Hirotomo Nishihara

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/9334744/publications.pdf

Version: 2024-02-01

138 papers	6,758 citations	71102 41 h-index	64796 79 g-index
150 all docs	150 docs citations	150 times ranked	7249 citing authors

#	Article	IF	Citations
1	Helically Aligned Fused Carbon Hollow Nanospheres with Chiral Discrimination Ability. Nanoscale, 2022, , .	5.6	1
2	Porous nanographene formation on Î³-alumina nanoparticles via transition-metal-free methane activation. Chemical Science, 2022, 13, 3140-3146.	7.4	8
3	Ordered carbonaceous frameworks: a new class of carbon materials with molecular-level design. Chemical Communications, 2022, 58, 3578-3590.	4.1	14
4	Aligned Macroporous Monoliths by Ice-Templating. Bulletin of the Chemical Society of Japan, 2022, 95, 611-620.	3.2	16
5	In-Depth Analysis of Key Factors Affecting the Catalysis of Oxidized Carbon Blacks for Cellulose Hydrolysis. ACS Catalysis, 2022, 12, 892-905.	11.2	19
6	Giant Carbon Nano-Test Tubes as Versatile Imaging Vessels for High-Resolution and In Situ Observation of Proteins. ACS Applied Materials & Interfaces, 2022, 14, 26507-26516.	8.0	5
7	Coordination chemistry for innovative carbon-related materials. Coordination Chemistry Reviews, 2022, 466, 214577.	18.8	5
8	Synthesis of microporous polymers with exposed C₆₀ surfaces by polyesterification of fullerenol. Chemical Communications, 2022, 58, 7086-7089.	4.1	3
9	Adsorption properties of templated nanoporous carbons comprising 1â€“2 graphene layers. , 2022, 1, 123-135.		4
10	Synthesis and electrocatalysis of ordered carbonaceous frameworks from Ni porphyrin with four ethynyl groups. Catalysis Today, 2022, , .	4.4	1
11	Iron porphyrin-derived ordered carbonaceous frameworks. Catalysis Today, 2021, 364, 164-171.	4.4	12
12	pHâ€Ðependent Morphology Control of Cellulose Nanofiber/Graphene Oxide Cryogels. Small, 2021, 17, e2005564.	10.0	20
13	Scalable nanoporous carbon films allow line-of-sight 3D atomic layer deposition of Pt: towards a new generation catalyst layer for PEM fuel cells. Materials Horizons, 2021, 8, 2451-2462.	12.2	20
14	Synthesis of graphene mesosponge via catalytic methane decomposition on magnesium oxide. Journal of Materials Chemistry A, 2021, 9, 14296-14308.	10.3	42
15	Force-responsive ordered carbonaceous frameworks synthesized from Ni-porphyrin. Chemical Communications, 2021, 57, 6007-6010.	4.1	10
16	Pillar[6]quinone: facile synthesis, crystal structures and electrochemical properties. Chemical Communications, 2021, 57, 6360-6363.	4.1	7
17	Elucidation of oxygen reduction reaction and nanostructure of platinum-loaded graphene mesosponge for polymer electrolyte fuel cell electrocatalyst. Electrochimica Acta, 2021, 370, 137705.	5.2	13
18	One-Step Fabrication of Homogeneous Ta₃N₅ Crystal Photoanodes Using TaF₅ Evaporation Supply for Photoelectrochemical Water Splitting. ACS Applied Energy Materials, 2021, 4, 2690-2695.	5.1	3

