Yuhei Miyauchi

List of Publications by Year
in descending order

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126 papers	9,103 citations	43973 48 h-index	40881 93 g-index
131 all docs	131 docs citations	131 times ranked	11011 citing authors

#	Article	IF	Citations
1	Tunable Photoluminescence of Monolayer MoS₂ via Chemical Doping. Nano Letters, 2013, 13, 5944-5948.	4.5	1,227
2	Low-temperature synthesis of high-purity single-walled carbon nanotubes from alcohol. Chemical Physics Letters, 2002, 360, 229-234.	1.2	965
3	Growth of vertically aligned single-walled carbon nanotube films on quartz substrates and their optical anisotropy. Chemical Physics Letters, 2004, 385, 298-303.	1.2	522
4	Synthesis of a carbon nanobelt. Science, 2017, 356, 172-175.	6.0	408
5	Fluorescence spectroscopy of single-walled carbon nanotubes synthesized from alcohol. Chemical Physics Letters, 2004, 387, 198-203.	1.2	299
6	Nonlinear photoluminescence in atomically thin layered<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>WSe</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> from diffusion-assisted exciton-exciton annihilation. Physical Review B, 2014, 90, .	1.1	254
7	Brightening of excitons in carbon nanotubes on dimensionality modification. Nature Photonics, 2013, 7, 715-719.	15.6	207
8	Evidence for Fast Interlayer Energy Transfer in MoSe₂/WS₂ Heterostructures. Nano Letters, 2016, 16, 4087-4093.	4.5	205
9	Direct synthesis of high-quality single-walled carbon nanotubes on silicon and quartz substrates. Chemical Physics Letters, 2003, 377, 49-54.	1.2	201
10	Characterization of single-walled carbon nanotubes catalytically synthesized from alcohol. Chemical Physics Letters, 2003, 374, 53-58.	1.2	173
11	Highly Efficient and Stable Perovskite Solar Cells by Interfacial Engineering Using Solution-Processed Polymer Layer. Journal of Physical Chemistry C, 2017, 121, 1562-1568.	1.5	166
12	Photoluminescence intensity of single-wall carbon nanotubes. Carbon, 2006, 44, 873-879.	5.4	151
13	Strength of carbon nanotubes depends on their chemical structures. Nature Communications, 2019, 10, 3040.	5.8	148
14	Considerably improved photovoltaic performance of carbon nanotube-based solar cells using metal oxide layers. Nature Communications, 2015, 6, 6305.	5.8	135
15	Anisotropic optical and electronic properties of two-dimensional layered germanium sulfide. Nano Research, 2017, 10, 546-555.	5.8	135
16	Synthesis and Size-Dependent Properties of [12], [16], and [24]Carbon Nanobelts. Journal of the American Chemical Society, 2018, 140, 10054-10059.	6.6	131
17	Magnetic Brightening of Carbon Nanotube Photoluminescence through Symmetry Breaking. Nano Letters, 2007, 7, 1851-1855.	4.5	120
18	Enhanced photovoltaic performances of graphene/Si solar cells by insertion of a MoS₂thin film. Nanoscale, 2015, 7, 14476-14482.	2.8	114

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19	Cross-polarized optical absorption of single-walled nanotubes by polarized photoluminescence excitation spectroscopy. Physical Review B, 2006, 74, .	1.1	107
20	Highly stable perovskite solar cells with an all-carbon hole transport layer. Nanoscale, 2016, 8, 11882-11888.	2.8	107
21	Efficient near-infrared up-conversion photoluminescence in carbon nanotubes. Nature Communications, 2015, 6, 8920.	5.8	103
22	Dispersion of Single-Walled Carbon Nanotube Bundles in Nonaqueous Solution. Journal of Physical Chemistry B, 2004, 108, 18395-18397.	1.2	102
