

# Sergei M Bachilo

## List of Publications by Year in descending order

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122  
papers

13,759  
citations

94269

37  
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28224

105  
g-index

127  
all docs

127  
docs citations

127  
times ranked

9879  
citing authors

#	ARTICLE	IF	CITATIONS
1	Near-infrared photoluminescence of Portland cement. <i>Scientific Reports</i> , 2022, 12, 1197.	1.6	7
2	Guanine-Specific Chemical Reaction Reveals ssDNA Interactions on Carbon Nanotube Surfaces. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 2231-2236.	2.1	8
3	(Invited) Camera-Based Strain Visualization Using Carbon Nanotube Fluorescence. <i>ECS Meeting Abstracts</i> , 2022, MA2022-01, 754-754.	0.0	0
4	Exploring the Role of Photosensitizer in Guanine Functionalization of Single-Wall Carbon Nanotubes. <i>ECS Meeting Abstracts</i> , 2022, MA2022-01, 732-732.	0.0	0
5	(Digital Presentation) Realistic Molecular Dynamics Modeling of ssDNA/SWCNT Hybrids. <i>ECS Meeting Abstracts</i> , 2022, MA2022-01, 715-715.	0.0	0
6	Next-generation 2D optical strain mapping with strain-sensing smart skin compared to digital image correlation. <i>Scientific Reports</i> , 2022, 12, .	1.6	6
7	DNA Wrapping Causes Strain in Single-Wall Carbon Nanotubes. <i>ECS Meeting Abstracts</i> , 2022, MA2022-01, 719-719.	0.0	0
8	Exploring the Covalent Doping of Single-Wall Carbon Nanotubes Induced By Photoexcited Hypochlorite. <i>ECS Meeting Abstracts</i> , 2022, MA2022-01, 733-733.	0.0	0
9	(Invited) Progress in Using Carbon Nanotube Spectra for Mechanical Strain Sensing. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 568-568.	0.0	0
10	(Invited) Computational Simulations of Selective Interactions between ssDNA and SWCNTs. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 582-582.	0.0	0
11	(Invited) Quantum Light Emission from Coupled Defect-States in DNA-Functionalized Carbon Nanotubes. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 559-559.	0.0	0
12	(Invited) Different Pathways of Fluorescent SWCNT Modifications with Aromatic Reactants. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 557-557.	0.0	0
13	Tailoring the Spectral Properties of Single-Wall Carbon Nanotube Samples through Structure-Selective Photochemistry. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 588-588.	0.0	0
14	(Invited) Toward Spectral Homogeneity in Guanine Functionalized SWCNTs. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 552-552.	0.0	0
15	(Invited) Spectroscopic Titration Shows (n,m)-Dependent Displacement of SDS By ssDNA on Single-Wall Carbon Nanotubes. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 543-543.	0.0	0
16	Quantum Light Emission from Coupled Defect States in DNA-Functionalized Carbon Nanotubes. <i>ACS Nano</i> , 2021, 15, 10406-10414.	7.3	22
17	Photoexcited Aromatic Reactants Give Multicolor Carbon Nanotube Fluorescence from Quantum Defects. <i>ACS Nano</i> , 2020, 14, 715-723.	7.3	32
18	Delayed Fluorescence from Carbon Nanotubes through Singlet Oxygen-Sensitized Triplet Excitons. <i>Journal of the American Chemical Society</i> , 2020, 142, 21189-21196.	6.6	14

