Benjamin S Flavel

List of Publications by Year
in descending order

94 papers	2,733 citations	147726 31 h-index	197736 49 g-index
97 all docs	97 docs citations	97 times ranked	3204 citing authors

#	Article	IF	Citations
1	Detection and Imaging of the Plant Pathogen Response by Nearâ€Infrared Fluorescent Polyphenol Sensors. Angewandte Chemie - International Edition, 2022, 61, .	7.2	27
2	Global Alignment of Carbon Nanotubes via High Precision Microfluidic Deadâ€End Filtration. Advanced Functional Materials, 2022, 32, 2107411.	7.8	10
3	Frontispiz: Detektion und Visualisierung der Pflanzenâ€Pathogenâ€Response durch Nahâ€Infrarotâ€fluoreszente Polyphenolsensoren. Angewandte Chemie, 2022, 134, .	1.6	0
4	Frontispiece: Detection and Imaging of the Plant Pathogen Response by Nearâ€Infrared Fluorescent Polyphenol Sensors. Angewandte Chemie - International Edition, 2022, 61, .	7.2	1
5	Absolute Quantification of sp³ Defects in Semiconducting Single-Wall Carbon Nanotubes by Raman Spectroscopy. Journal of Physical Chemistry Letters, 2022, 13, 3542-3548.	2.1	28
6	Diameter-dependent single- and double-file stacking of squaraine dye molecules inside chirality-sorted single-wall carbon nanotubes. Nanoscale, 2022, 14, 8385-8397.	2.8	1
7	(Invited) Raman Scattering By Exciton-Polaritons in Carbon Nanotubes. ECS Meeting Abstracts, 2022, MA2022-01, 740-740.	0.0	0
8	(Invited, Digital Presentation) Global Alignment of Carbon Nanotubes Via High Precision Microfluidic Dead-End Filtration. ECS Meeting Abstracts, 2022, MA2022-01, 758-758.	0.0	0
9	Detection and Imaging of the Plant Pathogen Response By Near Infrared Fluorescent Polyphenol Sensors. ECS Meeting Abstracts, 2022, MA2022-01, 712-712.	0.0	0
10	(Digital Presentation) Stable Organic Passivated Carbon Nanotube-Silicon Solar Cells with an Efficiency of 22%. ECS Meeting Abstracts, 2022, MA2022-01, 645-645.	0.0	0
11	Carbon Nanotubes for Photovoltaics: From Lab to Industry. Advanced Energy Materials, 2021, 11, 2002880.	10.2	59
12	Principles of carbon nanotube dielectrophoresis. Nano Research, 2021, 14, 2188-2206.	5.8	14
13	Solution processable in situ passivated silicon nanowires. Nanoscale, 2021, 13, 11439-11445.	2.8	3
14	Endohedral Filling Effects in Sorted and Polymer-Wrapped Single-Wall Carbon Nanotubes. Journal of Physical Chemistry C, 2021, 125, 7476-7487.	1.5	8
15	Sensing with Chirality-Pure Near-Infrared Fluorescent Carbon Nanotubes. Analytical Chemistry, 2021, 93, 6446-6455.	3.2	45
16	Charge Transfer from Photoexcited Semiconducting Single-Walled Carbon Nanotubes to Wide-Bandgap Wrapping Polymer. Journal of Physical Chemistry C, 2021, 125, 8125-8136.	1.5	9
17	(Invited) Nafion/CNT Passivated Carrier Selective Contacts for Silicon Photovoltaics. ECS Meeting Abstracts, 2021, MA2021-01, 478-478.	0.0	0
18	(Invited) Sensing with Chirality Pure Near Infrared Fluorescent Carbon Nanotubes. ECS Meeting Abstracts, 2021, MA2021-01, 549-549.	0.0	0

