

Rohit Karnik

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

90
papers

9,099
citations

44
h-index

95
g-index

96
ext. papers

10,282
ext. citations

11.4
avg, IF

6.13
L-index

#	Paper	IF	Citations
90	Molecular self-assembly Enables Tuning of Nanopores in Atomically Thin Graphene Membranes for Highly Selective Transport.. <i>Advanced Materials</i> , 2022 , e2108940	24	1
89	Nonlinear ion transport mediated by induced charge in ultrathin nanoporous membranes. <i>Physical Review E</i> , 2021 , 104, 044802	2.4	2
88	Engineering and characterization of gymnosperm sapwood toward enabling the design of water filtration devices. <i>Nature Communications</i> , 2021 , 12, 1871	17.4	7
87	Rapid screening of nanopore candidates in nanoporous single-layer graphene for selective separations using molecular visualization and interatomic potentials. <i>Journal of Chemical Physics</i> , 2021 , 154, 184111	3.9	1
86	Molecular size-dependent subcontinuum solvent permeation and ultrafast nanofiltration across nanoporous graphene membranes. <i>Nature Nanotechnology</i> , 2021 , 16, 989-995	28.7	31
85	Iron oxide xerogels for improved water quality monitoring of arsenic(III) in resource-limited environments solid-phase extraction, preservation, storage, transportation, and analysis of trace contaminants (SEPSTAT). <i>Analytical Methods</i> , 2021 , 13, 2165-2174	3.2	
84	A Comprehensive Review on Biofuels from Oil Palm Empty Bunch (EFB): Current Status, Potential, Barriers and Way Forward. <i>Sustainability</i> , 2021 , 13, 10210	3.6	4
83	Highly porous nanofiber-supported monolayer graphene membranes for ultrafast organic solvent nanofiltration. <i>Science Advances</i> , 2021 , 7, eabg6263	14.3	19
82	Monolayer graphene membranes for molecular separation in high-temperature harsh organic solvents. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	5
81	High permeability sub-nanometre sieve composite MoS membranes. <i>Nature Communications</i> , 2020 , 11, 2747	17.4	44
80	Solid-Phase Extraction, Preservation, Storage, Transport, and Analysis of Trace Contaminants for Water Quality Monitoring of Heavy Metals. <i>Environmental Science & Technology</i> , 2020 , 54, 2646-2657	10.3	20
79	Fieldwork-based determination of design priorities for point-of-use drinking water quality sensors for use in resource-limited environments. <i>PLoS ONE</i> , 2020 , 15, e0228140	3.7	2
78	Thermodynamic analysis and material design to enhance chemo-mechanical coupling in hydrogels for energy harvesting from salinity gradients. <i>Journal of Applied Physics</i> , 2020 , 128, 044701	2.5	1
77	Fieldwork-based determination of design priorities for point-of-use drinking water quality sensors for use in resource-limited environments 2020 , 15, e0228140		
76	Fieldwork-based determination of design priorities for point-of-use drinking water quality sensors for use in resource-limited environments 2020 , 15, e0228140		
75	Fieldwork-based determination of design priorities for point-of-use drinking water quality sensors for use in resource-limited environments 2020 , 15, e0228140		
74	Fieldwork-based determination of design priorities for point-of-use drinking water quality sensors for use in resource-limited environments 2020 , 15, e0228140		

