter Limit of Single Walled Carbon Nanotubes in SWCNT: Fullerene Solar Cells. <i>Advanced Energy Materials</i> , 2016, 6, 1600890.	10.2	50
43	Directional couplers with integrated carbon nanotube incandescent light emitters. <i>Optics Express</i> , 2016, 24, 966.	1.7	6
44	Length-Sorted, Large-Diameter, Polyfluorene-Wrapped Semiconducting Single-Walled Carbon Nanotubes for High-Density, Short-Channel Transistors. <i>ACS Nano</i> , 2016, 10, 1888-1895.	7.3	72
45	Light emission, light detection and strain sensing with nanocrystalline graphene. <i>Nanotechnology</i> , 2015, 26, 325202.	1.3	20
46	Sorting of Double-Walled Carbon Nanotubes According to Their Outer Wall Electronic Type via a Gel Permeation Method. <i>ACS Nano</i> , 2015, 9, 3849-3857.	7.3	19
47	Deposition of semiconducting single-walled carbon nanotubes using light-assisted dielectrophoresis. <i>Physica Status Solidi (B): Basic Research</i> , 2014, 251, 2475-2479.	0.7	7
48	Fabrication of carbon nanotube nanogap electrodes by helium ion sputtering for molecular contacts. <i>Applied Physics Letters</i> , 2014, 104, 103102.	1.5	24
49	Klein, schnell, hell. <i>Physik in Unserer Zeit</i> , 2014, 45, 243-248.	0.0	0
50	Nanotube film metallicity and its effect on the performance of carbon nanotube-silicon solar cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2014, 211, 1479-1487.	0.8	36
51	Waveguide-Integrated Light-Emitting Carbon Nanotubes. <i>Advanced Materials</i> , 2014, 26, 3465-3472.	11.1	56
52	Photocurrent Spectroscopy of (n, m) Sorted Solution-Processed Single-Walled Carbon Nanotubes. <i>ACS Nano</i> , 2014, 8, 9324-9331.	7.3	19
53	Separation of Double-Walled Carbon Nanotubes by Size Exclusion Column Chromatography. <i>ACS Nano</i> , 2014, 8, 6756-6764.	7.3	33
54	Photocurrent imaging of semiconducting carbon nanotube devices with local mirrors. <i>Physica Status Solidi (B): Basic Research</i> , 2014, 251, 2471-2474.	0.7	0

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55	Electron-beam-induced direct etching of graphene. Carbon, 2013, 64, 84-91.	5.4	36
56	Enhancing Raman signals with an interferometrically controlled AFM tip. Nanotechnology, 2013, 24, 415701.	1.3	2
57	Electroluminescence in Single Layer MoS ₂ . Nano Letters, 2013, 13, 1416-1421.	4.5	905
58	Catalytic subsurface etching of nanoscale channels in graphite. Nature Communications, 2013, 4, 1379.	5.8	46
59	Separation of Single-Walled Carbon Nanotubes by 1-Dodecanol-Mediated Size-Exclusion Chromatography. ACS Nano, 2013, 7, 3557-3564.	7.3	124
60	Single- and Double-Sided Chemical Functionalization of Bilayer Graphene. Small, 2013, 9, 631-639.	5.2	49
61	The Role of Nanotubes in Carbon Nanotube-Silicon Solar Cells. Advanced Energy Materials, 2013, 3, 1091-1097.	10.2	49
62	Fermi energy shift in deposited metallic nanotubes: A Raman scattering study. Physical Review B, 2013, 87, .	1.1	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, .	1.1	0
64	Controlled modification of mono- and bilayer graphene in O ₂ , H ₂ and CF ₄ plasmas. Nanotechnology, 2013, 24, 355705.	1.3	89
65	Probing the Nature of Defects in Graphene by Raman Spectroscopy. Nano Letters, 2012, 12, 3925-3930.	4.5	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.	1.5	94
68	Growth of non-branching Ag nanowires via ion migrational-transport controlled 3D electrodeposition. CrystEngComm, 2012, 14, 875-879.	1.3	13
69	Spatially Resolved Electrostatic Potential and Photocurrent Generation in Carbon Nanotube Array Devices. ACS Nano, 2012, 6, 7303-7310.	7.3	25
70	Antenna-Enhanced Photocurrent Microscopy on Single-Walled Carbon Nanotubes at 30 nm Resolution. ACS Nano, 2012, 6, 6416-6421.	7.3	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.	6.6	55
