Hyung Gyu Park

List of Publications by Citations

76 papers	6,080 citations	23 h-index	77 g-index
87 ext. papers	6,680 ext. citations	9.9 avg, IF	5.62 L-index

#	Paper	IF	Citations
76	Fast mass transport through sub-2-nanometer carbon nanotubes. *Science*, **2006**, 312, 1034-7	33.3	2257
75	Nanofluidics in carbon nanotubes. *Nano Today*, **2007**, 2, 22-29	17.9	963
74	Ultimate permeation across atomically thin porous graphene. *Science*, **2014**, 344, 289-92	33.3	607
73	Ion exclusion by sub-2-nm carbon nanotube pores. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 17250-5	11.5	523
72	Carbon nanofluidics of rapid water transport for energy applications. *Chemical Society Reviews*, **2014**, 43, 565-76	58.5	146
71	Fast water transport in graphene nanofluidic channels. *Nature Nanotechnology*, **2018**, 13, 238-245	28.7	139
70	Low-bias active control of terahertz waves by coupling large-area CVD graphene to a terahertz metamaterial. *Nano Letters*, **2013**, 13, 3193-8	11.5	139
69	Stability, Molecular Sieving, and Ion Diffusion Selectivity of a Lamellar Membrane from Two-Dimensional Molybdenum Disulfide. *Nano Letters*, **2017**, 17, 2342-2348	11.5	103
68	Mechanism and kinetics of growth termination in controlled chemical vapor deposition growth of multiwall carbon nanotube arrays. *Nano Letters*, **2009**, 9, 738-44	11.5	92
67	pH-tunable ion selectivity in carbon nanotube pores. *Langmuir*, **2010**, 26, 14848-53	4	90
66	Evolutionary kinetics of graphene formation on copper. *Nano Letters*, **2013**, 13, 967-74	11.5	87
65	Fabrication of flexible, aligned carbon nanotube/polymer composite membranes by in-situ polymerization. *Journal of Membrane Science*, **2014**, 460, 91-98	9.6	84
64	Recent advances in nanoelectrode architecture for photochemical hydrogen production. *Energy and Environmental Science*, **2010**, 3, 1028	35.4	81
63	Understanding the interaction between energetic ions and freestanding graphene towards practical 2D perforation. *Nanoscale*, **2016**, 8, 8345-54	7.7	52
62	Pseudocapacitive Coating for Effective Capacitive Deionization. *ACS Applied Materials & Interfaces*, **2018**, 10, 2442-2450	9.5	45
61	Transport in packed-bed and wall-coated steam-methanol reformers. *Journal of Power Sources*, **2007**, 166, 194-201	8.9	40
60	Graphite Coating of Iron Nanowires for Nanorobotic Applications: Synthesis, Characterization and Magnetic Wireless Manipulation. *Advanced Functional Materials*, **2013**, 23, 823-831	15.6	38