#	Article	IF	Citations
19	Lamellar MXene Composite Aerogels with Sandwiched Carbon Nanotubes Enable Stable Lithiumâ€“Sulfur Batteries with a High Sulfur Loading. Advanced Functional Materials, 2021, 31, 2100793.	14.9	95
20	The carbonization of aromatic molecules with three-dimensional structures affords carbon materials with controlled pore sizes at the Ã…ngstrom-level. Communications Chemistry, 2021, 4, .	4.5	17
21	A volatile redox mediator boosts the long-cycle performance of lithium-oxygen batteries. Energy Storage Materials, 2021, 38, 571-580.	18.0	14
22	Nano-Confinement of Insulating Sulfur in the Cathode Composite of All-Solid-State Liâ€“S Batteries Using Flexible Carbon Materials with Large Pore Volumes. ACS Applied Materials & Interfaces, 2021, 13, 38613-38622.	8.0	16
23	Edgeless porous carbon coating for durable and powerful lead-carbon batteries. Carbon, 2021, 185, 419-427.	10.3	12
24	High-density monolithic pellets of double-sided graphene fragments based on zeolite-templated carbon. Journal of Materials Chemistry A, 2021, 9, 7503-7507.	10.3	17
25	Development of a simple NLDFT model for the analysis of adsorption isotherms on zeolite templated carbon (ZTC). Carbon, 2020, 169, 205-213.	10.3	7
26	Pyreneâ€Thiolâ€modified Pd Nanoparticles on Carbon Support: Kinetic Control by Steric Hinderance and Improved Stability by the Catalystâ€Support Interaction. ChemCatChem, 2020, 12, 5880-5887.	3.7	11
27	Carbon-rich materials with three-dimensional ordering at the angstrom level. Chemical Science, 2020, 11, 5866-5873.	7.4	28
28	Unusual Redox Behavior of Ruthenocene Confined in the Micropores of Activated Carbon. Journal of Physical Chemistry C, 2020, 124, 15205-15215.	3.1	11
29	Quantifying Carbon Edge Sites on Depressing Hydrogen Evolution Reaction Activity. Nano Letters, 2020, 20, 5885-5892.	9.1	23
30	Effect of carbon surface on degradation of supercapacitors in a negative potential range. Journal of Power Sources, 2020, 457, 228042.	7.8	26
31	Synthesis of Ordered Carbonaceous Framework with Microporosity from Porphyrin with Ethynyl Groups. Chemistry Letters, 2020, 49, 619-623.	1.3	14
32	4.4 V supercapacitors based on super-stable mesoporous carbon sheet made of edge-free graphene walls. Energy and Environmental Science, 2019, 12, 1542-1549.	30.8	154
33	Force-driven reversible liquidâ€“gas phase transition mediated by elastic nanosponges. Nature Communications, 2019, 10, 2559.	12.8	46
34	A Simple â€œNano-Templatingâ€•Method Using Zeolite Y Toward the Formation of Carbon Schwarzites. Frontiers in Materials, 2019, 6, .	2.4	14
35	A Directional Strain Sensor Based on Anisotropic Microhoneycomb Cellulose Nanofiberâ€Carbon Nanotube Hybrid Aerogels Prepared by Unidirectional Freeze Drying. Small, 2019, 15, e1805363.	10.0	73
36	Insight into the origin of carbon corrosion in positive electrodes of supercapacitors. Journal of Materials Chemistry A, 2019, 7, 7480-7488.	10.3	62