#	Article	IF	Citations
19	(Invited) The MoirÃ© Structure of Double Walled Carbon Nanotubes Affects Their Electronic and Vibrational States. ECS Meeting Abstracts, 2021, MA2021-01, 558-558.	0.0	0
20	(Invited) Understanding the Process Variables to Achieve Global Alignment of Single-Wall Carbon Nanotubes. ECS Meeting Abstracts, 2021, MA2021-01, 573-573.	0.0	0
21	MoirÃ©-Induced Vibrational Coupling in Double-Walled Carbon Nanotubes. Nano Letters, 2021, 21, 6732-6739.	4.5	9
22	Stable Organic Passivated Carbon Nanotubeâ€“Silicon Solar Cells with an Efficiency of 22%. Advanced Science, 2021, 8, e2102027.	5.6	12
23	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
24	Separation of Specific Single-Enantiomer Single-Wall Carbon Nanotubes in the Large-Diameter Regime. ACS Nano, 2020, 14, 948-963.	7.3	75
25	Breakthrough Carbon Nanotubeâ€“Silicon Heterojunction Solar Cells. Advanced Energy Materials, 2020, 10, 1903261.	10.2	36
26	Ferroelectric-like organicâ€“inorganic interfaces. Journal of Materials Chemistry C, 2020, 8, 15677-15684.	2.7	4
27	A Polymer/Carbonâ€Nanotube Ink as a Boronâ€Dopant/Inorganicâ€Passivation Free Carrier Selective Contact for Silicon Solar Cells with over 21% Efficiency. Advanced Functional Materials, 2020, 30, 2004476.	7.8	29
28	Front and Backâ€Junction Carbon Nanotubeâ€Silicon Solar Cells with an Industrial Architecture. Advanced Functional Materials, 2020, 30, 2000484.	7.8	33
29	Stability of Chemically Doped Nanotubeâ€“Silicon Heterojunction Solar Cells: Role of Oxides at the Carbonâ€“Silicon Interface. ACS Applied Energy Materials, 2019, 2, 5925-5932.	2.5	12
30	Separation of Small-Diameter Single-Walled Carbon Nanotubes in One to Three Steps with Aqueous Two-Phase Extraction. ACS Nano, 2019, 13, 2567-2578.	7.3	61
31	Asymmetry of resonance Raman profiles in semiconducting single-walled carbon nanotubes at the first excitonic transition. Physical Review B, 2019, 99, .	1.1	8
32	Advances in Carbon Nanotubeâ€“Silicon Heterojunction Solar Cells. Advanced Energy Materials, 2018, 8, 1703241.	10.2	52
33	Frontispiece: Effect of Singleâ€walled Carbon Nanotube (SWCNT) Composition on Polyfluoreneâ€Based SWCNT Dispersion Selectivity. Chemistry - A European Journal, 2018, 24, .	1.7	1
34	Effect of Singleâ€walled Carbon Nanotube (SWCNT) Composition on Polyfluoreneâ€Based SWCNT Dispersion Selectivity. Chemistry - A European Journal, 2018, 24, 9799-9806.	1.7	11
35	Fitting Single-Walled Carbon Nanotube Optical Spectra. ACS Omega, 2017, 2, 1163-1171.	1.6	58
36	Inner- and outer-wall sorting of double-walled carbon nanotubes. Nature Nanotechnology, 2017, 12, 1176-1182.	15.6	32