72	Light-matter interaction in a microcavity-controlled graphene transistor. Nature Communications, 2012, 3, 906.	5.8	355

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73	Carbon Nanotube-Silicon Solar Cells. <i>Advanced Energy Materials</i> , 2012, 2, 1043-1055.	10.2	144
74	Electroluminescence from chirality-sorted (9,7)-semiconducting carbon nanotube devices. <i>Optics Express</i> , 2011, 19, A1184.	1.7	28
75	The Graphene-Gold Interface and Its Implications for Nanoelectronics. <i>Nano Letters</i> , 2011, 11, 3833-3837.	4.5	101
76	Hydrogen Sensing with Diameter- and Chirality-Sorted Carbon Nanotubes. <i>ACS Nano</i> , 2011, 5, 1670-1676.	7.3	60
77	A Scalable, CMOS-Compatible Assembly of Ambipolar Semiconducting Single-Walled Carbon Nanotube Devices. <i>Advanced Materials</i> , 2011, 23, 1734-1738.	11.1	34
78	Synthesis and Optical Properties of Molecular Rods Comprising a Central Core-Substituted Naphthalenediimide Chromophore for Carbon Nanotube Junctions. <i>European Journal of Organic Chemistry</i> , 2011, 2011, 478-496.	1.2	22
79	Imaging conduction pathways in carbon nanotube network transistors by voltage-contrast scanning electron microscopy. <i>Nanotechnology</i> , 2011, 22, 265715.	1.3	10
80	Controlled fabrication of single-walled carbon nanotube electrodes by electron-beam-induced oxidation. <i>Applied Physics Letters</i> , 2011, 99, .	1.5	19
81	Imaging defects and junctions in single-walled carbon nanotubes by voltage-contrast scanning electron microscopy. <i>Carbon</i> , 2010, 48, 494-500.	5.4	21
82	Electroluminescence from a single nanotube-molecule-nanotube junction. <i>Nature Nanotechnology</i> , 2010, 5, 863-867.	15.6	140
83	Phonon-Assisted Electroluminescence from Metallic Carbon Nanotubes and Graphene. <i>Nano Letters</i> , 2010, 10, 1589-1594.	4.5	77
84	The polarized carbon nanotube thin film LED. <i>Optics Express</i> , 2010, 18, 25738.	1.7	43
85	Ultraviolet photodetector arrays assembled by dielectrophoresis of ZnO nanoparticles. <i>Nanotechnology</i> , 2010, 21, 115501.	1.3	26
86	Toward Single-Chirality Carbon Nanotube Device Arrays. <i>ACS Nano</i> , 2010, 4, 2748-2754.	7.3	67
87	Dielectrophoretic Assembly of High-Density Arrays of Individual Graphene Devices for Rapid Screening. <i>ACS Nano</i> , 2009, 3, 1729-1734.	7.3	76
88	Silver nanowires growth via branch fragmentation of electrochemically grown silver dendrites. <i>Chemical Communications</i> , 2009, , 1130.	2.2	37
89	Shape-persistent macrocycles comprising perfluorinated benzene subunits: synthesis, aggregation behaviour and unexpected 1/4-rod formation. <i>Organic and Biomolecular Chemistry</i> , 2009, 7, 1081.	1.5	33
90	Imaging electronic structure of carbon nanotubes by voltage-contrast scanning electron microscopy. <i>Nano Research</i> , 2008, 1, 321-332.	5.8	29

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91	Reversible Metal-Insulator Transitions in Metallic Single-Walled Carbon Nanotubes. Nano Letters, 2008, 8, 2767-2772.	4.5	28
92	Raman Spectroscopic Evidence for Hot-Phonon Generation in Electrically Biased Carbon Nanotubes. Physical Review Letters, 2008, 100, 127401.	2.9	67
93	The Mechanism of Cavitation-Induced Scission of Single-Walled Carbon Nanotubes. Journal of Physical Chemistry B, 2007, 111, 1932-1937.	1.2	232
94	Ultra-Large-Scale Directed Assembly of Single-Walled Carbon Nanotube Devices. Nano Letters, 2007, 7, 1556-1560.	4.5	306
95	Influence of Structural and Dielectric Anisotropy on the Dielectrophoresis of Single-Walled Carbon Nanotubes. Nano Letters, 2007, 7, 1960-1966.	4.5	41
96	Length separation studies of single walled carbon nanotube dispersions. Physica Status Solidi (B): Basic Research, 2006, 243, 3073-3076.	0.7	39
97	Thin Films of Metallic Carbon Nanotubes Prepared by Dielectrophoresis. Advanced Materials, 2006, 18, 1468-1470.	11.1	139