#	Article	IF	Citations
37	Structural Coloration of a Colloidal Amorphous Array is Intensified by Carbon Nanolayers. Langmuir, 2018, 34, 4282-4288.	3.5	11
38	A Nacreâ€Like Carbon Nanotube Sheet for High Performance Liâ€Polysulfide Batteries with High Sulfur Loading. Advanced Science, 2018, 5, 1800384.	11.2	39
39	Zeolite-templated carbons â€“ three-dimensional microporous graphene frameworks. Chemical Communications, 2018, 54, 5648-5673.	4.1	172
40	Enhanced hydrogen spillover to fullerene at ambient temperature. Chemical Communications, 2018, 54, 3327-3330.	4.1	24
41	Microsphere Assemblies via Phosphonate Monoester Coordination Chemistry. Chemistry - A European Journal, 2018, 24, 1533-1538.	3.3	7
42	Graphene-based ordered framework with a diverse range of carbon polygons formed in zeolite nanochannels. Carbon, 2018, 129, 854-862.	10.3	70
43	Ultraporous nitrogen-doped zeolite-templated carbon for high power density aqueous-based supercapacitors. Carbon, 2018, 129, 510-519.	10.3	79
44	Microhoneycomb Monoliths Prepared by the Unidirectional Freeze-drying of Cellulose Nanofiber Based Sols: Method and Extensions. Journal of Visualized Experiments, 2018, , .	0.3	1
45	Enhanced hydrogen chemisorption and spillover on non-metallic nickel subnanoclusters. Journal of Materials Chemistry A, 2018, 6, 12523-12531.	10.3	17
46	Central metal dependent modulation of induced-fit gas uptake in molecular porphyrin solids. Chemical Communications, 2018, 54, 7822-7825.	4.1	2
47	Synthesis of zeolite-templated carbons for methane storage: A molecular simulation study. Tanso, 2018, 2018, 197-203.	0.1	4
48	Beads-Milling of Waste Si Sawdust into High-Performance Nanoflakes for Lithium-Ion Batteries. Scientific Reports, 2017, 7, 42734.	3.3	39
49	Improvement of Cyclability of Li-Ion Batteries Using C-Coated Si Nanopowder Electrode Fabricated from Si Swarf with Limitation of Delithiation Capacity. Journal of the Electrochemical Society, 2017, 164, A995-A1001.	2.9	8
50	Fabrication of Si nanopowder from Si swarf and application to high-capacity and low cost Li-ion batteries. Journal of Alloys and Compounds, 2017, 720, 529-540.	5.5	14
51	Fine Dispersion of Pt_{4â€“5} Subnanoclusters and Pt Single Atoms over Porous Carbon Supports and Their Structural Analyses with X-ray Absorption Spectroscopy. Journal of Physical Chemistry C, 2017, 121, 7892-7902.	3.1	36
52	Synthesis of ordered carbonaceous frameworks from organic crystals. Nature Communications, 2017, 8, 109.	12.8	60
53	Boron and nitrogen co-doped ordered microporous carbons with high surface areas. Chemical Communications, 2017, 53, 13348-13351.	4.1	21
54	Formation mechanism of zeolite-templated carbons. Tanso, 2017, 2017, 169-174.	0.1	27

#	Article	IF	Citations
55	Vanadiumâ€Ion Redox Reactions in a Threeâ€Dimensional Network of Reduced Graphite Oxide. ChemElectroChem, 2016, 3, 650-657.	3.4	16
56	Remarkable performance improvement of inexpensive ball-milled Si nanoparticles by carbon-coating for Li-ion batteries. Journal of Power Sources, 2016, 319, 99-103.	7.8	34
57	An organic proton battery employing two redox-active quinones trapped within the nanochannels of zeolite-templated carbon. Carbon, 2016, 107, 831-836.	10.3	52
58	Nuclear magnetic resonance study of zeolite-templated carbon. Synthetic Metals, 2016, 221, 149-152.	3.9	6
59	Synthesis and Photoproperties of Edge-functionalized Zeolite-templated Carbon with Bromine or Carbazole Groups. Chemistry Letters, 2016, 45, 601-603.	1.3	8
60	Oxidationâ€Resistant and Elastic Mesoporous Carbon with Singleâ€Layer Graphene Walls. Advanced Functional Materials, 2016, 26, 6418-6427.	14.9	102
61	Cellulose Nanofiber as a Distinct Structure-Directing Agent for Xylem-like Microhoneycomb Monoliths by Unidirectional Freeze-Drying. ACS Nano, 2016, 10, 10689-10697.	14.6	115
62	Effect of Heteroatoms in Ordered Microporous Carbons on Their Electrochemical Capacitance. Langmuir, 2016, 32, 11997-12004.	3.5	45
63	Easy fabrication of superporous zeolite templated carbon electrodes by electrospraying on rigid and flexible substrates. Journal of Materials Chemistry A, 2016, 4, 4610-4618.	10.3	14
64	Successful functionalization of superporous zeolite templated carbon using aminobenzene acids and electrochemical methods. Carbon, 2016, 99, 157-166.	10.3	17
65	InnenrÃ¼cktitelbild: Porous Carbon Fibers Containing Pores with Sizes Controlled at the Ã…ngstrom Level by the Cavity Size of Pillar[6]arene (Angew. Chem. 22/2015). Angewandte Chemie, 2015, 127, 6751-6751.	2.0	0
66	Porous Carbon Fibers Containing Pores with Sizes Controlled at the Ã…ngstrom Level by the Cavity Size of Pillar[6]arene. Angewandte Chemie - International Edition, 2015, 54, 6466-6469.	13.8	60
67	Formation of Foamâ€like Microstructural Carbon Material by Carbonization of Porous Coordination Polymers through a Ligandâ€Assisted Foaming Process. Chemistry - A European Journal, 2015, 21, 13278-13283.	3.3	14
68	Li-Rich Li-Si Alloy As A Lithium-Containing Negative Electrode Material Towards High Energy Lithium-Ion Batteries. Scientific Reports, 2015, 5, 8085.	3.3	53
69	Control of pore distribution of porous carbons derived from Mg²⁺ porous coordination polymers. Inorganic Chemistry Frontiers, 2015, 2, 473-476.	6.0	21
70	Characterization of a zeolite-templated carbon by electrochemical quartz crystal microbalance and in situ Raman spectroscopy. Carbon, 2015, 89, 63-73.	10.3	22
71	Enhanced electro-oxidation resistance of carbon electrodes induced by phosphorus surface groups. Carbon, 2015, 95, 681-689.	10.3	76
72	Pseudocapacitance of zeolite-templated carbon in organic electrolytes. Energy Storage Materials, 2015, 1, 35-41.	18.0	41