73	Drug loading augmentation in polymeric nanoparticles using a coaxial turbulent jet mixer: Yong investigator perspective. <i>Journal of Colloid and Interface Science</i> , 2019 , 538, 45-50	9.3	8
72	A Scalable Route to Nanoporous Large-Area Atomically Thin Graphene Membranes by Roll-to-Roll Chemical Vapor Deposition and Polymer Support Casting. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 10369-10378	9.5	44
71	Antibody-modified conduits for highly selective cytokine elimination from blood. <i>JCI Insight</i> , 2018 , 3,	9.9	1
70	Nanoporous Graphene: Facile Fabrication of Large-Area Atomically Thin Membranes by Direct Synthesis of Graphene with Nanoscale Porosity (Adv. Mater. 49/2018). <i>Advanced Materials</i> , 2018 , 30, 1870376	24	1
69	Facile Fabrication of Large-Area Atomically Thin Membranes by Direct Synthesis of Graphene with Nanoscale Porosity. <i>Advanced Materials</i> , 2018 , 30, e1804977	24	35
68	In-field determination of soil ion content using a handheld device and screen-printed solid-state ion-selective electrodes. <i>PLoS ONE</i> , 2018 , 13, e0203862	3.7	12
67	Single-Layer Graphene Membranes Withstand Ultrahigh Applied Pressure. <i>Nano Letters</i> , 2017 , 17, 3081-3088	10.9	54
66	Harnessing the hygroscopic and biofluorescent behaviors of genetically tractable microbial cells to design biohybrid wearables. <i>Science Advances</i> , 2017 , 3, e1601984	14.3	99
65	Assessment and control of the impermeability of graphene for atomically thin membranes and barriers. <i>Nanoscale</i> , 2017 , 9, 8496-8507	7.7	29
64	Molecular Sieving Across Centimeter-Scale Single-Layer Nanoporous Graphene Membranes. <i>ACS Nano</i> , 2017 , 11, 5726-5736	16.7	82
63	Design of Insulin-Loaded Nanoparticles Enabled by Multistep Control of Nanoprecipitation and Zinc Chelation. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 11440-11450	9.5	25
62	Isolation of Circulating Plasma Cells in Multiple Myeloma Using CD138 Antibody-Based Capture in a Microfluidic Device. <i>Scientific Reports</i> , 2017 , 7, 45681	4.9	26
61	A Micro/Nano Engineering Laboratory Module on Superoleophobic Membranes for Oil-Water Separation. <i>MRS Advances</i> , 2017 , 2, 1699-1706	0.7	
60	Knudsen effusion through polymer-coated three-layer porous graphene membranes. <i>Nanotechnology</i> , 2017 , 28, 184003	3.4	23
59	Selective Nanoscale Mass Transport across Atomically Thin Single Crystalline Graphene Membranes. <i>Advanced Materials</i> , 2017 , 29, 1605896	24	37
58	Mechanistic understanding of in vivo protein corona formation on polymeric nanoparticles and impact on pharmacokinetics. <i>Nature Communications</i> , 2017 , 8, 777	17.4	362
57	Water and Solute Transport Governed by Tunable Pore Size Distributions in Nanoporous Graphene Membranes. <i>ACS Nano</i> , 2017 , 11, 10042-10052	16.7	65
56	Microfluidic multiplexing of solid-state nanopores. <i>Journal of Physics Condensed Matter</i> , 2017 , 29, 484001.8		4