59	Morphology and crystallinity control of ultrathin TiO2 layers deposited on carbon nanotubes by temperature-step atomic layer deposition. *Nanoscale*, **2015**, 7, 10622-33	7.7	37
58	Multifunctional wafer-scale graphene membranes for fast ultrafiltration and high permeation gas separation. *Science Advances*, **2018**, 4, eaau0476	14.3	36
57	Metal-dielectric-CNT nanowires for femtomolar chemical detection by surface enhanced Raman spectroscopy. *Advanced Materials*, **2013**, 25, 4431-6	24	28
56	Observations of Early Stage Graphene Growth on Copper. *Electrochemical and Solid-State Letters*, **2012**, 15, K1		28
55	Methanol steam reformer on a silicon wafer. *Journal of Microelectromechanical Systems*, **2006**, 15, 976-985	2.5	27
54	Modeling and optimization of atomic layer deposition processes on vertically aligned carbon nanotubes. *Beilstein Journal of Nanotechnology*, **2014**, 5, 234-44	3	24
53	Multilayer Two-Dimensional Water Structure Confined in MoS2. *Journal of Physical Chemistry C*, **2017**, 121, 16021-16028	3.8	23
52	Osmotic Transport across Surface Functionalized Carbon Nanotube Membrane. *Nano Letters*, **2018**, 18, 6679-6685	11.5	23
51	Temperature gradient chemical vapor deposition of vertically aligned carbon nanotubes. *Carbon*, **2013**, 54, 343-352	10.4	22
50	Ion transport in graphene nanofluidic channels. *Nanoscale*, **2016**, 8, 19527-19535	7.7	21
49	Smart Reinvention of the Contact Lens with Graphene. *ACS Nano*, **2017**, 11, 5223-5226	16.7	20
48	Facile diameter control of vertically aligned, narrow single-walled carbon nanotubes. *RSC Advances*, **2013**, 3, 1434-1441	3.7	20
47	High Conformity and Large Domain Monocrystalline Anatase on Multiwall Carbon Nanotube Core–Shell Nanostructure: Synthesis, Structure, and Interface. *Chemistry of Materials*, **2016**, 28, 3488-3496	9.6	19
46	Morphological Evolution of Fe–Mo Bimetallic Catalysts for Diameter and Density Modulation of Vertically Aligned Carbon Nanotubes. *Journal of Physical Chemistry C*, **2013**, 117, 18657-18665	3.8	18
45	A MEMS-based reformed methanol fuel cell for portable power. *Journal of Micromechanics and Microengineering*, **2007**, 17, S237-S242	2	18
44	Sensitive Detection of Competitive Molecular Adsorption by Surface-Enhanced Raman Spectroscopy. *Langmuir*, **2017**, 33, 6999-7006	4	17
43	A Novel Fabrication of 3.6 nm High Graphene Nanochannels for Ultrafast Ion Transport. *Advanced Materials*, **2017**, 29, 1605854	24	15
42	A Forest of Sub-1.5-nm-wide Single-Walled Carbon Nanotubes over an Engineered Alumina Support. *Scientific Reports*, **2017**, 7, 46725	4.9	15

41	An effect of gas-phase reactions on the vertically aligned CNT growth by temperature gradient chemical vapor deposition. *Carbon*, **2018**, 130, 607-613	10.4	14
40	Water-assisted growth of uniform 100 mm diameter SWCNT arrays. *ACS Applied Materials & Interfaces*, **2014**, 6, 21019-25	9.5	12
39	Assessing the Thickness-Permeation Paradigm in Nanoporous Membranes. *ACS Nano*, **2019**, 13, 134-142	16.7	12
38	Spacer-Assisted Amine-Coiled Carbon Nanotubes for CO Capture. *Langmuir*, **2019**, 35, 4453-4459	4	11
37	Atomic-Layer Deposition into 2- versus 3-Dimensionally Ordered Nanoporous Media: Pore Size or Connectivity?. *Chemistry of Materials*, **2018**, 30, 4748-4754	9.6	11
36	Enhanced charge transport kinetics in anisotropic, stratified photoanodes. *ACS Applied Materials & Interfaces*, **2014**, 6, 1389-93	9.5	10
35	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	6.7	10
34	How to select the optimal membrane distillation system for industrial applications. *Journal of Membrane Science*, **2018**, 565, 402-410	9.6	10
33	Macroscopic Salt Rejection through Electrostatically Gated Nanoporous Graphene. *Nano Letters*, **2019**, 19, 6400-6409	11.5	9
32	Layer-selective synthesis of bilayer graphene via chemical vapor deposition. *2D Materials*, **2017**, 4, 035023	7.9	8
31	Annealing and polycrystallinity effects on the thermal conductivity of supported CVD graphene monolayers. *Nanoscale*, **2017**, 9, 15515-15524	7.7	7
30	Failure mechanism of the polymer infiltration of carbon nanotube forests. *Nanotechnology*, **2016**, 27, 464002	3.4	7
29	Ion beam profiling from the interaction with a freestanding 2D layer. *Beilstein Journal of Nanotechnology*, **2017**, 8, 682-687	3	7
28	Mechanism of Ion Exclusion by Sub-2nm Carbon Nanotube Membranes. *Materials Research Society Symposia Proceedings*, **2008**, 1106, 1		7
27	Noble-Metal-Free MoS2 Platelets with Promising Catalytic Performance in Hydrogen Evolution Reaction for the Post-Lithium-Ion Battery. *ACS Applied Energy Materials*, **2018**, 1, 5993-5998	6.1	7
26	Gas concentration polarization and transport mechanism transition near thin polymeric membranes. *Journal of Membrane Science*, **2018**, 567, 1-6	9.6	5
25	Nanofluidic Carbon Nanotube Membranes: Applications for Water Purification and Desalination **2009**, 77-93		4
24	Enhanced Chemical Separation by Freestanding CNT-Polyamide/Imide Nanofilm Synthesized at the Vapor-Liquid Interface. *ACS Applied Materials & Interfaces*, **2018**, 10, 19305-19310	9.5	4

