

Hyung Gyu Park

List of Publications by Year in descending order

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83
papers

7,227
citations

218592

26
h-index

91828

69
g-index

87
all docs

87
docs citations

87
times ranked

10164
citing authors

#	ARTICLE	IF	CITATIONS
1	Fast Mass Transport Through Sub-2-Nanometer Carbon Nanotubes. <i>Science</i> , 2006, 312, 1034-1037.	6.0	2,604
2	Nanofluidics in carbon nanotubes. <i>Nano Today</i> , 2007, 2, 22-29.	6.2	1,072
3	Ultimate Permeation Across Atomically Thin Porous Graphene. <i>Science</i> , 2014, 344, 289-292.	6.0	738
4	Ion exclusion by sub-2-nm carbon nanotube pores. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 17250-17255.	3.3	609
5	Fast water transport in graphene nanofluidic channels. <i>Nature Nanotechnology</i> , 2018, 13, 238-245.	15.6	220
6	Carbon nanofluidics of rapid water transport for energy applications. <i>Chemical Society Reviews</i> , 2014, 43, 565-576.	18.7	179
7	Low-Bias Active Control of Terahertz Waves by Coupling Large-Area CVD Graphene to a Terahertz Metamaterial. <i>Nano Letters</i> , 2013, 13, 3193-3198.	4.5	163
8	Stability, Molecular Sieving, and Ion Diffusion Selectivity of a Lamellar Membrane from Two-Dimensional Molybdenum Disulfide. <i>Nano Letters</i> , 2017, 17, 2342-2348.	4.5	144
9	Mechanism and Kinetics of Growth Termination in Controlled Chemical Vapor Deposition Growth of Multiwall Carbon Nanotube Arrays. <i>Nano Letters</i> , 2009, 9, 738-744.	4.5	104
10	pH-Tunable Ion Selectivity in Carbon Nanotube Pores. <i>Langmuir</i> , 2010, 26, 14848-14853.	1.6	100
11	Evolutionary Kinetics of Graphene Formation on Copper. <i>Nano Letters</i> , 2013, 13, 967-974.	4.5	97
12	Fabrication of flexible, aligned carbon nanotube/polymer composite membranes by in-situ polymerization. <i>Journal of Membrane Science</i> , 2014, 460, 91-98.	4.1	96
13	Recent advances in nanoelectrode architecture for photochemical hydrogen production. <i>Energy and Environmental Science</i> , 2010, 3, 1028.	15.6	90
14	Pseudocapacitive Coating for Effective Capacitive Deionization. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 2442-2450.	4.0	66
15	Understanding the interaction between energetic ions and freestanding graphene towards practical 2D perforation. <i>Nanoscale</i> , 2016, 8, 8345-8354.	2.8	64
16	Transport in packed-bed and wall-coated steam-methanol reformers. <i>Journal of Power Sources</i> , 2007, 166, 194-201.	4.0	49
17	Graphite Coating of Iron Nanowires for Nanorobotic Applications: Synthesis, Characterization and Magnetic Wireless Manipulation. <i>Advanced Functional Materials</i> , 2013, 23, 823-831.	7.8	48
18	Multifunctional wafer-scale graphene membranes for fast ultrafiltration and high permeation gas separation. <i>Science Advances</i> , 2018, 4, eaau0476.	4.7	47

