Li-Hsien Yeh

List of Publications by Year in Descending Order

90 papers	2,465 citations	31 h-index	45 g-index
90 ext. papers	2,843 ext. citations	6.6 avg, IF	5.58 L-index

#	Paper	IF	Citations
90	Space charge enhanced ion transport in heterogeneous polyelectrolyte/alumina nanochannel membranes for high-performance osmotic energy conversion. *Journal of Materials Chemistry A*, **2022**, 10, 2867-2875	13	3
89	Highly selective and high-performance osmotic power generators in subnanochannel membranes enabled by metal-organic frameworks. *Science Advances*, **2021**, 7,	14.3	54
88	Unraveling the anomalous channel-length-dependent blue energy conversion using engineered alumina nanochannels. *Nano Energy*, **2021**, 84, 105930	17.1	16
87	Ingestible polysaccharide battery coupled with a self-charging nanogenerator for controllable disinfection system. *Nano Energy*, **2021**, 79, 105440	17.1	13
86	Realization of robust mesoscale ionic diodes for ultrahigh osmotic energy generation at mild neutral pH. *Journal of Materials Chemistry A*, **2021**, 9, 20502-20509	13	2
85	Single Mesopores with High Surface Charges as Ultrahigh Performance Osmotic Power Generators. *Small*, **2020**, 16, e2006013	11	11
84	Improved Rectification and Osmotic Power in Polyelectrolyte-Filled Mesopores. *Micromachines*, **2020**, 11,	3.3	6
83	Novel patterned sapphire substrates for enhancing the efficiency of GaN-based light-emitting diodes.. *RSC Advances*, **2020**, 10, 16284-16290	3.7	8
82	Thermal Dependence of the Mesoscale Ionic Diode: Modeling and Experimental Verification. *ACS Applied Materials & Interfaces*, **2020**, 12, 17139-17146	9.5	9
81	Electrodiffusioosmosis-Induced Negative Differential Resistance in pH-Regulated Mesopores Containing Purely Monovalent Solutions. *ACS Applied Materials & Interfaces*, **2020**, 12, 3198-3204	9.5	14
80	Rectification of Concentration Polarization in Mesopores Leads To High Conductance Ionic Diodes and High Performance Osmotic Power. *Journal of the American Chemical Society*, **2019**, 141, 3691-3698	16.4	112
79	3D Network VO Electrodes in a Gel Electrolyte for High-Voltage Wearable Symmetric Pseudocapacitors. *ACS Applied Materials & Interfaces*, **2019**, 11, 29838-29848	9.5	15
78	Unraveling the Anomalous Surface-Charge-Dependent Osmotic Power Using a Single Funnel-Shaped Nanochannel. *ACS Nano*, **2019**, 13, 13374-13381	16.7	43
77	A nanofluidic osmotic power generator demonstrated in polymer gel electrolytes with substantially enhanced performance. *Journal of Materials Chemistry A*, **2019**, 7, 26791-26796	13	25
76	Voltage-Induced Modulation of Ionic Concentrations and Ion Current Rectification in Mesopores with Highly Charged Pore Walls. *Journal of Physical Chemistry Letters*, **2018**, 9, 393-398	6.4	62
75	Rectification of ionic current in nanopores functionalized with bipolar polyelectrolyte brushes. *Sensors and Actuators B: Chemical*, **2018**, 258, 1223-1229	8.5	35
74	4.2 V wearable asymmetric supercapacitor devices based on a VOx//MnOx paper electrode and an eco-friendly deep eutectic solvent-based gel electrolyte. *Journal of Materials Chemistry A*, **2018**, 6, 20686-20694	13	37