#	ARTICLE	IF	CITATIONS
19	Tailoring the Properties of Single-Wall Carbon Nanotube Samples through Structure-Selective Near-Infrared Photochemistry. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 6492-6497.	2.1	4
20	Dye Quenching of Carbon Nanotube Fluorescence Reveals Structure-Selective Coating Coverage. <i>ACS Nano</i> , 2020, 14, 12148-12158.	7.3	15
21	Creating fluorescent quantum defects in carbon nanotubes using hypochlorite and light. <i>Nature Communications</i> , 2019, 10, 2874.	5.8	63
22	Synchro-Excited Free-Running Single Photon Counting: A Novel Method for Measuring Short-Wave Infrared Emission Kinetics. <i>Analytical Chemistry</i> , 2019, 91, 12484-12491.	3.2	2
23	Controlled Patterning of Carbon Nanotube Energy Levels by Covalent DNA Functionalization. <i>ACS Nano</i> , 2019, 13, 8222-8228.	7.3	42
24	Noncontact Strain Mapping Using Laser-Induced Fluorescence from Nanotube-Based Smart Skin. <i>Journal of Structural Engineering</i> , 2019, 145, 04018238.	1.7	11
25	Dual-layer nanotube-based smart skin for enhanced noncontact strain sensing. <i>Structural Control and Health Monitoring</i> , 2019, 26, e2279.	1.9	15
26	Indexing the Quality of Single-Wall Carbon Nanotube Dispersions Using Absorption Spectra. <i>Journal of Physical Chemistry C</i> , 2018, 122, 4681-4690.	1.5	12
27	Variance Spectroscopy Studies of Single-Wall Carbon Nanotube Aggregation. <i>Journal of Physical Chemistry C</i> , 2018, 122, 26251-26259.	1.5	4
28	Enantiomers of Single-Wall Carbon Nanotubes Show Distinct Coating Displacement Kinetics. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 3793-3797.	2.1	24
29	Assessing Inhomogeneity in Sorted Samples of Single-Walled Carbon Nanotubes through Fluorescence and Variance Spectroscopy. <i>ECS Journal of Solid State Science and Technology</i> , 2017, 6, M3097-M3102.	0.9	4
30	Quenching of Single-Walled Carbon Nanotube Fluorescence by Dissolved Oxygen Reveals Selective Single-Stranded DNA Affinities. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 1952-1955.	2.1	35
31	Skewness Analysis in Variance Spectroscopy Measures Nanoparticle Individualization. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 2924-2929.	2.1	4
32	Full-field, high-spatial-resolution detection of local structural damage from low-resolution random strain field measurements. <i>Journal of Sound and Vibration</i> , 2017, 399, 75-85.	2.1	27
33	Strain-sensing smart skin. , 2016, , 353-375.		2
34	Spectral triangulation: a 3D method for locating single-walled carbon nanotubes in vivo. <i>Nanoscale</i> , 2016, 8, 10348-10357.	2.8	20
35	Photoluminescence Side Band Spectroscopy of Individual Single-Walled Carbon Nanotubes. <i>Journal of Physical Chemistry C</i> , 2016, 120, 23898-23904.	1.5	24
36	( <i>n</i> , <i>m</i> )-Specific Absorption Cross Sections of Single-Walled Carbon Nanotubes Measured by Variance Spectroscopy. <i>Nano Letters</i> , 2016, 16, 6903-6909.	4.5	57

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37	Toward Practical Non-Contact Optical Strain Sensing Using Single-Walled Carbon Nanotubes. ECS Journal of Solid State Science and Technology, 2016, 5, M3012-M3017.	0.9	16
38	Structure-Dependent Thermal Defunctionalization of Single-Walled Carbon Nanotubes. ACS Nano, 2015, 9, 6324-6332.	7.3	16
39	Variance Spectroscopy. Journal of Physical Chemistry Letters, 2015, 6, 3976-3981.	2.1	13
40	Carbon nanotubes as non-contact optical strain sensors in smart skins. Journal of Strain Analysis for Engineering Design, 2015, 50, 505-512.	1.0	25
41	Structure-dependent Optical Activity of Single-walled Carbon Nanotube Enantiomers. Fullerenes Nanotubes and Carbon Nanostructures, 2014, 22, 269-279.	1.0	6
42	"Smart Skin" optical strain sensor using single wall carbon nanotubes. , 2014, , .		4
43	Enabling <i>in vivo</i> measurements of nanoparticle concentrations with three-dimensional optoacoustic tomography. Journal of Biophotonics, 2014, 7, 581-588.	1.1	24
44	High Precision Fractionator for Use with Density Gradient Ultracentrifugation. Analytical Chemistry, 2014, 86, 11018-11023.	3.2	8
45	Removing Aggregates from Single-Walled Carbon Nanotube Samples by Magnetic Purification. Journal of Physical Chemistry C, 2014, 118, 4489-4494.	1.5	16
46	Directly Measured Optical Absorption Cross Sections for Structure-Selected Single-Walled Carbon Nanotubes. Nano Letters, 2014, 14, 1530-1536.	4.5	96
47	Chromatic Aberration Short-Wave Infrared Spectroscopy: Nanoparticle Spectra without a Spectrometer. Analytical Chemistry, 2013, 85, 1337-1341.	3.2	4
48	Length-dependent optical properties of single-walled carbon nanotube samples. Chemical Physics, 2013, 422, 255-263.	0.9	23
49	Towards non-invasive <i>in vivo</i> measurements of nanoparticle concentrations using 3D optoacoustic tomography. , 2013, , .		2
50	Measuring Single-Walled Carbon Nanotube Length Distributions from Diffusional Trajectories. ACS Nano, 2012, 6, 8424-8431.	7.3	51
51	Strain Paint: Noncontact Strain Measurement Using Single-Walled Carbon Nanotube Composite Coatings. Nano Letters, 2012, 12, 3497-3500.	4.5	51
52	Reversible Formation of Ammonium Persulfate/Sulfuric Acid Graphite Intercalation Compounds and Their Peculiar Raman Spectra. ACS Nano, 2012, 6, 7842-7849.	7.3	95
53	Evidence for Long-lived, Optically Generated Quenchers of Excitons in Single-Walled Carbon Nanotubes. Nano Letters, 2012, 12, 33-38.	4.5	16
54	Efficient Spectrofluorimetric Analysis of Single-Walled Carbon Nanotube Samples. Analytical Chemistry, 2011, 83, 7431-7437.	3.2	36