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19	Morphology and crystallinity control of ultrathin TiO ₂ layers deposited on carbon nanotubes by temperature-step atomic layer deposition. <i>Nanoscale</i> , 2015, 7, 10622-10633.	2.8	41
20	Multilayer Two-Dimensional Water Structure Confined in MoS ₂ . <i>Journal of Physical Chemistry C</i> , 2017, 121, 16021-16028.	1.5	35
21	Methanol Steam Reformer on a Silicon Wafer. <i>Journal of Microelectromechanical Systems</i> , 2006, 15, 976-985.	1.7	34
22	Osmotic Transport across Surface Functionalized Carbon Nanotube Membrane. <i>Nano Letters</i> , 2018, 18, 6679-6685.	4.5	34
23	Observations of Early Stage Graphene Growth on Copper. <i>Electrochemical and Solid-State Letters</i> , 2012, 15, K1.	2.2	33
24	Metal-Dielectric-CNT Nanowires for Femtomolar Chemical Detection by Surface Enhanced Raman Spectroscopy. <i>Advanced Materials</i> , 2013, 25, 4431-4436.	11.1	31
25	Ion transport in graphene nanofluidic channels. <i>Nanoscale</i> , 2016, 8, 19527-19535.	2.8	30
26	Modeling and optimization of atomic layer deposition processes on vertically aligned carbon nanotubes. <i>Beilstein Journal of Nanotechnology</i> , 2014, 5, 234-244.	1.5	27
27	Temperature gradient chemical vapor deposition of vertically aligned carbon nanotubes. <i>Carbon</i> , 2013, 54, 343-352.	5.4	25
28	Smart Reinvention of the Contact Lens with Graphene. <i>ACS Nano</i> , 2017, 11, 5223-5226.	7.3	25
29	Sensitive Detection of Competitive Molecular Adsorption by Surface-Enhanced Raman Spectroscopy. <i>Langmuir</i> , 2017, 33, 6999-7006.	1.6	25
30	High Conformity and Large Domain Monocrystalline Anatase on Multiwall Carbon Nanotube Core-Shell Nanostructure: Synthesis, Structure, and Interface. <i>Chemistry of Materials</i> , 2016, 28, 3488-3496.	3.2	23
31	Facile diameter control of vertically aligned, narrow single-walled carbon nanotubes. <i>RSC Advances</i> , 2013, 3, 1434-1441.	1.7	22
32	Morphological Evolution of Fe-Mo Bimetallic Catalysts for Diameter and Density Modulation of Vertically Aligned Carbon Nanotubes. <i>Journal of Physical Chemistry C</i> , 2013, 117, 18657-18665.	1.5	22
33	A Novel Fabrication of 3.6 nm High Graphene Nanochannels for Ultrafast Ion Transport. <i>Advanced Materials</i> , 2017, 29, 1605854.	11.1	21
34	Spacer-Assisted Amine-Coiled Carbon Nanotubes for CO ₂ Capture. <i>Langmuir</i> , 2019, 35, 4453-4459.	1.6	21
35	An effect of gas-phase reactions on the vertically aligned CNT growth by temperature gradient chemical vapor deposition. <i>Carbon</i> , 2018, 130, 607-613.	5.4	20
36	A MEMS-based reformed methanol fuel cell for portable power. <i>Journal of Micromechanics and Microengineering</i> , 2007, 17, S237-S242.	1.5	18

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37	Macroscopic Salt Rejection through Electrostatically Gated Nanoporous Graphene. Nano Letters, 2019, 19, 6400-6409.	4.5	18
38	Assessing the Thicknessâ€“Permeation Paradigm in Nanoporous Membranes. ACS Nano, 2019, 13, 134-142.	7.3	18
39	A Forest of Sub-1.5-nm-wide Single-Walled Carbon Nanotubes over an Engineered Alumina Support. Scientific Reports, 2017, 7, 46725.	1.6	17
40	Water-Assisted Growth of Uniform 100 nm Diameter SWCNT Arrays. ACS Applied Materials & Interfaces, 2014, 6, 21019-21025.	4.0	15
41	How to select the optimal membrane distillation system for industrial applications. Journal of Membrane Science, 2018, 565, 402-410.	4.1	14
42	Atomic-Layer Deposition into 2- versus 3-Dimensionally Ordered Nanoporous Media: Pore Size or Connectivity?. Chemistry of Materials, 2018, 30, 4748-4754.	3.2	14
43	Improved high-rate performance of a supercapacitor electrode from manganese-oxide-coated vertically aligned carbon nanotubes prepared by a pulsed current electrodeposition method. Electrochimica Acta, 2019, 296, 676-682.	2.6	12
44	Mechanism of Ion Exclusion by Sub-2nm Carbon Nanotube Membranes. Materials Research Society Symposia Proceedings, 2008, 1106, 1.	0.1	11
45	Ion beam profiling from the interaction with a freestanding 2D layer. Beilstein Journal of Nanotechnology, 2017, 8, 682-687.	1.5	11
46	Noble-Metal-Free MoS ₂ Platelets with Promising Catalytic Performance in Hydrogen Evolution Reaction for the Post-Lithium-Ion Battery. ACS Applied Energy Materials, 2018, 1, 5993-5998.	2.5	11
47	Enhanced Charge Transport Kinetics in Anisotropic, Stratified Photoanodes. ACS Applied Materials & Interfaces, 2014, 6, 1389-1393.	4.0	10
48	Layer-selective synthesis of bilayer graphene via chemical vapor deposition. 2D Materials, 2017, 4, 035023.	2.0	10
49	Nanofluidic Carbon Nanotube Membranes: Applications for Water Purification and Desalination. , 2009, , 77-93.		9
50	Annealing and polycrystallinity effects on the thermal conductivity of supported CVD graphene monolayers. Nanoscale, 2017, 9, 15515-15524.	2.8	9
51	Gas concentration polarization and transport mechanism transition near thin polymeric membranes. Journal of Membrane Science, 2018, 567, 1-6.	4.1	8
52	Failure mechanism of the polymer infiltration of carbon nanotube forests. Nanotechnology, 2016, 27, 464002.	1.3	7
53	Enhanced Chemical Separation by Freestanding CNTâ€“Polyamide/Imide Nanofilm Synthesized at the Vaporâ€“Liquid Interface. ACS Applied Materials & Interfaces, 2018, 10, 19305-19310.	4.0	5
54	Nanofluidic Carbon Nanotube Membranes. , 2014, , 173-188.		4

