Xiang-Yu Kong

List of Publications by Year
in descending order

101 papers	5,705 citations	57631 44 h-index	85405 71 g-index
107 all docs	107 docs citations	107 times ranked	3253 citing authors

#	Article	IF	Citations
1	Ultrathin and Ion-Selective Janus Membranes for High-Performance Osmotic Energy Conversion. Journal of the American Chemical Society, 2017, 139, 8905-8914.	6.6	304
2	Engineered Asymmetric Heterogeneous Membrane: A Concentration-Gradient-Driven Energy Harvesting Device. Journal of the American Chemical Society, 2015, 137, 14765-14772.	6.6	299
3	High-performance silk-based hybrid membranes employed for osmotic energy conversion. Nature Communications, 2019, 10, 3876.	5.8	252
4	Highly Conductive, Airâ€Stable Silver Nanowire@Iongel Composite Films toward Flexible Transparent Electrodes. Advanced Materials, 2016, 28, 7167-7172.	11.1	203
5	Engineered Ionic Gates for Ion Conduction Based on Sodium and Potassium Activated Nanochannels. Journal of the American Chemical Society, 2015, 137, 11976-11983.	6.6	184
6	A Bioinspired Multifunctional Heterogeneous Membrane with Ultrahigh Ionic Rectification and Highly Efficient Selective Ionic Gating. Advanced Materials, 2016, 28, 144-150.	11.1	179
7	Underwater superaerophobic Ni nanoparticle-decorated nickelâ€“molybdenum nitride nanowire arrays for hydrogen evolution in neutral media. Nano Energy, 2020, 78, 105375.	8.2	148
8	Metallic Two-Dimensional MoS₂ Composites as High-Performance Osmotic Energy Conversion Membranes. Journal of the American Chemical Society, 2021, 143, 1932-1940.	6.6	133
9	Biomimetic Nacre-Like Silk-Crosslinked Membranes for Osmotic Energy Harvesting. ACS Nano, 2020, 14, 9701-9710.	7.3	124
10	Enhanced ion transport by graphene oxide/cellulose nanofibers assembled membranes for high-performance osmotic energy harvesting. Materials Horizons, 2020, 7, 2702-2709.	6.4	118
11	Bioinspired hierarchical porous membrane for efficient uranium extraction from seawater. Nature Sustainability, 2022, 5, 71-80.	11.5	112
12	Enhanced Stability and Controllability of an Ionic Diode Based on Funnelâ€Shaped Nanochannels with an Extended Critical Region. Advanced Materials, 2016, 28, 3345-3350.	11.1	109
13	Lightâ€Controlled Ion Transport through Biomimetic DNAâ€Based Channels. Angewandte Chemie - International Edition, 2016, 55, 15637-15641.	7.2	104
14	An Efficient Uranium Adsorption Magnetic Platform Based on Amidoxime-Functionalized Flower-like Fe₃O₄@TiO₂ Coreâ€“Shell Microspheres. ACS Applied Materials & Interfaces, 2021, 13, 17931-17939.	4.0	104
15	Light- and Electric-Field-Controlled Wetting Behavior in Nanochannels for Regulating Nanoconfined Mass Transport. Journal of the American Chemical Society, 2018, 140, 4552-4559.	6.6	99
16	Ultrathin and Robust Silk Fibroin Membrane for High-Performance Osmotic Energy Conversion. ACS Energy Letters, 2020, 5, 742-748.	8.8	98
17	Anion Concentration Gradient-Assisted Construction of a Solidâ€“Electrolyte Interphase for a Stable Zinc Metal Anode at High Rates. Journal of the American Chemical Society, 2022, 144, 11168-11177.	6.6	94
18	Bioinspired Heterogeneous Ion Pump Membranes: Unidirectional Selective Pumping and Controllable Gating Properties Stemming from Asymmetric Ionic Group Distribution. Journal of the American Chemical Society, 2018, 140, 1083-1090.	6.6	87