23	Dependence of exciton transition energy of single-walled carbon nanotubes on surrounding dielectric materials. Chemical Physics Letters, 2007, 442, 394-399.	1.2	99
24	Acetylene-Accelerated Alcohol Catalytic Chemical Vapor Deposition Growth of Vertically Aligned Single-Walled Carbon Nanotubes. Journal of Physical Chemistry C, 2009, 113, 7511-7515.	1.5	84
25	Cold wall CVD generation of single-walled carbon nanotubes and in situ Raman scattering measurements of the growth stage. Chemical Physics Letters, 2004, 386, 89-94.	1.2	82
26	Identification of an excitonic phonon sideband by photoluminescence spectroscopy of single-walled carbon-13 nanotubes. Physical Review B, 2006, 74, .	1.1	79
27	Observation of Negative and Positive Trions in the Electrochemically Carrier-Doped Single-Walled Carbon Nanotubes. Journal of the American Chemical Society, 2012, 134, 14461-14466.	6.6	73
28	Drastic Change in Photoluminescence Properties of Graphene Quantum Dots by Chromatographic Separation. Advanced Optical Materials, 2014, 2, 983-989.	3.6	73
29	Construction of Covalent Organic Nanotubes by Light-Induced Cross-Linking of Diacetylene-Based Helical Polymers. Journal of the American Chemical Society, 2016, 138, 11001-11008.	6.6	67
30	Selective Optical Property Modification of Double-Walled Carbon Nanotubes by Fluorination. ACS Nano, 2008, 2, 485-488.	7.3	64
31	Thermal dissociation of inter-layer excitons in MoS₂/MoSe₂ hetero-bilayers. Nanoscale, 2017, 9, 6674-6679.	2.8	64
32	Exploring the Origin of Blue and Ultraviolet Fluorescence in Graphene Oxide. Journal of Physical Chemistry Letters, 2013, 4, 2035-2040.	2.1	63
33	Carbon Nanotube Photoluminescence Modulation by Local Chemical and Supramolecular Chemical Functionalization. Accounts of Chemical Research, 2020, 53, 1846-1859.	7.6	63
34	Efficient Photocarrier Transfer and Effective Photoluminescence Enhancement in Type I Monolayer MoTe₂/WSe₂ Heterostructure. Advanced Functional Materials, 2018, 28, 1801021.	7.8	62
35	Polarization-sensitive and broadband germanium sulfide photodetectors with excellent high-temperature performance. Nanoscale, 2017, 9, 12425-12431.	2.8	60
36	Roles of Polymer Layer in Enhanced Photovoltaic Performance of Perovskite Solar Cells via Interface Engineering. Advanced Materials Interfaces, 2018, 5, 1701256.	1.9	60

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37	Temperature Dependence of Raman Scattering from Single-Walled Carbon Nanotubes: Undefined Radial Breathing Mode Peaks at High Temperatures. Japanese Journal of Applied Physics, 2008, 47, 2010.	0.8	58
38	Growth and optical properties of Nb-doped WS₂ monolayers. Applied Physics Express, 2016, 9, 071201.	1.1	58
39	Optical characterization of single-walled carbon nanotubes synthesized by catalytic decomposition of alcohol. New Journal of Physics, 2003, 5, 149-149.	1.2	57
40	Exciton Localization of Single-Walled Carbon Nanotubes Revealed by Femtosecond Excitation Correlation Spectroscopy. Physical Review Letters, 2006, 97, 257401.	2.9	57
41	Photoluminescence studies on exciton photophysics in carbon nanotubes. Journal of Materials Chemistry C, 2013, 1, 6499.	2.7	56
42	Excitonic Photoluminescence from Nanodisc States in Graphene Oxides. Journal of Physical Chemistry Letters, 2014, 5, 1754-1759.	2.1	53
43	Photoluminescence intermittency in an individual single-walled carbon nanotube at room temperature. Applied Physics Letters, 2005, 86, 123116.	1.5	52