55	Enhanced water transport and salt rejection through hydrophobic zeolite pores. <i>Nanotechnology</i> , 2017 , 28, 505703	3.4	9
54	Nanoporous Atomically Thin Graphene Membranes for Desalting and Dialysis Applications. <i>Advanced Materials</i> , 2017 , 29, 1700277	24	85
53	Fundamental transport mechanisms, fabrication and potential applications of nanoporous atomically thin membranes. <i>Nature Nanotechnology</i> , 2017 , 12, 509-522	28.7	408
52	Polymeric Nanoparticles Amenable to Simultaneous Installation of Exterior Targeting and Interior Therapeutic Proteins. <i>Angewandte Chemie</i> , 2016 , 128, 3370-3373	3.6	5
51	Polymeric Nanoparticles Amenable to Simultaneous Installation of Exterior Targeting and Interior Therapeutic Proteins. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 3309-12	16.4	94
50	Monolayer graphene transfer onto polypropylene and polyvinylidenedifluoride microfiltration membranes for water desalination. <i>Desalination</i> , 2016 , 388, 29-37	10.3	34
49	Effects of annealing on copper substrate surface morphology and graphene growth by chemical vapor deposition. <i>Carbon</i> , 2015 , 94, 369-377	10.4	55
48	Nanofiltration across Defect-Sealed Nanoporous Monolayer Graphene. <i>Nano Letters</i> , 2015 , 15, 3254-60	11.5	229
47	Heterogeneous sub-continuum ionic transport in statistically isolated graphene nanopores. <i>Nature Nanotechnology</i> , 2015 , 10, 1053-7	28.7	158
46	Selective ionic transport through tunable subnanometer pores in single-layer graphene membranes. <i>Nano Letters</i> , 2014 , 14, 1234-41	11.5	569
45	Oscillations in light-triggered logic microfluidic circuit. <i>Microsystem Technologies</i> , 2014 , 20, 437-444	1.7	1
44	A cell rolling cytometer reveals the correlation between mesenchymal stem cell dynamic adhesion and differentiation state. <i>Lab on A Chip</i> , 2014 , 14, 161-6	7.2	25
43	Ultra-high throughput synthesis of nanoparticles with homogeneous size distribution using a coaxial turbulent jet mixer. <i>ACS Nano</i> , 2014 , 8, 6056-65	16.7	163
42	Nanofluidic transport governed by the liquid/vapour interface. <i>Nature Nanotechnology</i> , 2014 , 9, 317-23	28.7	127
41	Mechanisms of molecular permeation through nanoporous graphene membranes. <i>Langmuir</i> , 2014 , 30, 675-82	4	197
40	Parallel microfluidic synthesis of size-tunable polymeric nanoparticles using 3D flow focusing towards in vivo study. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2014 , 10, 401-9	6	117
39	Role of electrostatic interactions in protein loading in PLGA-PEG nanoparticles 2014 ,		3
38	Time limitations and geometrical parameters in the design of microfluidic comparators. <i>Microfluidics and Nanofluidics</i> , 2014 , 17, 359-373	2.8	4

37	Implications of permeation through intrinsic defects in graphene on the design of defect-tolerant membranes for gas separation. <i>ACS Nano</i> , 2014 , 8, 841-9	16.7	155
36	Water filtration using plant xylem. <i>PLoS ONE</i> , 2014 , 9, e89934	3.7	52
35	Transepithelial transport of Fc-targeted nanoparticles by the neonatal fc receptor for oral delivery. <i>Science Translational Medicine</i> , 2013 , 5, 213ra167	17.5	286
34	Microfluidic platform for combinatorial synthesis and optimization of targeted nanoparticles for cancer therapy. <i>ACS Nano</i> , 2013 , 7, 10671-80	16.7	171
33	Integration of solid-state nanopores in microfluidic networks via transfer printing of suspended membranes. <i>Analytical Chemistry</i> , 2013 , 85, 3871-8	7.8	38
32	Spontaneous formation of heterogeneous patches on polymer-lipid core-shell particle surfaces during self-assembly. <i>Small</i> , 2013 , 9, 511-7	11	15
31	Self-sorting of deformable particles in an asynchronous logic microfluidic circuit. <i>Small</i> , 2013 , 9, 375-81	11	13
30	Bioinspired multivalent DNA network for capture and release of cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 19626-31	11.5	228
29	Cell sorting by deterministic cell rolling. <i>Lab on A Chip</i> , 2012 , 12, 1427-30	7.2	63
28	Selective molecular transport through intrinsic defects in a single layer of CVD graphene. <i>ACS Nano</i> , 2012 , 6, 10130-8	16.7	285
27	Enhanced discrimination of DNA molecules in nanofluidic channels through multiple measurements. <i>Lab on A Chip</i> , 2012 , 12, 1094-101	7.2	20
26	Evaporation-induced cavitation in nanofluidic channels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 3688-93	11.5	92
25	Microstructured barbs on the North American porcupine quill enable easy tissue penetration and difficult removal. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 21289-94	11.5	78
24	Cell-surface sensors for real-time probing of cellular environments. <i>Nature Nanotechnology</i> , 2011 , 6, 524-31	28.7	167
23	Engineered cell homing. <i>Blood</i> , 2011 , 118, e184-91	2.2	158
22	Synthesis of size-tunable polymeric nanoparticles enabled by 3D hydrodynamic flow focusing in single-layer microchannels. <i>Advanced Materials</i> , 2011 , 23, H79-83	24	169
21	MICROFLUIDICS: Synthesis of Size-Tunable Polymeric Nanoparticles Enabled by 3D Hydrodynamic Flow Focusing in Single-Layer Microchannels (Adv. Mater. 12/2011). <i>Advanced Materials</i> , 2011 , 23, H78-H78	24	5
20	Examining the lateral displacement of HL60 cells rolling on asymmetric P-selectin patterns. <i>Langmuir</i> , 2011 , 27, 240-9	4	18