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19	A Bioinspired Switchable and Tunable Carbonateâ€Activated Nanofluidic Diode Based on a Single Nanochannel. Angewandte Chemie - International Edition, 2015, 54, 13664-13668.	7.2	85
20	Asymmetric Multifunctional Heterogeneous Membranes for pHâ€•and Temperatureâ€Cooperative Smart Ion Transport Modulation. Advanced Materials, 2016, 28, 9613-9619.	11.1	83
21	Bioinspired Ionic Diodes: From Unipolar to Bipolar. Advanced Functional Materials, 2018, 28, 1801079.	7.8	82
22	A Biomimetic Voltageâ€Gated Chloride Nanochannel. Advanced Materials, 2016, 28, 3181-3186.	11.1	77
23	Light-Driven ATP Transmembrane Transport Controlled by DNA Nanomachines. Journal of the American Chemical Society, 2018, 140, 16048-16052.	6.6	76
24	Neutralization Reaction Assisted Chemical-Potential-Driven Ion Transport through Layered Titanium Carbides Membrane for Energy Harvesting. Nano Letters, 2020, 20, 3593-3601.	4.5	76
25	A Tunable Ionic Diode Based on a Biomimetic Structureâ€Tailorable Nanochannel. Angewandte Chemie - International Edition, 2017, 56, 8168-8172.	7.2	72
26	â€œUphillâ€•cation transport: A bioinspired photo-driven ion pump. Science Advances, 2016, 2, e1600689.	4.7	71
27	Engineered PES/SPES nanochannel membrane for salinity gradient power generation. Nano Energy, 2019, 59, 354-362.	8.2	71
28	Improved Ion Transport and High Energy Conversion through Hydrogel Membrane with 3D Interconnected Nanopores. Nano Letters, 2020, 20, 5705-5713.	4.5	71
29	Structures and magnetic properties of CrSinâ˜ (n = 3â€“12) clusters: Photoelectron spectroscopy and density functional calculations. Journal of Chemical Physics, 2012, 137, 064307.	1.2	70
30	Nacre-like Mechanically Robust Heterojunction for Lithium-Ion Extraction. Matter, 2021, 4, 737-754.	5.0	69
31	High-Sensitivity Detection of Iron(III) by Dopamine-Modified Funnel-Shaped Nanochannels. ACS Applied Materials & Interfaces, 2018, 10, 22632-22639.	4.0	67
32	Robust sulfonated poly (ether ether ketone) nanochannels for high-performance osmotic energy conversion. National Science Review, 2020, 7, 1349-1359.	4.6	65
33	Photoelectron Spectroscopy and Density Functional Calculations of VGe_{<i>n</i>}^{â€“} (<i>n</i> = 3â€“12) Clusters. Journal of Physical Chemistry C, 2015, 119, 11048-11055.	1.5	63
34	Electrostatic-Charge- and Electric-Field-Induced Smart Gating for Water Transportation. ACS Nano, 2016, 10, 9703-9709.	7.3	63
35	Heterogeneous MXene/PSâ€bâ€P2VP Nanofluidic Membranes with Controllable Ion Transport for Osmotic Energy Conversion. Advanced Functional Materials, 2021, 31, 2105013.	7.8	62
36	An Artificial CO₂â€Driven Ionic Gate Inspired by Olfactory Sensory Neurons in Mosquitoes. Advanced Materials, 2017, 29, 1603884.	11.1	61

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37	Structural and Magnetic Properties of CoGe_{<i>n</i>}^{âˆ’} (<i>n</i>=2â€“11) Clusters: Photoelectron Spectroscopy and Density Functional Calculations. ChemPhysChem, 2014, 15, 3987-3993.	1.0	57
38	Engineered Smart Gating Nanochannels for High Performance in Formaldehyde Detection and Removal. Advanced Functional Materials, 2019, 29, 1807953.	7.8	53
39	Synergy of light and acidâ€“base reaction in energy conversion based on cellulose nanofiber intercalated titanium carbide composite nanofluidics. Energy and Environmental Science, 2021, 14, 4400-4409.	15.6	53