44	Evidence for line width and carrier screening effects on excitonic valley relaxation in 2D semiconductors. Nature Communications, 2018, 9, 2598.	5.8	52
45	Radiative lifetimes and coherence lengths of one-dimensional excitons in single-walled carbon nanotubes. Physical Review B, 2009, 80, .	1.1	51
46	Empirical Prediction of Electronic Potentials of Single-Walled Carbon Nanotubes With a Specific Chirality (n,m). Scientific Reports, 2013, 3, 2959.	1.6	51
47	Nonlinear Photoluminescence Spectroscopy of Carbon Nanotubes with Localized Exciton States. ACS Nano, 2014, 8, 11254-11260.	7.3	48
48	Selfâ€Aligned and Scalable Growth of Monolayer WSe₂â€“MoS₂ Lateral Heterojunctions. Advanced Functional Materials, 2018, 28, 1706860.	7.8	48
49	Tuning of the photoluminescence and up-conversion photoluminescence properties of single-walled carbon nanotubes by chemical functionalization. Nanoscale, 2016, 8, 16916-16921.	2.8	44
50	Carbon Atoms in Ethanol Do Not Contribute Equally to Formation of Single-Walled Carbon Nanotubes. ACS Nano, 2013, 7, 3095-3103.	7.3	43
51	Fabrication of Single-Walled Carbon Nanotube/Si Heterojunction Solar Cells with High Photovoltaic Performance. ACS Photonics, 2014, 1, 360-364.	3.2	42
52	Continuous Control and Enhancement of Excitonic Valley Polarization in Monolayer WSe₂ by Electrostatic Doping. Advanced Functional Materials, 2019, 29, 1900260.	7.8	42
53	Improved Bath Sonication Method for Dispersion of Individual Single-Walled Carbon Nanotubes Using New Triphenylene-Based Surfactant. Japanese Journal of Applied Physics, 2008, 47, 2000.	0.8	41
54	Homogeneous linewidth broadening and exciton dephasing mechanism in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>MoT</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2016, 93, .	1.1	39

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55	Direct and Indirect Exciton Dynamics in Fewâ€Layered ReS₂ Revealed by Photoluminescence and Pumpâ€Probe Spectroscopy. Advanced Functional Materials, 2019, 29, 1806169.	7.8	39
56	Restoring the intrinsic optical properties of CVD-grown MoS₂ monolayers and their heterostructures. Nanoscale, 2019, 11, 12798-12803.	2.8	37
57	Single-Chirality Separation and Optical Properties of (5,4) Single-Wall Carbon Nanotubes. Journal of Physical Chemistry C, 2016, 120, 10705-10710.	1.5	36
58	Synthesis of single-walled carbon nanotubes with narrow diameter-distribution from fullerene. Chemical Physics Letters, 2003, 375, 553-559.	1.2	35
59	Length-Dependent Photoluminescence Lifetimes in Single-Walled Carbon Nanotubes. Journal of Physical Chemistry C, 2010, 114, 12905-12908.	1.5	35
60	Photoluminescence quantum yields for atomically thin-layered ReS2: Identification of indirect-bandgap semiconductors. Applied Physics Letters, 2018, 113, .	1.5	34
61	Symmetry-induced nonequilibrium distributions of bright and dark exciton states in single carbon nanotubes. Physical Review B, 2009, 80, .	1.1	32
62	Analysis of the Photovoltaic Properties of Single-Walled Carbon Nanotube/Silicon Heterojunction Solar Cells. Applied Physics Express, 2012, 5, 042304.	1.1	32
63	Temperature dependence of photoluminescence spectra in hole-doped single-walled carbon nanotubes: Implications of trion localization. Physical Review B, 2013, 87, .	1.1	32
64	Observation of biexcitonic emission at extremely low power density in tungsten disulfide atomic layers grown on hexagonal boron nitride. Scientific Reports, 2017, 7, 322.	1.6	32