23	Carbon Micronymphaea: Graphene on Vertically Aligned Carbon Nanotubes. *Journal of Nanomaterials*, **2013**, 2013, 1-7	3.2	3
22	Atomic Layer Deposition for Surface and Interface Engineering in Nanostructured Photovoltaic Devices **2017**, 119-148		2
21	Analytic approach to analyzing the performance of membrane dehumidification by pervaporation. *Journal of Mechanical Science and Technology*, **2019**, 33, 2979-2984	1.6	2
20	Nanofluidic Carbon Nanotube Membranes **2014**, 173-188		2
19	A new approach to characterize charge transfer reaction for solid oxide fuel cell. *Surface and Coatings Technology*, **2019**, 364, 377-382	4.4	1
18	Characterization of contact resistances in ceramic-coated vertically aligned carbon nanotube arrays.. *RSC Advances*, **2019**, 9, 7266-7275	3.7	1
17	Contact transfer length investigation of a 2D nanoparticle network by scanning probe microscopy. *Nanotechnology*, **2015**, 26, 365701	3.4	1
16	Manufacturing Over Many Scales: High Fidelity Macroscale Coverage of Nanoporous Metal Arrays via Lift-Off-Free Nanofabrication. *Advanced Materials Interfaces*, **2014**, 1, 1400084	4.6	1
15	Femtomolar molecular detection with CNT based SERS substrate **2014**,		1
14	Carbon Nanotube Nanofluidics **2011**,		1
13	Transport in a Microfluidic Catalytic Reactor **2003**, 47		1
12	Transport in a Methanol Steam Reformer as the Fuel Processor for Fuel Cell Systems **2004**, 433		1
11	Carbon Nanotube-Based Permeable Membranes. *Materials Research Society Symposia Proceedings*, **2004**, 820, 1		1
10	Carbon nanotube-based membranes: a platform for studying nanofluidics		1
9	Confined Water in Carbon Nanotubes and Its Applications. *NATO Science for Peace and Security Series C: Environmental Security*, **2014**, 19-27	0.3	1
8	The nucleation, radial growth, and bonding of TiO2 deposited via atomic layer deposition on single-walled carbon nanotubes. *Applied Surface Science*, **2021**, 555, 149662	6.7	1
7	Molecular Sensing by SERS Using Entangled Nanofibers **2019**, 795-823		
6	Novel Graphene Membranes Theory and Application **2016**, 371-388		

5	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	15.6
4	Observation of the Graphene Surface Structure at the Early Stages of Graphene Growth on Copper. *ECS Transactions*, **2011**, 35, 147-159	1
3	Role of Gas-phase Reactions and Thermal Gradient Control in Carbon Nanotube Synthesis. *Materials Research Society Symposia Proceedings*, **2012**, 1451, 91-96	
2	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	0.5
1	Architecture and mass transport properties of graphene-based membranes. *JMST Advances*, **2020**, 2, 77-88	1.9