40	Construction and application of photoresponsive smart nanochannels. Journal of Photochemistry and Photobiology C: Photochemistry Reviews, 2016, 26, 31-47.	5.6	52
41	DNAzyme tunable lead(<scp>ii</scp>) gating based on ion-track etched conical nanochannels. Chemical Communications, 2015, 51, 5979-5981.	2.2	50
42	Improved Ion Transport in Hydrogel-Based Nanofluidics for Osmotic Energy Conversion. ACS Central Science, 2020, 6, 2097-2104.	5.3	49
43	Light-Induced Heat Driving Active Ion Transport Based on 2D MXene Nanofluids for Enhancing Osmotic Energy Conversion. CCS Chemistry, 2021, 3, 1325-1335.	4.6	48
44	Biomimetic Nanocomposite Membranes with Ultrahigh Ion Selectivity for Osmotic Power Conversion. ACS Central Science, 2021, 7, 1486-1492.	5.3	48
45	Smallest fullerene-like silicon cage stabilized by a V2 unit. Journal of Chemical Physics, 2014, 140, 024308.	1.2	47
46	Skinâ€Inspired Lowâ€Grade Heat Energy Harvesting Using Directed Ionic Flow through Conical Nanochannels. Advanced Energy Materials, 2018, 8, 1800459.	10.2	47
47	Tailoring A Poly(ether sulfone) Bipolar Membrane: Osmoticâ€Energy Generator with High Power Density. Angewandte Chemie - International Edition, 2020, 59, 17423-17428.	7.2	47
48	Metal organic framework enhanced SPEEK/SPSF heterogeneous membrane for ion transport and energy conversion. Nano Energy, 2021, 81, 105657.	8.2	47
49	Biomimetic KcsA channels with ultra-selective K+ transport for monovalent ion sieving. Nature Communications, 2022, 13, 1701.	5.8	46
50	Charged porous asymmetric membrane for enhancing salinity gradient energy conversion. Nano Energy, 2021, 79, 105509.	8.2	42
51	Biomimetic Peptideâ€Gated Nanoporous Membrane for Onâ€Demand Molecule Transport. Angewandte Chemie - International Edition, 2018, 57, 151-155.	7.2	41
52	Bacteriorhodopsinâ€Inspired Lightâ€Driven Artificial Molecule Motors for Transmembrane Mass Transportation. Angewandte Chemie - International Edition, 2018, 57, 16708-16712.	7.2	40
53	Vibrationally Resolved Photoelectron Spectroscopy of the Model GFP Chromophore Anion Revealing the Photoexcited S₁ State Being Both Vertically and Adiabatically Bound against the Photodetached D₀ Continuum. Journal of Physical Chemistry Letters, 2014, 5, 2155-2159.	2.1	34
54	Structural and magnetic properties of FeGenâˆ’/0 (n = 3-12) clusters: Mass-selected anion photoelectron spectroscopy and density functional theory calculations. Journal of Chemical Physics, 2017, 147, 234310.	1.2	32

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55	Engineered Asymmetric Composite Membranes with Rectifying Properties. Advanced Materials, 2016, 28, 757-763.	11.1	31
56	Surface Charge Regulated Asymmetric Ion Transport in Nanoconfined Space. Small, 2021, 17, e2101099.	5.2	31
57	Engineered Cellulose Nanofiber Membranes with Ultrathin Low-Dimensional Carbon Material Layers for Photothermal-Enhanced Osmotic Energy Conversion. ACS Applied Materials & Interfaces, 2022, 14, 13223-13230.	4.0	31
58	A universal tunable nanofluidic diode via photoresponsive hostâ€“guest interactions. NPG Asia Materials, 2018, 10, 849-857.	3.8	30
59	Ion transport regulation through triblock copolymer/PET asymmetric nanochannel membrane: Model system establishment and rectification mapping. Chinese Chemical Letters, 2021, 32, 822-825.	4.8	29
60	Structural and bonding properties of small TiGe_n^{âˆ’} (n = 2â€“6) clusters: photoelectron spectroscopy and density functional calculations. RSC Advances, 2014, 4, 25963-25968.	1.7	27