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55	Analyzing Absorption Backgrounds in Single-Walled Carbon Nanotube Spectra. ACS Nano, 2011, 5, 1639-1648.	7.3	142
56	Advanced sorting of single-walled carbon nanotubes by nonlinear density-gradient ultracentrifugation. Nature Nanotechnology, 2010, 5, 443-450.	15.6	527
57	Surfactant-Dependent Exciton Mobility in Single-Walled Carbon Nanotubes Studied by Single-Molecule Reactions. Nano Letters, 2010, 10, 1595-1599.	4.5	88
58	Dependence of Exciton Mobility on Structure in Single-Walled Carbon Nanotubes. Journal of Physical Chemistry Letters, 2010, 1, 2189-2192.	2.1	37
59	Oxygen Doping Modifies Near-Infrared Band Gaps in Fluorescent Single-Walled Carbon Nanotubes. Science, 2010, 330, 1656-1659.	6.0	323
60	Do Inner Shells of Double-Walled Carbon Nanotubes Fluoresce?. Nano Letters, 2009, 9, 3282-3289.	4.5	42
61	Curvature effects on the $E_{33}$ and $E_{44}$ exciton transitions in semiconducting single-walled carbon nanotubes. Physical Review B, 2008, 77, 201408.	1.1	39
62	Efficient photosensitized energy transfer and near-IR fluorescence from porphyrin-SWNT complexes. Journal of Materials Chemistry, 2008, 18, 1510.	6.7	70
63	Strain Measurements on Individual Single-Walled Carbon Nanotubes in a Polymer Host: Structure-Dependent Spectral Shifts and Load Transfer. Nano Letters, 2008, 8, 826-831.	4.5	59
64	Translational and Rotational Dynamics of Individual Single-Walled Carbon Nanotubes in Aqueous Suspension. ACS Nano, 2008, 2, 1770-1776.	7.3	58
65	Electric Field Quenching of Carbon Nanotube Photoluminescence. Nano Letters, 2008, 8, 1527-1531.	4.5	23
66	Chirality-Resolved Length Analysis of Single-Walled Carbon Nanotube Samples through Shear-Aligned Photoluminescence Anisotropy. ACS Nano, 2008, 2, 1738-1746.	7.3	31
67	Photophysical Properties of C <sub>84</sub> Major Isomers. Journal of Physical Chemistry C, 2007, 111, 17720-17724.	1.5	3
68	The purification of HiPco SWCNTs with liquid bromine at room temperature. Carbon, 2007, 45, 1013-1017.	5.4	23
69	Determination of Exciton-Phonon Coupling Elements in Single-Walled Carbon Nanotubes by Raman Overtone Analysis. Physical Review Letters, 2007, 98, 037405.	2.9	61
70	Structure-Dependent Fluorescence Efficiencies of Individual Single-Walled Carbon Nanotubes. Nano Letters, 2007, 7, 3080-3085.	4.5	156
71	Temperature effects on femtosecond transient absorption kinetics of semiconducting single-walled carbon nanotubes. Physical Chemistry Chemical Physics, 2006, 8, 5689.	1.3	13
72	Intense Photoluminescence from Mixed Solutions of C <sub>70</sub> and Palladium Octaethylporphyrin: A Supramolecular Heavy Atom Effect. Journal of Physical Chemistry A, 2006, 110, 10731-10736.	1.1	7