#	Article	IF	Citations
73	Photocatalytic performance of TiO₂â€“zeolite templated carbon composites in organic contaminant degradation. Physical Chemistry Chemical Physics, 2014, 16, 25004-25007.	2.8	27
74	Carbon tubules containing nanocrystalline SiC produced by the graphitization of sugar cane bagasse. Carbon, 2014, 68, 814-817.	10.3	1
75	Conversion of silica nanoparticles into Si nanocrystals through electrochemical reduction. Nanoscale, 2014, 6, 10574-10583.	5.6	16
76	Experimental and Theoretical Studies of Hydrogen/Deuterium Spillover on Pt-Loaded Zeolite-Templated Carbon. Journal of Physical Chemistry C, 2014, 118, 9551-9559.	3.1	32
77	Carbonâ€“carbon asymmetric aqueous capacitor by pseudocapacitive positive and stable negative electrodes. Carbon, 2014, 67, 792-794.	10.3	23
78	Large Pseudocapacitance in Quinone-Functionalized Zeolite-Templated Carbon. Bulletin of the Chemical Society of Japan, 2014, 87, 250-257.	3.2	78
79	Preparation of Highly Dispersed Pt Nanoparticles Supported on Zeolite-templated Carbon and Catalytic Application in Hydrogenation Reaction. Chemistry Letters, 2014, 43, 1794-1796.	1.3	13
80	Production of Colored Pigments with Amorphous Arrays of Black and White Colloidal Particles. Angewandte Chemie - International Edition, 2013, 52, 7261-7265.	13.8	262
81	Amorphous water in three-dimensional confinement of zeolite-templated carbon. Chemical Physics Letters, 2013, 571, 54-60.	2.6	15
82	Towards ultrahigh volumetric capacitance: graphene derived highly dense but porous carbons for supercapacitors. Scientific Reports, 2013, 3, 2975.	3.3	541
83	Reversible Pore Size Control of Elastic Microporous Material by Mechanical Force. Chemistry - A European Journal, 2013, 19, 13009-13016.	3.3	23
84	Binderless thin films of zeolite-templated carbon electrodes useful for electrochemical microcapacitors with ultrahigh rate performance. Physical Chemistry Chemical Physics, 2013, 15, 10331.	2.8	21
85	Fast and reversible lithium storage in a wrinkled structure formed from Si nanoparticles during lithiation/delithiation cycling. Journal of Power Sources, 2013, 222, 400-409.	7.8	59
86	Formation of crosslinked-fullerene-like framework as negative replica of zeolite Y. Carbon, 2013, 62, 455-464.	10.3	66
87	Electrochemical generation of oxygen-containing groups in an ordered microporous zeolite-templated carbon. Carbon, 2013, 54, 94-104.	10.3	62
88	Magnetic properties of hostâ€“guest material using network of curved nanocarbon sheet. Journal of Physics and Chemistry of Solids, 2012, 73, 1436-1439.	4.0	9
89	Energy Storage: Templated Nanocarbons for Energy Storage (Adv. Mater. 33/2012). Advanced Materials, 2012, 24, 4466-4466.	21.0	5
90	Effect of Buffer Size around Nanosilicon Anode Particles for Lithium-Ion Batteries. Journal of Physical Chemistry C, 2012, 116, 6004-6011.	3.1	77