73	Buffer anions can enormously enhance the electrokinetic energy conversion in nanofluidics with highly overlapped double layers. *Nano Energy*, **2017**, 32, 374-381	17.1	49
72	Analytical model for surface-charge-governed nanochannel conductance. *Sensors and Actuators B: Chemical*, **2017**, 247, 697-705	8.5	10
71	Anomalous pH-Dependent Nanofluidic Salinity Gradient Power. *Small*, **2017**, 13, 1702691	11	36
70	Nanofluidic Power: Anomalous pH-Dependent Nanofluidic Salinity Gradient Power (Small 48/2017). *Small*, **2017**, 13, 1770253	11	2
69	Highly Charged Particles Cause a Larger Current Blockage in Micropores Compared to Neutral Particles. *ACS Nano*, **2016**, 10, 8413-22	16.7	42
68	Salt gradient driven ion transport in solid-state nanopores: the crucial role of reservoir geometry and size. *Physical Chemistry Chemical Physics*, **2016**, 18, 30160-30165	3.6	44
67	Electrophoretic Behavior of pH-Regulated Soft Biocolloids **2016**, 946-960		2
66	Gate modulation of proton transport in a nanopore. *Physical Chemistry Chemical Physics*, **2016**, 18, 7449-58	3.6	23
65	Gated ion transport in a soft nanochannel with biomimetic polyelectrolyte brush layers. *Sensors and Actuators B: Chemical*, **2016**, 229, 305-314	8.5	29
64	Electrophoresis of pH-regulated nanoparticles: impact of the Stern layer. *Physical Chemistry Chemical Physics*, **2016**, 18, 9927-34	3.6	16
63	Deformability-Based Electrokinetic Particle Separation. *Micromachines*, **2016**, 7,	3.3	13
62	Utilization of Calophyllum inophyllum shell and kernel oil cake for reducing sugar production. *Bioresource Technology*, **2016**, 212, 338-341	11	9
61	Gate manipulation of ionic conductance in a nanochannel with overlapped electric double layers. *Sensors and Actuators B: Chemical*, **2015**, 215, 266-271	8.5	25
60	pH-Regulated nanopore conductance with overlapped electric double layers. *Electrochemistry Communications*, **2015**, 55, 60-63	5.1	18
59	pH-regulated ionic conductance in a nanochannel with overlapped electric double layers. *Analytical Chemistry*, **2015**, 87, 4508-14	7.8	80
58	Ion transport and selectivity in biomimetic nanopores with pH-tunable zwitterionic polyelectrolyte brushes. *Nanoscale*, **2015**, 7, 17020-9	7.7	57
57	Characterization and in vitro biocompatibility of catanionic assemblies formed with oppositely charged dicetyl amphiphiles. *Colloids and Surfaces B: Biointerfaces*, **2015**, 126, 10-7	6	11
56	Regulating Current Rectification and Nanoparticle Transport Through a Salt Gradient in Bipolar Nanopores. *Small*, **2015**, 11, 4594-602	11	51

55	Buffer effect on the ionic conductance in a pH-regulated nanochannel. *Electrochemistry Communications*, **2015**, 51, 129-132	5.1	16
54	Proton enhancement in an extended nanochannel. *Langmuir*, **2014**, 30, 13116-20	4	12
53	Effects of lipid composition on physicochemical characteristics and cytotoxicity of vesicles composed of cationic and anionic dialkyl lipids. *Physical Chemistry Chemical Physics*, **2014**, 16, 1545-53	3.6	10
52	Programmable ionic conductance in a pH-regulated gated nanochannel. *Physical Chemistry Chemical Physics*, **2014**, 16, 20138-46	3.6	38
51	Tuning ion transport and selectivity by a salt gradient in a charged nanopore. *Analytical Chemistry*, **2014**, 86, 2681-6	7.8	67
50	Tunable Donnan Potential and Electrokinetic Flow in a Biomimetic Gated Nanochannel with pH-Regulated Polyelectrolyte Brushes. *Journal of Physical Chemistry C*, **2014**, 118, 19806-19813	3.8	32
49	pH-regulated ionic conductance in a nanopore. *Electrochemistry Communications*, **2014**, 43, 91-94	5.1	27
48	Tunable Streaming Current in a pH-Regulated Nanochannel by a Field Effect Transistor. *Journal of Physical Chemistry C*, **2014**, 118, 6090-6099	3.8	34
47	Simple synthesis, self-assembly, and cytotoxicity of novel dimeric cholesterol derivatives. *Colloids and Surfaces B: Biointerfaces*, **2014**, 116, 153-9	6	6
46	Analytical model for surface charge property of pH-regulated nanorods. *Electrochemistry Communications*, **2014**, 45, 75-78	5.1	7
45	Electroviscous effect on the streaming current in a pH-regulated nanochannel. *Electrochemistry Communications*, **2014**, 48, 77-80	5.1	22
44	Field Effect Modulation of Surface Charge Property and Electroosmotic Flow in a Nanochannel: Stern Layer Effect. *Journal of Physical Chemistry C*, **2013**, 117, 9322-9331	3.8	54
43	Field effect regulation of Donnan potential and electrokinetic flow in a functionalized soft nanochannel. *Soft Matter*, **2013**, 9, 9767	3.6	32
42	Effects of 1-hexadecyl-3-methylimidazolium ionic liquids on the physicochemical characteristics and cytotoxicity of phosphatidylcholine vesicles. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2013**, 436, 1083-1091	5.1	14
41	Electroformation and electrofusion of giant vesicles in a microfluidic device. *Colloids and Surfaces B: Biointerfaces*, **2013**, 110, 81-7	6	18
40	Electrophoresis of a soft sphere in a necked cylindrical nanopore. *Physical Chemistry Chemical Physics*, **2013**, 15, 11758-65	3.6	13
39	Electrophoresis of deformable polyelectrolytes in a nanofluidic channel. *Langmuir*, **2013**, 29, 2446-54	4	11
38	Ion transport in a pH-regulated nanopore. *Analytical Chemistry*, **2013**, 85, 7527-34	7.8	104