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55	Carbon Nanotube Nanofluidics. , 0, , .		3
56	Observation of the Graphene Surface Structure at the Early Stages of Graphene Growth on Copper. ECS Transactions, 2011, 35, 147-159.	0.3	3
57	Carbon Micronymphaea: Graphene on Vertically Aligned Carbon Nanotubes. Journal of Nanomaterials, 2013, 2013, 1-7.	1.5	3
58	A new approach to characterize charge transfer reaction for solid oxide fuel cell. Surface and Coatings Technology, 2019, 364, 377-382.	2.2	3
59	Analytic approach to analyzing the performance of membrane dehumidification by pervaporation. Journal of Mechanical Science and Technology, 2019, 33, 2979-2984.	0.7	3
60	The nucleation, radial growth, and bonding of TiO ₂ deposited via atomic layer deposition on single-walled carbon nanotubes. Applied Surface Science, 2021, 555, 149662.	3.1	3
61	Transport in a Methanol Steam Reformer as the Fuel Processor for Fuel Cell Systems. , 2004, , 433.		2
62	Carbon Nanotube-Based Permeable Membranes. Materials Research Society Symposia Proceedings, 2004, 820, 1.	0.1	2
63	Crystal Driven Neutron Source: A New Paradigm for Miniature Neutron Sources. , 2009, , .		2
64	Characterization of contact resistances in ceramic-coated vertically aligned carbon nanotube arrays. RSC Advances, 2019, 9, 7266-7275.	1.7	2
65	Architecture and mass transport properties of graphene-based membranes. JMST Advances, 2020, 2, 77-88.	0.6	2
66	Effect of anions on the phase transition temperature of two structurally isomeric polymers: poly(<i>N</i> -isopropylacrylamide) and poly(2-isopropyl-2-oxazoline). Polymer Chemistry, 2022, 13, 4615-4624.	1.9	2
67	Transport in a Microfluidic Catalytic Reactor. , 2003, , 47.		1
68	Carbon nanotube-based membranes: a platform for studying nanofluidics. , 0, , .		1
69	Interaction of single-layer CVD graphene with a metasurface of terahertz split-ring resonators. Proceedings of SPIE, 2013, , .	0.8	1
70	(Invited) Growth Kinetics and Uniform Scaling-up of Graphene Synthesis. ECS Transactions, 2013, 53, 17-26.	0.3	1
71	Manufacturing Over Many Scales: High Fidelity Macroscale Coverage of Nanoporous Metal Arrays via Lift-off Free Nanofabrication. Advanced Materials Interfaces, 2014, 1, 1400084.	1.9	1
72	Femtomolar molecular detection with CNT based SERS substrate. Proceedings of SPIE, 2014, , .	0.8	1

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73	Contact transfer length investigation of a 2D nanoparticle network by scanning probe microscopy. Nanotechnology, 2015, 26, 365701.	1.3	1
74	Confined Water in Carbon Nanotubes and Its Applications. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 19-27.	0.1	1
75	Architecture and Transport Properties of Membranes out of Graphene. Membrane Journal, 2016, 26, 239-252.	0.2	1
76	Role of Gas-phase Reactions and Thermal Gradient Control in Carbon Nanotube Synthesis. Materials Research Society Symposia Proceedings, 2012, 1451, 91-96.	0.1	0
77	Wafer-scale graphene synthesis, transfer and FETs. , 2013, , .		0
78	Iron Nanowires: Graphite Coating of Iron Nanowires for Nanorobotic Applications: Synthesis, Characterization and Magnetic Wireless Manipulation (Adv. Funct. Mater. 7/2013). Advanced Functional Materials, 2013, 23, 782-782.	7.8	0
79	Novel Graphene Membranes " Theory and Application. , 2016, , 371-388.		0
80	Molecular Sensing by SERS Using Entangled Nanofibers. , 2019, , 795-823.		0
81	Analysis of Pulsating Flow in Elastic Parallel Plates and an Elastic Pipe Model Using Moving Boundary Algorithm. Transactions of the Korean Society of Mechanical Engineers, B, 2005, 29, 425-434.	0.0	0
82	Nanofluidics in Carbon Nanotubes. , 2014, , 1-6.		0
83	Effects of interfacial polymerization conditions on performance of polyamide reverse osmosis membranes and optimization of polymerization conditions by statistical methodology. , 0, 74, 1-11.		0