61	Photoelectron spectroscopy and density functional calculations of AgSinâˆ’ (n = 3â€“12) clusters. Journal of Chemical Physics, 2013, 138, 244312.	1.2	26
62	Adenosineâ€Activated Nanochannels Inspired by Gâ€Proteinâ€Coupled Receptors. Small, 2016, 12, 1854-1858.	5.2	26
63	A bio-inspired dumbbell-shaped nanochannel with a controllable structure and ionic rectification. Nanoscale, 2018, 10, 6850-6854.	2.8	25
64	Ionic Crosslinkingâ€Induced Nanochannels: Nanophase Separation for Ion Transport Promotion. Advanced Materials, 2022, 34, e2108410.	11.1	25
65	Fabrication of Nanochannels. Materials, 2015, 8, 6277-6308.	1.3	24
66	Specific Recognition of Uranyl Ion Employing a Functionalized Nanochannel Platform for Dealing with Radioactive Contamination. ACS Applied Materials & Interfaces, 2020, 12, 3854-3861.	4.0	24
67	A joint experimental and theoretical study on structural, electronic, and magnetic properties of MnGenâˆ’ (n = 3â€“14) clusters. Journal of Chemical Physics, 2021, 154, 204302.	1.2	24
68	Microscopic solvation of NaBO2 in water: anion photoelectron spectroscopy and ab initio calculations. Physical Chemistry Chemical Physics, 2011, 13, 15865.	1.3	23
69	Anion Photoelectron Spectroscopy and Density Functional Study of Small Aluminumâˆ’Vanadium Oxide Clusters. Journal of Physical Chemistry A, 2011, 115, 13-18.	1.1	22
70	Photoelectron spectroscopy of lithium and gold alloyed boron oxide clusters: charge transfer complexes, covalent gold, hyperhalogen, and dual three-center four-electron hyperbonds. Physical Chemistry Chemical Physics, 2014, 16, 5129.	1.3	22
71	Bioinspired nervous signal transmission system based on two-dimensional laminar nanofluidics: From electronics to ionics. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 16743-16748.	3.3	22
72	Polymer-based membranes for promoting osmotic energy conversion. Giant, 2022, 10, 100094.	2.5	21

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73	Lightâ€Controlled Ion Transport through Biomimetic DNAâ€Based Channels. Angewandte Chemie, 2016, 128, 15866-15870.	1.6	20
74	Structural evolution and magnetic properties of anionic clusters Cr₂Ge_{<i>n</i>} (<i>n</i>â€‰â€‰=â€‰â€‰3â€“14): photoelectron spectroscopy and density functional theory computation. Journal of Physics Condensed Matter, 2018, 30, 335501.	0.7	20
75	Tunable molecular transport and sieving enabled by covalent organic framework with programmable surface charge. Materials Today, 2021, 51, 56-64.	8.3	19
76	Interaction of TiO+ with water: infrared photodissociation spectroscopy and density functional calculations. Physical Chemistry Chemical Physics, 2013, 15, 17126.	1.3	18
77	Photoelectron Spectroscopy and Density Functional Calculations of TiGe<i>n</i>â^' (<i>n</i>=7â€“12) Clusters. Chinese Journal of Chemical Physics, 2016, 29, 123-128.	0.6	18
78	Bioinspired poly (ionic liquid) membrane for efficient salinity gradient energy harvesting: Electrostatic crosslinking induced hierarchical nanoporous network. Nano Energy, 2022, 97, 107170.	8.2	18
79	Engineered Artificial Nanochannels for Nitrite Ion Harmless Conversion. ACS Applied Materials & Interfaces, 2018, 10, 30852-30859.	4.0	17
80	Bioinspired hydrogel-based nanofluidic ionic diodes: nano-confined network tuning and ion transport regulation. Chemical Communications, 2020, 56, 8123-8126.	2.2	16