#	Article	IF	Citations
91	General Relationship between Hydrogen Adsorption Capacities at 77 and 298 K and Pore Characteristics of the Porous Adsorbents. Journal of Physical Chemistry C, 2012, 116, 10529-10540.	3.1	50
92	Production of l-theanine using glutaminase encapsulated in carbon-coated mesoporous silica with high pH stability. Biochemical Engineering Journal, 2012, 68, 207-214.	3.6	30
93	Zeolite-Templated Carbon â€“ Its Unique Characteristics and Applications. , 2012, , 295-322.		13
94	Templated Nanocarbons for Energy Storage. Advanced Materials, 2012, 24, 4473-4498.	21.0	672
95	Fabrication of a Highly Conductive Ordered Porous Electrode by Carbon-Coating of a Continuous Mesoporous Silica Film. Chemistry of Materials, 2011, 23, 3144-3151.	6.7	31
96	Path integral molecular dynamics for hydrogen adsorption site of zeolite-templated carbon with semi-empirical PM3 potential. Computational and Theoretical Chemistry, 2011, 975, 128-133.	2.5	11
97	Nuclear quantum effect on hydrogen adsorption site of zeolite-templated carbon model using path integral molecular dynamics. Journal of Alloys and Compounds, 2011, 509, S868-S871.	5.5	6
98	Three-Dimensionally Arrayed and Mutually Connected 1.2-nm Nanopores for High-Performance Electric Double Layer Capacitor. Journal of the American Chemical Society, 2011, 133, 1165-1167.	13.7	260
99	Phase Diagram of 4He Film in 3D Nanopores of ZTC. Journal of Low Temperature Physics, 2011, 162, 565-572.	1.4	6
100	Isotope effect of proton and deuteron adsorption site on zeolite-templated carbon using path integral molecular dynamics. Theoretical Chemistry Accounts, 2011, 130, 1039-1042.	1.4	4
101	Template synthesis of carbon-based uniform nanoporous materials and their applications for energy storage. Tanso, 2011, 2011, 89-95.	0.1	7
102	Adsorption and diffusion of atomic hydrogen on a curved surface of microporous carbon: A theoretical study. Chemical Physics Letters, 2010, 495, 251-255.	2.6	37
103	Fabrication and characterization of magnetic nanoporous zeolite templated carbon. Journal of Physics and Chemistry of Solids, 2010, 71, 565-568.	4.0	12
104	Helium Film Formed in 1.2 nm Pore in Zeolite Templated Carbon. Journal of Low Temperature Physics, 2010, 158, 275-280.	1.4	5
105	Assembling of nanoparticles using ice crystals. Materials Chemistry and Physics, 2010, 123, 347-350.	4.0	10
106	Preparation of titaniaâ€“silica cryogels with controlled shapes and photocatalysis through unidirectional freezing. Materials Letters, 2010, 64, 959-961.	2.6	27
107	Carbon-coated mesoporous silica as an electrode material. Microporous and Mesoporous Materials, 2010, 132, 421-427.	4.4	28
108	Structure and magnetic properties of curved graphene networks and the effects of bromine and potassium adsorption. Physical Review B, 2010, 81, .	3.2	33

