Takuya Hayashi

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/10871707/publications.pdf

Version: 2024-02-01

119 papers	6,802 citations	76294 40 h-index	60583 81 g-index
121 all docs	121 docs citations	121 times ranked	10755 citing authors

#	Article	IF	Citations
1	Enhanced desalination performance in compacted carbon-based reverse osmosis membranes. Nanoscale Advances, 2020, 2, 3444-3451.	2.2	6
2	Nanocomposite desalination membranes made of aromatic polyamide with cellulose nanofibers: synthesis, performance, and water diffusion study. Nanoscale, 2020, 12, 19628-19637.	2.8	19
3	Hybridized double-walled carbon nanotubes and activated carbon as free-standing electrode for flexible supercapacitor applications. Carbon Letters, 2020, 30, 527-534.	3.3	20
4	Outer Tube-Selectively Boron-Doped Double-Walled Carbon Nanotubes for Thermoelectric Applications. ACS Applied Nano Materials, 2020, 3, 3347-3354.	2.4	8
5	High-Quality Green-Emitting Nanodiamonds Fabricated by HPHT Sintering of Polycrystalline Shockwave Diamonds. Nanoscale Research Letters, 2020, 15, 209.	3.1	12
6	A water-resilient carbon nanotube based strain sensor for monitoring structural integrity. Journal of Materials Chemistry A, 2019, 7, 19996-20005.	5.2	36
7	New Insights in the Natural Organic Matter Fouling Mechanism of Polyamide and Nanocomposite Multiwalled Carbon Nanotubes-Polyamide Membranes. Environmental Science & Technology, 2019, 53, 6255-6263.	4.6	38
8	Electric field assisted ion adsorption with nanoporous SWCNT electrodes. Adsorption, 2019, 25, 1035-1041.	1.4	2
9	Water Diffusion Mechanism in Carbon Nanotube and Polyamide Nanocomposite Reverse Osmosis Membranes: A Possible Percolation-Hopping Mechanism. Physical Review Applied, 2018, 9, .	1.5	23
10	Mild oxidation-production of subnanometer-sized nanowindows of single wall carbon nanohorn. Journal of Colloid and Interface Science, 2018, 529, 332-336.	5.0	5
11	Synthesis of outer tube-selectively nitrogen-doped double-walled carbon nanotubes by nitrogen plasma treatment. Nanoscale, 2018, 10, 15938-15942.	2.8	9
12	Effective Antiscaling Performance of Reverse-Osmosis Membranes Made of Carbon Nanotubes and Polyamide Nanocomposites. ACS Omega, 2018, 3, 6047-6055.	1.6	25
13	Effect of boron doping on the electrical conductivity of metallicity-separated single walled carbon nanotubes. Nanoscale, 2018, 10, 12723-12733.	2.8	37
14	Effective NaCl and dye rejection of hybrid graphene oxide/graphene layered membranes. Nature Nanotechnology, 2017, 12, 1083-1088.	15.6	307
15	Antiorganic Fouling and Low-Protein Adhesion on Reverse-Osmosis Membranes Made of Carbon Nanotubes and Polyamide Nanocomposite. ACS Applied Materials & Interfaces, 2017, 9, 32192-32201.	4.0	36
16	A Review of Double-Walled and Triple-Walled Carbon Nanotube Synthesis and Applications. Applied Sciences (Switzerland), 2016, 6, 109.	1.3	44
17	Linear carbon chains inside multi-walled carbon nanotubes: Growth mechanism, thermal stability and electrical properties. Carbon, 2016, 107, 217-224.	5.4	33
18	High Performance and Chlorine Resistant Carbon Nanotube/Aromatic Polyamide Reverse Osmosis Nanocomposite Membrane. MRS Advances, 2016, 1, 1469-1476.	0.5	12