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73	Raman studies of electron-phonon coupling in single walled carbon nanotubes. <i>Physica Status Solidi (B): Basic Research</i> , 2006, 243, 3171-3175.	0.7	1
74	Photorearrangement of $\alpha$ -Azoxy Ketones and Triplet Sensitization of Azoxy Compounds. <i>Journal of Organic Chemistry</i> , 2005, 70, 2598-2605.	1.7	2
75	Versatile Visualization of Individual Single-Walled Carbon Nanotubes with Near-Infrared Fluorescence Microscopy. <i>Nano Letters</i> , 2005, 5, 975-979.	4.5	140
76	Femtosecond Spectroscopy of Optical Excitations in Single-Walled Carbon Nanotubes: Evidence for Exciton-Exciton Annihilation. <i>Physical Review Letters</i> , 2005, 94, 157402.	2.9	214
77	Thermolysis and Photolysis of C <sub>60</sub> Diozonides. <i>Fullerenes Nanotubes and Carbon Nanostructures</i> , 2005, 13, 73-88.	1.0	9
78	Exciton Binding Energy in Semiconducting Single-Walled Carbon Nanotubes. <i>Journal of Physical Chemistry B</i> , 2005, 109, 15671-15674.	1.2	110
79	Structure-Dependent Hydrostatic Deformation Potentials of Individual Single-Walled Carbon Nanotubes. <i>Physical Review Letters</i> , 2004, 93, .	2.9	49
80	Ultrafast carrier dynamics in single-walled carbon nanotubes probed by femtosecond spectroscopy. <i>Journal of Chemical Physics</i> , 2004, 120, 3368-3373.	1.2	186
81	Fluorescence spectroscopy of single-walled carbon nanotubes in aqueous suspension. <i>Applied Physics A: Materials Science and Processing</i> , 2004, 78, 1111-1116.	1.1	86
82	Pressure dependence of optical transitions in semiconducting single-walled carbon nanotubes. <i>Physica Status Solidi (B): Basic Research</i> , 2004, 241, 3367-3373.	0.7	6
83	Reversible Dimerization of [5,6]-C <sub>60</sub> O. <i>Journal of the American Chemical Society</i> , 2004, 126, 7350-7358.	6.6	21
84	Near-Infrared Fluorescence Microscopy of Single-Walled Carbon Nanotubes in Phagocytic Cells. <i>Journal of the American Chemical Society</i> , 2004, 126, 15638-15639.	6.6	792
85	Solubilization and Purification of Single-Wall Carbon Nanotubes in Water by in Situ Radical Polymerization of Sodium 4-Styrenesulfonate. <i>Macromolecules</i> , 2004, 37, 3965-3967.	2.2	209
86	Narrow (n,m)-Distribution of Single-Walled Carbon Nanotubes Grown Using a Solid Supported Catalyst. <i>Journal of the American Chemical Society</i> , 2003, 125, 11186-11187.	6.6	807
87	Comparative Photophysics of C <sub>61</sub> H <sub>2</sub> Isomers. <i>Journal of Physical Chemistry A</i> , 2003, 107, 10674-10679.	1.1	17
88	Dependence of Optical Transition Energies on Structure for Single-Walled Carbon Nanotubes in Aqueous Suspension: An Empirical Kataura Plot. <i>Nano Letters</i> , 2003, 3, 1235-1238.	4.5	1,070
89	The Influence of Ir and Pt Addition on the Synthesis of Fullerenes at Atmospheric Pressure. <i>Fullerenes Nanotubes and Carbon Nanostructures</i> , 2003, 11, 371-382.	1.0	4
90	(n,m)-Assigned Absorption and Emission Spectra of Single-Walled Carbon Nanotubes. <i>AIP Conference Proceedings</i> , 2003, , .	0.3	2