#	Article	IF	Citations
37	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
38	Photocurrent spectroscopy of dye-sensitized carbon nanotubes. Nanoscale, 2017, 9, 11205-11213.	2.8	9
39	Understanding the graphitization and growth of free-standing nanocrystalline graphene using in situ transmission electron microscopy. Nanoscale, 2017, 9, 12835-12842.	2.8	27
40	Resonant anti-Stokes Raman scattering in single-walled carbon nanotubes. Physical Review B, 2017, 96, .	1.1	15
41	The effect of dry shear aligning of nanotube thin films on the photovoltaic performance of carbon nanotubeâ€“silicon solar cells. Beilstein Journal of Nanotechnology, 2016, 7, 1486-1491.	1.5	3
42	Chiral-index resolved length mapping of carbon nanotubes in solution using electric-field induced differential absorption spectroscopy. Nanotechnology, 2016, 27, 375706.	1.3	7
43	Performance Enhancement of Polymerâ€Free Carbon Nanotube Solar Cells via Transfer Matrix Modeling. Advanced Energy Materials, 2016, 6, 1501345.	10.2	25
44	Large scale, selective dispersion of long single-walled carbon nanotubes with high photoluminescence quantum yield by shear force mixing. Carbon, 2016, 105, 593-599.	5.4	165
45	Cavity-enhanced light emission from electrically driven carbon nanotubes. Nature Photonics, 2016, 10, 420-427.	15.6	119
46	Probing the Diameter Limit of Single Walled Carbon Nanotubes in SWCNT: Fullerene Solar Cells. Advanced Energy Materials, 2016, 6, 1600890.	10.2	50
47	Directional couplers with integrated carbon nanotube incandescent light emitters. Optics Express, 2016, 24, 966.	1.7	6
48	Dry shear aligning: a simple and versatile method to smooth and align the surfaces of carbon nanotube thin films. Nanoscale, 2016, 8, 3232-3236.	2.8	20
49	Doubleâ€Walled Carbon Nanotube Processing. Advanced Materials, 2015, 27, 3105-3137.	11.1	84
50	Aligned Carbon Nanotube Thin Films from Liquid Crystal Polyelectrolyte Inks. ACS Applied Materials & Interfaces, 2015, 7, 25857-25864.	4.0	38
51	The relationship between employee orientation, financial performance and leverage. Social Responsibility Journal, 2015, 11, 716-733.	1.6	4
52	Light emission, light detection and strain sensing with nanocrystalline graphene. Nanotechnology, 2015, 26, 325202.	1.3	20
53	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
54	The influence of gender diverse corporate boards on employee-orientation. Journal of Management and Governance, 2015, 19, 825-848.	2.4	7

#	Article	IF	Citations
55	Deposition of semiconducting singleâ€walled carbon nanotubes using lightâ€assisted dielectrophoresis. Physica Status Solidi (B): Basic Research, 2014, 251, 2475-2479.	0.7	7
56	Fabrication of carbon nanotube nanogap electrodes by helium ion sputtering for molecular contacts. Applied Physics Letters, 2014, 104, 103102.	1.5	24
57	Separation of Single-Walled Carbon Nanotubes with a Gel Permeation Chromatography System. ACS Nano, 2014, 8, 1817-1826.	7.3	106
58	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
59	Waveguideâ€Integrated Lightâ€Emitting Carbon Nanotubes. Advanced Materials, 2014, 26, 3465-3472.	11.1	56
60	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
61	Separation of Double-Walled Carbon Nanotubes by Size Exclusion Column Chromatography. ACS Nano, 2014, 8, 6756-6764.	7.3	33
62	Photocurrent imaging of semiconducting carbon nanotube devices with local mirrors. Physica Status Solidi (B): Basic Research, 2014, 251, 2471-2474.	0.7	0
63	Increased redox-active peptide loading on carbon nanotube electrodes. Electrochimica Acta, 2013, 89, 206-211.	2.6	15
64	Singleâ€Walled Carbon Nanotube/Polyaniline/nâ€Silicon Solar Cells: Fabrication, Characterization, and Performance Measurements. ChemSusChem, 2013, 6, 320-327.	3.6	37
65	Separation of Single-Walled Carbon Nanotubes by 1-Dodecanol-Mediated Size-Exclusion Chromatography. ACS Nano, 2013, 7, 3557-3564.	7.3	124
66	Singleâ€•and Doubleâ€Sided Chemical Functionalization of Bilayer Graphene. Small, 2013, 9, 631-639.	5.2	49
67	The Role of Nanotubes in Carbon Nanotubeâ€“Silicon Solar Cells. Advanced Energy Materials, 2013, 3, 1091-1097.	10.2	49
68	Grafting of Poly(ethylene glycol) on Click Chemistry Modified Si(100) Surfaces. Langmuir, 2013, 29, 8355-8362.	1.6	31
69	Patterned Forests of Vertically-Aligned Multiwalled Carbon Nanotubes Using Metal Salt Catalyst Solutions. Journal of Nanoscience and Nanotechnology, 2013, 13, 728-731.	0.9	0
70	Carbon Nanotubeâ€Silicon Solar Cells. Advanced Energy Materials, 2012, 2, 1043-1055.	10.2	144
71	Micropatterned Arrays of Porous Silicon: Toward Sensory Biointerfaces. ACS Applied Materials & Interfaces, 2011, 3, 2463-2471.	4.0	43
72	Electrochemistry of polystyrene intercalated vertically aligned single- and double-walled carbon nanotubes on gold electrodes. Electrochemistry Communications, 2011, 13, 1190-1193.	2.3	9