#	Article	IF	Citations
19	Optical sensitivity of mussel protein-coated double-walled carbon nanotubes on the ironâ€“DOPA conjugation bond. RSC Advances, 2016, 6, 16308-16313.	1.7	1
20	Multiple exciton generation induced enhancement of the photoresponse of pulsed-laser-ablation synthesized single-wall-carbon-nanotube/PbS-quantum-dots nanohybrids. Scientific Reports, 2016, 6, 20083.	1.6	23
21	Synthesis and characterization of graphene from rice husks. Tanso, 2016, 2016, 182-190.	0.1	7
22	Flexible Transparent Conducting Films Composed of Photochemically Oxidized Thin Multi-Walled Carbon Nanotubes. Journal of Nanoscience and Nanotechnology, 2016, 16, 11980-11985.	0.9	2
23	High-performance multi-functional reverse osmosis membranes obtained by carbon nanotubeÂ·polyamide nanocomposite. Scientific Reports, 2015, 5, 13562.	1.6	101
24	Microwave plasma-induced graphene-sheet fibers from waste coffee grounds. Journal of Materials Chemistry A, 2015, 3, 14545-14549.	5.2	22
25	Molecular Dynamics Study of Carbon Nanotubes/Polyamide Reverse Osmosis Membranes: Polymerization, Structure, and Hydration. ACS Applied Materials & Interfaces, 2015, 7, 24566-24575.	4.0	58
26	Sustainable and Versatile CuO/GNS Nanocatalyst for Highly Efficient Base Free Coupling Reactions. ACS Sustainable Chemistry and Engineering, 2015, 3, 2478-2488.	3.2	57
27	Electrochemical role of oxygen containing functional groups on activated carbon electrode. RSC Advances, 2014, 4, 62678-62683.	1.7	17
28	Rice Huskâ€Derived Graphene with Nanoâ€Sized Domains and Clean Edges. Small, 2014, 10, 2766-2770.	5.2	181
29	Importance of open, heteroatom-decorated edges in chemically doped-graphene for supercapacitor applications. Journal of Materials Chemistry A, 2014, 2, 9532-9540.	5.2	91
30	Effect of defects on the intrinsic strength and stiffness of graphene. Nature Communications, 2014, 5, 3186.	5.8	560
31	Molybdenum-encapsulation modified the optical property of single walled carbon nanotubes. RSC Advances, 2014, 4, 54747-54751.	1.7	0
32	Defect-Assisted Heavily and Substitutionally Boron-Doped Thin Multiwalled Carbon Nanotubes Using High-Temperature Thermal Diffusion. Journal of Physical Chemistry C, 2014, 118, 4454-4459.	1.5	17
33	CO2 adsorption on crystalline graphitic nanostructures. Journal of CO2 Utilization, 2014, 5, 60-65.	3.3	17
34	A selective way to create defects by the thermal treatment of fluorinated double walled carbon nanotubes. Chinese Journal of Catalysis, 2014, 35, 864-868.	6.9	7
35	Double-walled carbon nanotubes: synthesis, structural characterization, and application. Carbon Letters, 2014, 15, 77-88.	3.3	35
36	Carbon Nanotubes and Other Carbon Materials. , 2014, , 628-642.		0

#	Article	IF	Citations
37	Mechanically Tough, Electrically Conductive Polyethylene Oxide Nanofiber Web Incorporating DNA-Wrapped Double-Walled Carbon Nanotubes. ACS Applied Materials & Interfaces, 2013, 5, 4150-4154.	4.0	20
38	A reversible strain-induced electrical conductivity in cup-stacked carbon nanotubes. Nanoscale, 2013, 5, 10212.	2.8	12
39	Boron-assisted coalescence of parallel multi-walled carbon nanotubes. RSC Advances, 2013, 3, 26266.	1.7	5
40	Iron Particle Nanodrilling of Few Layer Graphene at Low Electron Beam Accelerating Voltages. Particle and Particle Systems Characterization, 2013, 30, 76-82.	1.2	9
41	Formation of Nitrogen-Doped Graphene Nanoribbons via Chemical Unzipping. ACS Nano, 2013, 7, 2192-2204.	7.3	80
42	Photosensor Device Based on Fewâ€Layered WS₂ Films. Advanced Functional Materials, 2013, 23, 5511-5517.	7.8	546
43	Controlled interlayer spacing of scrolled reduced graphene nanotubes by thermal annealing. RSC Advances, 2013, 3, 4161.	1.7	13
44	Important roles of graphene edges in carbon-based energy storage devices. Journal of Energy Chemistry, 2013, 22, 183-194.	7.1	32
45	Carbon Nanofibers. , 2013, , 233-262.		36
46	Preparation and structure analysis of double wall-carbon nanotubes encapsulating gadolinium trichloride nanowires. Tanso, 2013, 2013, 279-283.	0.1	0
47	Raman Spectroscopy of Boron-Doped Single-Layer Graphene. ACS Nano, 2012, 6, 6293-6300.	7.3	245
48	Clean Nanotube Unzipping by Abrupt Thermal Expansion of Molecular Nitrogen: Graphene Nanoribbons with Atomically Smooth Edges. ACS Nano, 2012, 6, 2261-2272.	7.3	54
49	Nitrogen-doped graphene: beyond single substitution and enhanced molecular sensing. Scientific Reports, 2012, 2, 586.	1.6	563
50	Determination of the stacking order of curved few-layered graphene systems. Nanoscale, 2012, 4, 6419.	2.8	5
51	Singleâ€wall carbon nanotube interactions with copperâ€oxamato building block of moleculeâ€based magnets probed by resonance Raman spectroscopy. Journal of Raman Spectroscopy, 2012, 43, 1951-1956.	1.2	7
52	Fabrication of Transparent, Tough, and Conductive Shapeâ€Memory Polyurethane Films by Incorporating a Small Amount of Highâ€Quality Graphene. Macromolecular Rapid Communications, 2012, 33, 628-634.	2.0	69
53	Enhanced electrical conductivities of N-doped carbon nanotubes by controlled heat treatment. Nanoscale, 2011, 3, 4359.	2.8	60
54	Chirality-Dependent Transport in Double-Walled Carbon Nanotube Assemblies: The Role of Inner Tubes. ACS Nano, 2011, 5, 7547-7554.	7.3	28