65	Carrier Transport and Photoresponse in GeSe/MoS₂ Heterojunction pâ€“n Diodes. Small, 2018, 14, e1704559.	5.2	32
66	Direct Synthesis of Single-Walled Carbon Nanotubes on Silicon and Quartz-Based Systems. Japanese Journal of Applied Physics, 2004, 43, 1221-1226.	0.8	31
67	Dispersion-Process Effects on the Photoluminescence Quantum Yields of Single-Walled Carbon Nanotubes Dispersed Using Aromatic Polymers. Journal of Physical Chemistry C, 2012, 116, 10282-10286.	1.5	31
68	Fabrication and In Situ Transmission Electron Microscope Characterization of Free-Standing Graphene Nanoribbon Devices. ACS Nano, 2016, 10, 1475-1480.	7.3	31
69	Generation of Single-Walled Carbon Nanotubes from Alcohol and Generation Mechanism by Molecular Dynamics Simulations. Journal of Nanoscience and Nanotechnology, 2004, 4, 360-367.	0.9	28
70	High Bending Durability of Efficient Flexible Perovskite Solar Cells Using Metal Oxide Electron Transport Layer. Journal of Physical Chemistry C, 2018, 122, 17088-17095.	1.5	28
71	Machine-Learning Analysis to Predict the Exciton Valley Polarization Landscape of 2D Semiconductors. ACS Nano, 2019, 13, 12687-12693.	7.3	27
72	Determination of Precise Redox Properties of Oxygen-Doped Single-Walled Carbon Nanotubes Based on in Situ Photoluminescence Electrochemistry. Journal of Physical Chemistry C, 2016, 120, 15632-15639.	1.5	25

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73	Growth of single-walled carbon nanotubes from size-selected catalytic metal particles. Applied Physics A: Materials Science and Processing, 2004, 79, 787-790.	1.1	24
74	Vertically Aligned13C Single-Walled Carbon Nanotubes Synthesized by No-Flow Alcohol Chemical Vapor Deposition and their Root Growth Mechanism. Japanese Journal of Applied Physics, 2008, 47, 1971-1974.	0.8	24
75	Step-Growth Annulative Ï€-Extension Polymerization for Synthesis of Cove-Type Graphene Nanoribbons. Journal of the American Chemical Society, 2020, 142, 1686-1691.	6.6	23
76	Observation of Drastic Electronic-Structure Change in a One-Dimensional MoirÃ© Superlattice. Physical Review Letters, 2020, 124, 106101.	2.9	23
77	Nonradiative exciton decay dynamics in hole-doped single-walled carbon nanotubes. Physical Review B, 2010, 81, .	1.1	22
78	Changes in the Fluorescence Spectrum of Individual Single-Wall Carbon Nanotubes Induced by Light-Assisted Oxidation with Hydroperoxide. Journal of Physical Chemistry B, 2006, 110, 8935-8940.	1.2	21
79	Long radiative lifetimes of excitons in monolayer transition-metal dichalcogenidesMX₂(M= Mo, W;X= S, Se). Applied Physics Express, 2018, 11, 015201.	1.1	20
80	Controllable Magnetic Proximity Effect and Charge Transfer in 2D Semiconductor and Doubleâ€Layered Perovskite Manganese Oxide van der Waals Heterostructure. Advanced Materials, 2020, 32, e2003501.	11.1	20
81	Resonant Coupling of a MoirÃ© Exciton to a Phonon in a WSe₂/MoSe₂ Heterobilayer. Nano Letters, 2021, 21, 5938-5944.	4.5	20
82	Directional Exciton-Energy Transport in a Lateral Heteromonolayer of WSe₂â€“MoSe₂. ACS Nano, 2022, 16, 8205-8212.	7.3	20
83	Plasmon-assisted photoluminescence enhancement of single-walled carbon nanotubes on metal surfaces. Applied Physics Letters, 2010, 97, 063110.	1.5	19
84	Rayleigh scattering studies on inter-layer interactions in structure-defined individual double-wall carbon nanotubes. Nano Research, 2014, 7, 1548-1555.	5.8	18