#	Article	IF	Citations
109	Investigation of the Ion Storage/Transfer Behavior in an Electrical Doubleâ€Layer Capacitor by Using Ordered Microporous Carbons as Model Materials. Chemistry - A European Journal, 2009, 15, 5355-5363.	3.3	155
110	A possible buckybowl-like structure of zeolite templated carbon. Carbon, 2009, 47, 1220-1230.	10.3	243
111	Enhancement Mechanism of Electrochemical Capacitance in Nitrogen-/Boron-Doped Carbons with Uniform Straight Nanochannels. Langmuir, 2009, 25, 11961-11968.	3.5	195
112	High-Pressure Hydrogen Storage in Zeolite-Templated Carbon. Journal of Physical Chemistry C, 2009, 113, 3189-3196.	3.1	181
113	Water-dispersible â€œcarbon nanopodsâ€•with controllable graphene layer orientation. Chemical Communications, 2009, , 4554.	4.1	7
114	Control of Acid-Site Location of MFI Zeolite by Catalytic Cracking of Silane and Its Application to Olefin Synthesis from Acetone. Journal of Chemical Engineering of Japan, 2009, 42, S162-S167.	0.6	16
115	Submicron mesoporous carbon spheres by ultrasonic emulsification. Journal of Porous Materials, 2008, 15, 265-270.	2.6	14
116	Morphology maps of ice-templated silica gels derived from silica hydrogels and hydrosols. Microporous and Mesoporous Materials, 2008, 116, 166-170.	4.4	42
117	Carbon-coated mesoporous silica with hydrophobicity and electrical conductivity. Carbon, 2008, 46, 48-53.	10.3	70
118	Synthesis of silica-based porous monoliths with straight nanochannels using an ice-rod nanoarray as a template. Journal of Materials Chemistry, 2008, 18, 3662.	6.7	45
119	Electronic structure studies of carbon materials by high energy-resolution carbon K-emission spectroscopy measurements. Microscopy and Microanalysis, 2008, 14, 796-797.	0.4	0
120	Synthesis of nano-carbons by using the template method. Tanso, 2008, 2008, 307-315.	0.1	2
121	Carbon deposition into nanospace through CVD. Tanso, 2007, 2007, 345-351.	0.1	0
122	Densification of ordered microporous carbons and controlling their micropore size by hot-pressing. Carbon, 2007, 45, 2011-2016.	10.3	51
123	CONTROLLING MICROMORPHOLOGY OF SILICA GELS BY UNIDIRECTIONAL FREEZING AND FREEZE DRYING. , 2007, , .		0
124	Preparation of monolithic SiO2â€“Al2O3cryogels with inter-connected macropores through ice templating. Journal of Materials Chemistry, 2006, 16, 3231-3236.	6.7	58
125	Preparation of resorcinol formaldehyde (RF) carbon gels: Use of ultrasonic irradiation followed by microwave drying. Journal of Non-Crystalline Solids, 2006, 352, 5683-5686.	3.1	42
126	Porous microfibers and microhoneycombs synthesized by ice templating. Catalysis Surveys From Asia, 2006, 10, 161-171.	2.6	25

#	Article	IF	Citations
127	Improvement of mesoporosity of carbon cryogels by ultrasonic irradiation. Carbon, 2005, 43, 525-531.	10.3	37
128	Morphology of resorcinolâ€“formaldehyde gels obtained through ice-templating. Carbon, 2005, 43, 1563-1565.	10.3	55
129	Preparation of mesoporous carbon gels from an inexpensive combination of phenol and formaldehyde. Carbon, 2005, 43, 2628-2630.	10.3	47
130	3D interconnected macroporous carbon monoliths prepared by ultrasonic irradiation. Carbon, 2005, 43, 2808-2811.	10.3	28
131	Ordered Macroporous Silica by Ice Templating. Chemistry of Materials, 2005, 17, 683-689.	6.7	221
132	Preparation of resorcinolâ€“formaldehyde carbon cryogel microhoneycombs. Carbon, 2004, 42, 899-901.	10.3	76
133	Formation of unique nanowhiskers on carbon gels. Carbon, 2004, 42, 2119-2121.	10.3	0
134	Preparation of Porous TiO2Cryogel Fibers through Unidirectional Freezing of Hydrogel Followed by Freeze-Drying. Chemistry of Materials, 2004, 16, 4987-4991.	6.7	89
135	Formation of monolithic silica gel microhoneycombs (SMHs) using pseudosteady state growth of microstructural ice crystals. Chemical Communications, 2004, , 874.	4.1	172
136	Influence of surfactants on porous properties of carbon cryogels prepared by solâ€“gel polycondensation of resorcinol and formaldehyde. Carbon, 2003, 41, 2981-2990.	10.3	28
137	Porous properties of silica gels with controlled morphology synthesized by unidirectional freeze-gelation. Microporous and Mesoporous Materials, 2003, 63, 43-51.	4.4	68
138	Nanoscale characterization of the siteâ€specific degradation of electric doubleâ€layer capacitor using scanning electrochemical cell microscopy. Electrochemical Science Advances, 0, , e2100053.	2.8	2