#	Article	IF	Citations
55	Optically and Biologically Active Mussel Proteinâ€Coated Doubleâ€Walled Carbon Nanotubes. Small, 2011, 7, 3292-3297.	5.2	31
56	Bulk Synthesis of Narrow Diameter and Highly Crystalline Tripleâ€Walled Carbon Nanotubes by Coalescing Fullerene Peapods. Advanced Materials, 2011, 23, 1761-1764.	11.1	25
57	Thermostable Natural Rubber with Cellular Structure Using Thin Multiwalled Carbon Nanotubes. ChemSusChem, 2011, 4, 931-934.	3.6	3
58	Behavior of the high frequency Raman modes of double-wall carbon nanotubes after doping with bromine or iodine vapors. Carbon, 2011, 49, 3585-3596.	5.4	19
59	Boron Atoms as Loop Accelerator and Surface Stabilizer in Plateletâ€Type Carbon Nanofibers. ChemPhysChem, 2010, 11, 2345-2348.	1.0	15
60	Covalent Attachment of Aromatic Diisocyanate to the Sidewalls of Single- and Double-Walled Carbon Nanotubes. European Journal of Inorganic Chemistry, 2010, 2010, 4305-4308.	1.0	11
61	A simple route to short cup-stacked carbon nanotubes by sonication. Carbon, 2010, 48, 3643-3647.	5.4	9
62	Raman and Fluorescence Spectroscopic Studies of a DNA-Dispersed Double-Walled Carbon Nanotube Solution. ACS Nano, 2010, 4, 1060-1066.	7.3	25
63	Observation of magnetic edge state in graphene nanoribbons. Physical Review B, 2010, 81, .	1.1	132
64	Synthesis of catalytic chemical vapor grown carbon fibers: carbon nanotube and carbon nanofiber. Tanso, 2010, 2010, 153-160.	0.1	3
65	Strong and stable photoluminescence from the semiconducting inner tubes within double walled carbon nanotubes. Applied Physics Letters, 2009, 94, 083106.	1.5	34
66	Controlled growth of one-dimensional clusters of molybdenum atoms using double-walled carbon nanotube templating. Applied Physics Letters, 2009, 94, .	1.5	8
67	Loop formation in graphitic nanoribbon edges using furnace heating or Joule heating. Journal of Vacuum Science & Technology B, 2009, 27, 1996.	1.3	26
68	Transparent and Conductive Polyethylene Oxide Film by the Introduction of Individualized Singleâ€Walled Carbon Nanotubes. Macromolecular Rapid Communications, 2009, 30, 2084-2088.	2.0	6
69	Bright Photoluminescence from the Inner Tubes of â€œPeapodâ€â€Derived Doubleâ€Walled Carbon Nanotubes. Small, 2009, 5, 2678-2682.	5.2	38
70	In vivo immunological toxicity in mice of carbon nanotubes with impurities. Carbon, 2009, 47, 1365-1372.	5.4	98
71	Properties of One-Dimensional Molybdenum Nanowires in a Confined Environment. Nano Letters, 2009, 9, 1487-1492.	4.5	43
72	DJ-1 binds to mitochondrial complex I and maintains its activity. Biochemical and Biophysical Research Communications, 2009, 390, 667-672.	1.0	172