85	Evaluation of photoluminescence quantum yield of monolayer WSe₂ using reference dye of 3â€borylbithiophene derivative. Physica Status Solidi (B): Basic Research, 2017, 254, 1600563.	0.7	18
86	Experimental Evidence of Anisotropic and Stable Charged Excitons (Trions) in Atomically Thin 2D ReS₂. Advanced Functional Materials, 2019, 29, 1905961.	7.8	18
87	Planar Perovskite Solar Cells with High Efficiency and Fill Factor Obtained Using Two-Step Growth Process. ACS Applied Materials & Interfaces, 2019, 11, 15680-15687.	4.0	18
88	Electron-hole asymmetry in single-walled carbon nanotubes probed by direct observation of transverse quasidark excitons. Physical Review B, 2010, 81, .	1.1	17
89	Polarization dependence of radial breathing mode peaks in resonant Raman spectra of vertically aligned single-walled carbon nanotubes. Physical Review B, 2010, 81, .	1.1	17
90	Graphene Nanoribbon Dielectric Passivation Layers for Graphene Electronics. ACS Applied Nano Materials, 2019, 2, 4825-4831.	2.4	17

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91	Enhancement Mechanism of the Photovoltaic Conversion Efficiency of Single-Walled Carbon Nanotube/Si Solar Cells by HNO₃Doping. Applied Physics Express, 2013, 6, 102301.	1.1	16
92	Chemical doping modulation of nonlinear photoluminescence properties in monolayer MoS₂. Applied Physics Express, 2016, 9, 055202.	1.1	16
93	Roomâ€Temperature Chiral Lightâ€Emitting Diode Based on Strained Monolayer Semiconductors. Advanced Materials, 2021, 33, e2100601.	11.1	16
94	Nonlinear photoluminescence properties of trions in hole-doped single-walled carbon nanotubes. Physical Review B, 2014, 89, .	1.1	15
95	Ultra-narrow-band near-infrared thermal exciton radiation in intrinsic one-dimensional semiconductors. Nature Communications, 2018, 9, 3144.	5.8	15
96	Femtosecond excitation correlation spectroscopy of single-walled carbon nanotubes: Analysis based on nonradiative multiexciton recombination processes. Physical Review B, 2009, 80, .	1.1	14
97	Efficient and Chiral Electroluminescence from Inâ€Plane Heterostructure of Transition Metal Dichalcogenide Monolayers. Advanced Functional Materials, 2022, 32, .	7.8	14
98	Tunable electronic correlation effects in nanotube-light interactions. Physical Review B, 2015, 92, .	1.1	13
99	Sonochemical reaction to control the near-infrared photoluminescence properties of single-walled carbon nanotubes. Nanoscale, 2020, 12, 6263-6270.	2.8	13
100	Surfactant-Stabilized Single-Walled Carbon Nanotubes Using Triphenylene Derivatives Remain Individually Dispersion in Both Liquid and Dried Solid States. Applied Physics Express, 0, 2, 055501.	1.1	12
101	pH-Dependent Photoluminescence Properties of Monolayer Transition-Metal Dichalcogenides Immersed in an Aqueous Solution. Journal of Physical Chemistry C, 2018, 122, 13175-13181.	1.5	12
102	Exciton diffusion in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>h</mml:mi><mml:mi>BN</mml:mi></mml:mrow></mml:m -encapsulated monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi>Se</mml:mi><mml:m Physical Review B, 2020, 102, .	1.1	12
103	Upconversion photoluminescence imaging and spectroscopy of individual single-walled carbon nanotubes. Applied Physics Express, 2016, 9, 045103.	1.1	11
104	Photostability of Monolayer Transition-Metal Dichalcogenides in Ambient Air and Acidic/Basic Aqueous Solutions. ACS Omega, 2019, 4, 10322-10327.	1.6	11