81	Towards Practical Osmotic Energy Capture by a Layer-by-Layer Membrane. Trends in Chemistry, 2020, 2, 180-182.	4.4	16
82	A universal functionalization strategy for biomimetic nanochannel via external electric field assisted non-covalent interaction. Nano Research, 2021, 14, 1421-1428.	5.8	16
83	Thermoenhanced osmotic power generator via lithium bromide and asymmetric sulfonated poly(ether) Tj ETQq1 1 0.784314 rgBT /Over	3.8	16
84	Anomalous Property of Ag(BO₂)₂ Hyperhalogen: Does Spinâ€“Orbit Coupling Matter?. ChemPhysChem, 2013, 14, 3303-3308.	1.0	15
85	Sequential Recognition of Zinc and Pyrophosphate Ions in a Terpyridineâ€Functionalized Single Nanochannel. ChemPhysChem, 2017, 18, 253-259.	1.0	15
86	The synergistic effect of space and surface charge on nanoconfined ion transport and nanofluidic energy harvesting. Nano Energy, 2022, 92, 106709.	8.2	14
87	Identification of hyperhalogens in Ag_n(BO₂)_m (n = 1â€“3, m = 1â€“2) clusters: anion photoelectron spectroscopy and density functional calculations. Physical Chemistry Chemical Physics, 2014, 16, 26067-26074.	1.3	12
88	Biomimetic Peptideâ€Gated Nanoporous Membrane for Onâ€Demand Molecule Transport. Angewandte Chemie, 2018, 130, 157-161.	1.6	12
89	Electrochemical ion-pumping-assisted transfer system featuring a heterogeneous membrane for lithium recovery. Chemical Engineering Journal, 2022, 435, 134955.	6.6	12
90	Covalent organic frameworks embedded in polystyrene membranes for ion sieving. Chemical Communications, 2022, 58, 5403-5406.	2.2	12

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91	Tailoring A Poly(ether sulfone) Bipolar Membrane: Osmoticâ€Energy Generator with High Power Density. Angewandte Chemie, 2020, 132, 17576-17581.	1.6	11
92	Tailoring Sulfonated Poly(phenyl-alkane)s of Intrinsic Microporosity Membrane for Advanced Osmotic Energy Conversion. , 2022, 4, 1422-1429.		11
93	Probing the early stages of salt nucleationâ€"Experimental and theoretical investigations of sodium/potassium thiocyanate cluster anions. Journal of Chemical Physics, 2015, 142, 024313.	1.2	10
94	A Tunable Ionic Diode Based on a Biomimetic Structureâ€Tailorable Nanochannel. Angewandte Chemie, 2017, 129, 8280-8284.	1.6	7
95	Wetting-Induced Water Promoted Flow on Tunable Liquidâ€"Liquid Interface-Based Nanopore Membrane System. ACS Nano, 2022, 16, 11092-11101.	7.3	7
96	Bacteriorhodopsinâ€Inspired Lightâ€Driven Artificial Molecule Motors for Transmembrane Mass Transportation. Angewandte Chemie, 2018, 130, 16950-16954.	1.6	6
97	pH-regulated thermo-driven nanofluidics for nanoconfined mass transport and energy conversion. Nanoscale Advances, 2020, 2, 4070-4076.	2.2	6
98	Examining the Amine Functionalization in Dicarboxylates: Photoelectron Spectroscopy and Theoretical Studies of Aspartate and Glutamate. Journal of Physical Chemistry A, 2014, 118, 5256-5262.	1.1	5
99	Investigation of (m=2â€"5,n=2â€"3) clusters using photoelectron spectroscopy and density functional calculations. Chemical Physics Letters, 2013, 564, 6-10.	1.2	2
100	Cement-and-pebble nanofluidic membranes with stable acid resistance as osmotic energy generators. Science China Materials, 2022, 65, 2729-2736.	3.5	2
101	A photoelectron spectroscopy and quantum chemical study on ternary Alâ€"Bâ€"O clusters: Al_nBO₂^{âˆ’} and Al_nBO₂ (<i>n</i> = 2, 3). Physical Chemistry Chemical Physics, 2018, 20, 5200-5209.	1.3	1