#	Article	IF	Citations
73	Freestanding, bendable thin film for supercapacitors using DNA-dispersed double walled carbon nanotubes. Applied Physics Letters, 2009, 95, .	1.5	26
74	Comparison of the Resonance Raman Behavior of Double-Walled Carbon Nanotubes Doped with Bromine or Iodine Vapors. Journal of Physical Chemistry C, 2009, 113, 3934-3938.	1.5	23
75	Fundamental Understanding of Nanoporous Carbons for Energy Application Potentials. Carbon Letters, 2009, 10, 177-180.	3.3	6
76	Optical studies of inner tubes within double-walled carbon nanotubes. Tanso, 2009, 2009, 172-179.	0.1	0
77	Carbon Nanotubes: State-of-the-art Technology and Safety for Success. Carbon Letters, 2009, 10, 87-89.	3.3	0
78	Raman study on electrochemical lithium insertion into multiwalled carbon nanotubes. Journal of Raman Spectroscopy, 2008, 39, 1183-1188.	1.2	9
79	Extremeâ€Performance Rubber Nanocomposites for Probing and Excavating Deep Oil Resources Using Multiâ€Walled Carbon Nanotubes. Advanced Functional Materials, 2008, 18, 3403-3409.	7.8	112
80	Robust, Conducting, and Transparent Polymer Composites Using Surfaceâ€Modified and Individualized Doubleâ€Walled Carbon Nanotubes. Advanced Materials, 2008, 20, 4509-4512.	11.1	58
81	Double-Wall Carbon Nanotubes Doped with Different Br2 Doping Levels: A Resonance Raman Study. Nano Letters, 2008, 8, 4168-4172.	4.5	28
82	Bulk Production of a New Form of sp² Carbon: Crystalline Graphene Nanoribbons. Nano Letters, 2008, 8, 2773-2778.	4.5	588
83	Diameter-selective separation of double-walled carbon nanotubes. Applied Physics Letters, 2008, 93, 223107.	1.5	18
84	Synthesis and Isolation of Molybdenum Atomic Wires. Nano Letters, 2008, 8, 237-240.	4.5	61
85	Selective Optical Property Modification of Double-Walled Carbon Nanotubes by Fluorination. ACS Nano, 2008, 2, 485-488.	7.3	64
86	Nonlinear optical absorption and reflection of single wall carbon nanotube thin films by Z-scan technique. Applied Physics Letters, 2008, 92, .	1.5	37
87	CdSe quantum dot-decorated double walled carbon nanotubes: The effect of chemical moieties. Applied Physics Letters, 2008, 93, 051901.	1.5	13
88	Wave propagation in double-walled carbon nanotubes conveying fluid. Journal of Applied Physics, 2008, 103, .	1.1	17
89	Carbon Nanotubes and Other Carbon Materials. , 2008, , 691-706.		1
90	Selective Tuning of the Electronic Properties of Coaxial Nanocables through Exohedral Doping. Nano Letters, 2007, 7, 2383-2388.	4.5	43