#	Article	IF	Citations
73	Electrochemical Detection of Copper Using a Gly-Gly-His Modified Carbon Nanotube Biosensor. Silicon, 2011, 3, 163-171.	1.8	27
74	Comparison of double-walled with single-walled carbon nanotube electrodes by electrochemistry. Carbon, 2011, 49, 2639-2647.	5.4	27
75	Single walled carbon nanotube network electrodes for dye solar cells. Solar Energy Materials and Solar Cells, 2010, 94, 1665-1672.	3.0	34
76	Chemically immobilised carbon nanotubes on silicon: Stable surfaces for aqueous electrochemistry. Electrochimica Acta, 2010, 55, 3995-4001.	2.6	21
77	Robust Forests of Vertically Aligned Carbon Nanotubes Chemically Assembled on Carbon Substrates. Langmuir, 2010, 26, 1848-1854.	1.6	40
78	A Simple Approach to Patterned Protein Immobilization on Silicon via Electrografting from Diazonium Salt Solutions. ACS Applied Materials & Interfaces, 2010, 2, 1184-1190.	4.0	60
79	Patterning of Metal, Carbon, and Semiconductor Substrates with Thin Organic Films by Microcontact Printing with Aryldiazonium Salt Inks. Analytical Chemistry, 2010, 82, 7027-7034.	3.2	46
80	Nanoscale structure of lipid domain boundaries. Soft Matter, 2010, 6, 2193.	1.2	11
81	Adhesion of chemically and electrostatically bound gold nanoparticles to a self-assembled silane monolayer investigated by atomic force volume spectroscopy. Journal of Nanoparticle Research, 2009, 11, 2013-2022.	0.8	25
82	Electroless plated gold as a support for carbon nanotube electrodes. Electrochimica Acta, 2009, 54, 3191-3198.	2.6	19
83	Fabrication and electrochemical behavior of vertically-aligned carbon nanotube electrodes covalently attached to p-type silicon via a thioester linkage. Materials Letters, 2009, 63, 757-760.	1.3	13
84	Reaction of Gold Substrates with Diazonium Salts in Acidic Solution at Open-Circuit Potential. Langmuir, 2009, 25, 13503-13509.	1.6	72
85	Patterned polyaniline & carbon nanotubeâ€“polyaniline composites on silicon. Soft Matter, 2009, 5, 164-172.	1.2	32
86	Electrochemical characterisation of patterned carbon nanotube electrodes on silane modified silicon. Electrochimica Acta, 2008, 53, 5653-5659.	2.6	20
87	Mixed assembly of ferrocene/porphyrin onto carbon nanotube arrays towards multibit information storage. , 2008, , .		1
88	Ruthenium Porphyrin Functionalized Single-Walled Carbon Nanotube Arraysâ€"A Step Toward Light Harvesting Antenna and Multibit Information Storage. Journal of the American Chemical Society, 2008, 130, 8788-8796.	6.6	93
89	Patterned attachment of carbon nanotubes to silicon. , 2008, , .		0
90	Optical and Electrochemical Properties of Singleâ€walled Carbon Nanotube Arrays Attached to Silicon (100) Surfaces. Fullerenes Nanotubes and Carbon Nanostructures, 2008, 16, 18-29.	1.0	13

#	Article	IF	Citations
91	Solution chemistry approach to fabricate vertically aligned carbon nanotubes on gold wires: towards vertically integrated electronics. Nanotechnology, 2008, 19, 445301.	1.3	17
92	Patterned ferrocenemethanol modified carbon nanotube electrodes on silane modified silicon. Journal of Materials Chemistry, 2007, 17, 4757.	6.7	26
93	Patterned attachment of carbon nanotubes to silane modified silicon. Carbon, 2007, 45, 2551-2558.	5.4	46
94	Detection and imaging of the plant pathogen response by near infrared fluorescent polyphenol sensors. Angewandte Chemie, 0, , .	1.6	2