19	Effects of ligands with different water solubilities on self-assembly and properties of targeted nanoparticles. <i>Biomaterials</i> , 2011 , 32, 6226-33	15.6	151
18	Mimicking the inflammatory cell adhesion cascade by nucleic acid aptamer programmed cell-cell interactions. <i>FASEB Journal</i> , 2011 , 25, 3045-56	0.9	38
17	Engineering of self-assembled nanoparticle platform for precisely controlled combination drug therapy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 17939-44	11.5	492
16	A semianalytical model to study the effect of cortical tension on cell rolling. <i>Biophysical Journal</i> , 2010 , 99, 3870-9	2.9	20
15	Single-step assembly of homogenous lipid-polymeric and lipid-quantum dot nanoparticles enabled by microfluidic rapid mixing. <i>ACS Nano</i> , 2010 , 4, 1671-9	16.7	248
14	Desalination of water by vapor-phase transport through hydrophobic nanopores. <i>Journal of Applied Physics</i> , 2010 , 108, 044315	2.5	32
13	Engineered mesenchymal stem cells with self-assembled vesicles for systemic cell targeting. <i>Biomaterials</i> , 2010 , 31, 5266-74	15.6	103
12	Investigating the translocation of lambda-DNA molecules through PDMS nanopores. <i>Analytical and Bioanalytical Chemistry</i> , 2009 , 394, 437-46	4.4	13
11	Microfluidic platform for controlled synthesis of polymeric nanoparticles. <i>Nano Letters</i> , 2008 , 8, 2906-12	11.5	616
10	Chemical engineering of mesenchymal stem cells to induce a cell rolling response. <i>Bioconjugate Chemistry</i> , 2008 , 19, 2105-9	6.3	90
9	Nanomechanical control of cell rolling in two dimensions through surface patterning of receptors. <i>Nano Letters</i> , 2008 , 8, 1153-8	11.5	47
8	Rectification of ionic current in a nanofluidic diode. <i>Nano Letters</i> , 2007 , 7, 547-51	11.5	419
7	A mechanical-electrokinetic battery using a nano-porous membrane. <i>Journal of Micromechanics and Microengineering</i> , 2006 , 16, 667-675	2	44
6	Field-effect control of protein transport in a nanofluidic transistor circuit. <i>Applied Physics Letters</i> , 2006 , 88, 123114	3.4	147
5	Diffusion-limited patterning of molecules in nanofluidic channels. <i>Nano Letters</i> , 2006 , 6, 1735-40	11.5	67
4	Mixing crowded biological solutions in milliseconds. <i>Analytical Chemistry</i> , 2005 , 77, 7618-25	7.8	99
3	Effects of biological reactions and modifications on conductance of nanofluidic channels. <i>Nano Letters</i> , 2005 , 5, 1638-42	11.5	158
2	Electrostatic control of ions and molecules in nanofluidic transistors. <i>Nano Letters</i> , 2005 , 5, 943-8	11.5	508

1 DNA translocation in inorganic nanotubes. *Nano Letters*, **2005**, 5, 1633-7

11.5 277