#	Article	IF	Citations
91	Hysteretic transfer characteristics of double-walled and single-walled carbon nanotube field-effect transistors. Applied Physics Letters, 2007, 91, 143118.	1.5	11
92	Mechanical Properties of Carbon Nanomaterials. ChemPhysChem, 2007, 8, 999-1004.	1.0	45
93	Oxidation and Thermal Stability of Linear Carbon Chains Contained in Thermally Treated Double-Walled Carbon Nanotubes. Small, 2007, 3, 788-792.	5.2	12
94	Sodium Chloride-Catalyzed Oxidation of Multiwalled Carbon Nanotubes for Environmental Benefit. Journal of Physical Chemistry B, 2006, 110, 12017-12021.	1.2	8
95	Efficient H2Adsorption by Nanopores of High-Purity Double-Walled Carbon Nanotubes. Journal of the American Chemical Society, 2006, 128, 12636-12637.	6.6	50
96	Medical Application of Carbon-Nanotube-Filled Nanocomposites: The Microcatheter. Small, 2006, 2, 1406-1411.	5.2	44
97	In Situ Raman Study on Single- and Double-Walled Carbon Nanotubes as a Function of Lithium Insertion. Small, 2006, 2, 667-676.	5.2	73
98	Nanotube Coalescence-Inducing Mode: A Novel Vibrational Mode in Carbon Systems. Small, 2006, 2, 1031-1036.	5.2	77
99	Role of systemic T-cells and histopathological aspects after subcutaneous implantation of various carbon nanotubes in mice. Carbon, 2006, 44, 1079-1092.	5.4	78
100	TEM image simulation study of small carbon nanotubes and carbon nanowire. Carbon, 2006, 44, 1130-1136.	5.4	17
101	Formation of off-centered double-walled carbon nanotubes exhibiting wide interlayer spacing from bi-cables. Chemical Physics Letters, 2006, 432, 240-244.	1.2	6
102	Large-scale production of carbon nanotubes and their applications. Pure and Applied Chemistry, 2006, 78, 1703-1713.	0.9	78
103	Comparative study of herringbone and stacked-cup carbon nanofibers. Carbon, 2005, 43, 3005-3008.	5.4	30
104	Wave propagation of carbon nanotubes embedded in an elastic medium. Journal of Applied Physics, 2005, 97, 044307.	1.1	53
105	Thrombogenicity and Blood Coagulation of a Microcatheter Prepared from Carbon Nanotubeâ˜'Nylon-Based Composite. Nano Letters, 2005, 5, 101-105.	4.5	61
106	Progressive and invasive functionalization of carbon nanotube sidewalls by diluted nitric acid under supercritical conditions. Journal of Materials Chemistry, 2005, 15, 407.	6.7	61
107	Atomic Nanotube Welders:â€‰ Boron Interstitials Triggering Connections in Double-Walled Carbon Nanotubes. Nano Letters, 2005, 5, 1099-1105.	4.5	72
108	Reply to â€œA Comment on â€˜NanoTeflons:â€‰ Structure and EELS Characterization of Fluorinated Carbon Nanotubes and Nanofibers'â€• Nano Letters, 2004, 4, 1001-1002.	4.5	6

#	Article	IF	Citations
109	Evaluation of the resiliency of carbon nanotubes in the bulk state. Carbon, 2004, 42, 2362-2366.	5.4	5
110	Coalescence of Double-Walled Carbon Nanotubes:â€‰ Formation of Novel Carbon Bicables. Nano Letters, 2004, 4, 1451-1454.	4.5	75
111	æ°—ç›¸æˆé•·ã‚«ãƒ¼ãƒœãƒ³ãƒŠãƒŽãƒãƒ¥ãƒ¼ãƒ–ãƒ»ãƒŠãƒŽãƒ•ã‚¡ã‚¤ãƒãƒ¼ã®åˆæˆã¨ãã®æ§‹é€ è§£æž Hyomen Kagaku, 2004, 25, 352-3	0.[illegible]	0
112	Smallest Freestanding Single-Walled Carbon Nanotube. Nano Letters, 2003, 3, 887-889.	4.5	101
113	Selective and Efficient Impregnation of Metal Nanoparticles on Cup-Stacked-Type Carbon Nanofibers. Nano Letters, 2003, 3, 723-726.	4.5	208
114	Structural Design and Functions of Carbon Materials by Alloying in Atomic and Molecular Scales. , 2003, , 41-55.		0
115	Microstructural change of cup-stacked carbon nanofiber by post-treatment. Molecular Crystals and Liquid Crystals, 2002, 387, 157-161.	0.4	5
116	Structure and basic properties of cup-stacked type carbon nanofiber. Molecular Crystals and Liquid Crystals, 2002, 387, 167-171.	0.4	9
117	Hrtem observation of ball-milled lampshade carbon nanofiber. Molecular Crystals and Liquid Crystals, 2002, 387, 141-144.	0.4	0
118	Scanning tunneling microscope study of boron-doped highly oriented pyrolytic graphite. Journal of Applied Physics, 2001, 90, 5670-5674.	1.1	159
119	Characterization of Novel Carbon Materials Using EELS. Tanso, 1999, 1999, 320-323.	0.1	3