105	Allâ€optical structure assignment of individual singleâ€walled carbon nanotubes from Rayleigh and Raman scattering measurements. Physica Status Solidi (B): Basic Research, 2012, 249, 2436-2441.	0.7	10
106	Rapid Single-Stage Separation of Micrometer-Long and High-Purity Semiconducting Carbon Nanotubes by Gel Filtration. Applied Physics Express, 2013, 6, 065101.	1.1	8
107	Ultrafast dynamics of bright and dark positive trions for valley polarization in monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>WS</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2019, 99, .	1.1	8
108	Magnetic Field Induced Interâ€Valley Trion Dynamics in Monolayer 2D Semiconductor. Advanced Functional Materials, 2021, 31, 2006064.	7.8	8

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109	EXTRACTION OF METALLIC NANOTUBES OF ZEOLITE-SUPPORTED SINGLE-WALLED CARBON NANOTUBES SYNTHESIZED FROM ALCOHOL. Nano, 2007, 02, 221-226.	0.5	7
110	Redox properties of a single (7,5)single-walled carbon nanotube determined by an in situ photoluminescence spectroelectrochemical method. Nanoscale, 2014, 6, 12798-12804.	2.8	7
111	Theory of exciton thermal radiation in semiconducting single-walled carbon nanotubes. Optics Letters, 2021, 46, 3021.	1.7	7
112	Empirical formulation of broadband complex refractive index spectra of single-chirality carbon nanotube assembly. Nanophotonics, 2022, 11, 1011-1020.	2.9	7
113	Unidirectional molecular assembly alignment on graphene enabled by nanomechanical symmetry breaking. Scientific Reports, 2018, 8, 2333.	1.6	5
114	Phonon-mediated intervalley relaxation of positive trions in monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>WSe</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> Physical Review B, 2019, 100, .	1.1	5
115	ACCVD Growth, Raman and Photoluminescence Spectroscopy of Isotopically Modified Single-Walled Carbon Nanotubes. AIP Conference Proceedings, 2005, , .	0.3	3
116	Statistical Verification of Anomaly in Chiral Angle Distribution of Air-Suspended Carbon Nanotubes. Nano Letters, 2022, 22, 5818-5824.	4.5	3
117	Magneto-optical spectroscopy of excitons in carbon nanotubes. Physica Status Solidi (B): Basic Research, 2006, 243, 3192-3196.	0.7	2
118	Bright and highly valley polarized trions in chemically doped monolayer MoS2. Applied Physics Express, 2020, 13, 035002.	1.1	2
119	MAGNETO SPECTROSCOPY OF SINGLE-WALLED CARBON NANOTUBES. International Journal of Modern Physics B, 2007, 21, 1189-1197.	1.0	1
120	Changing photoluminescence spectra of graphene oxide by centrifugation treatments. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 1600-1603.	0.8	1
121	Photoluminescence quantum yield and long exciton radiative lifetime in monolayer two-dimensional transition metal dichalcogenides. , 2016, , .		0
122	Photoluminescence. , 2018, , 471-476.		0
123	Photon Energy Up-conversion in Carbon Nanotubes. Nanostructure Science and Technology, 2019, , 537-549.	0.1	0
124	Van der Waals Heterostructures: Controllable Magnetic Proximity Effect and Charge Transfer in 2D Semiconductor and Doubleâ€Layered Perovskite Manganese Oxide van der Waals Heterostructure (Adv.) Tj ETQq0 1 0 rgBT /Overlock 1	11.1	0
125	Roomâ€Temperature Chiral Lightâ€Emitting Diode Based on Strained Monolayer Semiconductors (Adv.) Tj ETQq1 1 0.784314 rgBT /Ov	11.1	0
126	Roles of Polymer Layer in Interfacial Engineering Perovskite Solar Cells with High Photovoltaic Performance. , 0, , .		0