98	Probing dielectrophoretic force fields with metallic carbon nanotubes. Applied Physics Letters, 2006, 89, 183117.	1.5	23
99	Separation Techniques for Carbon Nanotubes. Advanced Engineering Materials, 2005, 7, 111-116.	1.6	62
100	Correlation between Transport Measurements and Resonant Raman Spectroscopy on site-deposited Individual Carbon Nanotubes. AIP Conference Proceedings, 2005, , .	0.3	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 Electron-Phonon Coupling of Individual Single-Walled Carbon Nanotubes. Nano Letters, 2005, 5, 1761-1767.	4.5	53
103	Raman Spectroscopy of Individual Single-Walled Carbon Nanotubes from Various Sources. Journal of Physical Chemistry B, 2005, 109, 10567-10573.	1.2	133
104	Comment on "Using the Selective Functionalization of Metallic Single-Walled Carbon Nanotubes to Control Dielectrophoretic Mobility". Journal of Physical Chemistry B, 2005, 109, 17014-17015.	1.2	8
105	Surface Conductance Induced Dielectrophoresis of Semiconducting Single-Walled Carbon Nanotubes. Nano Letters, 2004, 4, 1395-1399.	4.5	213
106	Contacting single bundles of carbon nanotubes with alternating electric fields. Applied Physics A: Materials Science and Processing, 2003, 76, 397-400.	1.1	105
107	Separation of Metallic from Semiconducting Single-Walled Carbon Nanotubes.. ChemInform, 2003, 34, no.	0.1	7
108	Separation of Metallic from Semiconducting Single-Walled Carbon Nanotubes. Science, 2003, 301, 344-347.	6.0	1,472

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109	Near-Infrared Absorbance of Single-Walled Carbon Nanotubes Dispersed in Dimethylformamide. <i>Journal of Physical Chemistry B</i> , 2003, 107, 5667-5669.	1.2	45
110	Simultaneous Deposition of Metallic Bundles of Single-walled Carbon Nanotubes Using Ac-dielectrophoresis. <i>Nano Letters</i> , 2003, 3, 1019-1023.	4.5	263
111	FTIR-luminescence mapping of dispersed single-walled carbon nanotubes. <i>New Journal of Physics</i> , 2003, 5, 140-140.	1.2	84
112	Patterning and Visualizing Self-Assembled Monolayers with Low-Energy Electrons. <i>Nano Letters</i> , 2002, 2, 1161-1164.	4.5	39
113	Field induced and spontaneous sub-gap in [110] and [100] oriented YBCO films: indication for a $d_{x^2-y^2} + d_{xy}$ order parameter. <i>Physica C: Superconductivity and Its Applications</i> , 2000, 341-348, 1629-1632.	0.6	15
114	[110] tunneling under applied magnetic fields into $Y_1Ba_2Cu_3O_{7-\delta}$: Possible evidence for a field-induced d_{xy} gap component. <i>Europhysics Letters</i> , 2000, 51, 116-121.	0.7	15
115	Determination of the superconducting gap in $YBa_2Cu_3O_{7-\delta}$ by tunneling experiments under magnetic fields. <i>Physical Review B</i> , 2000, 62, 146-149.	1.1	32
116	Anisotropic Magnetic Field Dependence of the Zero-Bias Anomaly on In-Plane Oriented [100] $Y_1Ba_2Cu_3O_{7-\delta}$ /In Tunnel Junctions. <i>Physical Review Letters</i> , 1999, 83, 4634-4637.	2.9	118
117	A systematic approach to reduce macroscopic defects in c-axis oriented YBCO films. <i>Physica C: Superconductivity and Its Applications</i> , 1999, 315, 99-106.	0.6	11
118	A systematic approach to reduce macroscopic defects in c-axis-oriented YBCO films. <i>Physica C: Superconductivity and Its Applications</i> , 1999, 317-318, 536-539.	0.6	3
119	Title is missing!. <i>Journal of Low Temperature Physics</i> , 1999, 117, 533-537.	0.6	3
120	On the origin of hole formation in YBCO films. <i>Physica C: Superconductivity and Its Applications</i> , 1997, 289, 146-150.	0.6	13
121	Superconducting, structural and surface properties of GdBaCuO thin films deposited by electron cyclotron resonance supported sputtering. <i>Physica C: Superconductivity and Its Applications</i> , 1997, 279, 153-164.	0.6	7