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91	Ozonides, Epoxides, and Oxidoannulenes of C70. Journal of the American Chemical Society, 2002, 124, 6317-6323.	6.6	66
92	THE ELUSIVE C60S: THREE ATTEMPTED SYNTHESSES. Fullerenes Nanotubes and Carbon Nanostructures, 2002, 10, 37-47.	1.0	7
93	Self-assembled nanoscale photomimetic models: structure and related dynamics. Chemical Physics, 2002, 275, 185-209.	0.9	27
94	Band Gap Fluorescence from Individual Single-Walled Carbon Nanotubes. Science, 2002, 297, 593-596.	6.0	3,582
95	Structure-Assigned Optical Spectra of Single-Walled Carbon Nanotubes. Science, 2002, 298, 2361-2366.	6.0	2,826
96	Synthesis and Characterization of the "Missing" Oxide of C60: [5,6]-Open C60O. Journal of the American Chemical Society, 2001, 123, 9720-9721.	6.6	91
97	Triplet State Dissociation of C120, the Dimer of C60. Journal of Physical Chemistry A, 2001, 105, 9845-9850.	1.1	18
98	Competition between electron transfer and energy migration in self-assembled porphyrin triads. Materials Science and Engineering C, 2001, 18, 99-111.	3.8	9
99	Manifestation of nonplanarity effects and charge-transfer interactions in spectral and kinetic properties of triplet states of sterically strained octaethylporphyrins. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2001, 90, 67-77.	0.2	19
100	Steric Interactions Influence on Electron Transfer Efficiency in Meso-Nitrophenylporphyrins and their Chemical Dimers. Molecular Crystals and Liquid Crystals, 2001, 361, 77-82.	0.3	1
101	Photoinduced electron transfer in meso-nitrophenyl-substituted porphyrins and their chemical dimers. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2000, 88, 205-216.	0.2	10
102	Title is missing!. Journal of Fluorescence, 2000, 10, 55-68.	1.3	17
103	C60O3, a Fullerene Ozonide: Synthesis and Dissociation to C60O and O2. Journal of the American Chemical Society, 2000, 122, 11473-11479.	6.6	107
104	Determination of Triplet Quantum Yields from Triplet-Triplet Annihilation Fluorescence. Journal of Physical Chemistry A, 2000, 104, 7711-7714.	1.1	83
105	Time-Resolved Thermally Activated Delayed Fluorescence in C70 and 1,2-C70H2. Journal of Physical Chemistry A, 2000, 104, 11265-11269.	1.1	34
106	Efficient low temperature charge transfer in a self-assembled porphyrin aggregate. Journal of Photochemistry and Photobiology A: Chemistry, 1999, 126, 99-109.	2.0	24
107	Pathways for photoinduced electron transfer in meso-nitro-phenyl-octaethylporphyrins and their chemical dimers. Chemical Physics Letters, 1999, 304, 155-166.	1.2	22
108	Photophysical Studies of 1,2-C70H2. Journal of Physical Chemistry A, 1999, 103, 10842-10845.	1.1	7

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109	Fluorescence of Retinal Schiff Base in Alcohols. Journal of Physical Chemistry A, 1999, 103, 2481-2488.	1.1	13
110	Excited state energies and internal conversion in diphenylpolyenes: from diphenylbutadiene to diphenyltetradecaheptaene. Chemical Physics Letters, 1998, 283, 235-242.	1.2	51
111	Unusual dynamic relaxation of triplet-excited meso-phenyl-substituted porphyrins and their chemical dimers at room temperatures. Chemical Physics Letters, 1998, 297, 97-108.	1.2	50
112	Spectral shape of diphenylpolyene fluorescence and mixing of the S1 and S2 states. Chemical Physics, 1998, 229, 75-91.	0.9	21
113	Electron Transfer in Porphyrin Multimolecular Self-Organized Nanostructures. Molecular Crystals and Liquid Crystals, 1998, 324, 169-176.	0.3	5
114	Fluorescence properties of protonated and unprotonated Schiff bases of retinal at room temperature. Journal of Photochemistry and Photobiology B: Biology, 1996, 34, 39-46.	1.7	18
115	$\hat{I}^2$ -carotene triplet state absorption in the near-IR range. Journal of Photochemistry and Photobiology A: Chemistry, 1995, 91, 111-115.	2.0	31
116	<title>Beta-carotene S<formula><inf><roman>1</roman></inf></formula> fluorescence</title>. , 1995, 2370, 719.		1
117	Solvent and Temperature Effects on Dual Fluorescence in a Series of Carotenes. Energy Gap Dependence of the Internal Conversion Rate. The Journal of Physical Chemistry, 1995, 99, 16199-16209.	2.9	130
118	Diphenyloctatetraene S2 emission. Chemical Physics Letters, 1994, 218, 557-562.	1.2	12
119	Time-resolved laser study of the transient absorption and conductivity on iodine-doped $\hat{I}^2$ -carotene films. , 1993, , .		1
120	Picosecond kinetics and S n $\leftarrow$ S 1 absorption spectra of retinoids and carotenoids. , 1991, , .		2
121	Solvent effect on radiative and non-radiative transitions in all-trans-1,6-diphenylhexatriene. Journal of Photochemistry and Photobiology A: Chemistry, 1991, 59, 273-283.	2.0	21
122	S2 $\hat{I}^2$ S0 fluorescence and transient S n $\hat{I}^2$ S1 absorption of all-rans- $\hat{I}^2$ -carotene in solid and liquid solutions. Journal of Photochemistry and Photobiology A: Chemistry, 1989, 46, 315-322.	2.0	68