37	Electrophoresis of a charge-regulated soft sphere: importance of effective membrane charge. *Colloids and Surfaces B: Biointerfaces*, **2013**, 102, 864-70	6	5
36	Low-Voltage Pulsed Electric Field Sterilization on a Microfluidic Chip. *Electroanalysis*, **2013**, 25, 1301-1309	3	6
35	Counterion condensation in pH-regulated polyelectrolytes. *Electrochemistry Communications*, **2012**, 19, 97-100	5.1	32
34	Electrokinetics of pH-regulated zwitterionic polyelectrolyte nanoparticles. *Nanoscale*, **2012**, 4, 7575-84	7.7	34
33	Slowing down DNA translocation through a nanopore by lowering fluid temperature. *Electrophoresis*, **2012**, 33, 3458-65	3.6	24
32	Regulating DNA translocation through functionalized soft nanopores. *Nanoscale*, **2012**, 4, 2685-93	7.7	68
31	Influence of the shape of a polyelectrolyte on its electrophoretic behavior. *Soft Matter*, **2012**, 8, 9469	3.6	19
30	Electrokinetic ion and fluid transport in nanopores functionalized by polyelectrolyte brushes. *Nanoscale*, **2012**, 4, 5169-77	7.7	61
29	Electrophoresis of a particle at an arbitrary surface potential and double layer thickness: importance of nonuniformly charged conditions. *Langmuir*, **2012**, 28, 2997-3004	4	9
28	Importance of boundary on the electrophoresis of a soft cylindrical particle. *Journal of Physical Chemistry B*, **2012**, 116, 12626-32	3.4	10
27	Importance of temperature effect on the electrophoretic behavior of charge-regulated particles. *Langmuir*, **2012**, 28, 1013-9	4	31
26	Controlling pH-regulated bionanoparticles translocation through nanopores with polyelectrolyte brushes. *Analytical Chemistry*, **2012**, 84, 9615-22	7.8	40
25	Importance of electroosmotic flow and multiple ionic species on the electrophoresis of a rigid sphere in a charge-regulated zwitterionic cylindrical pore. *Langmuir*, **2012**, 28, 10942-7	4	7
24	Ion Concentration Polarization in Polyelectrolyte-Modified Nanopores. *Journal of Physical Chemistry C*, **2012**, 116, 8672-8677	3.8	97
23	Importance of Ionic Polarization Effect on the Electrophoretic Behavior of Polyelectrolyte Nanoparticles in Aqueous Electrolyte Solutions. *Journal of Physical Chemistry C*, **2012**, 116, 367-373	3.8	36
22	DNA Electrokinetic Translocation through a Nanopore: Local Permittivity Environment Effect. *Journal of Physical Chemistry C*, **2012**, 116, 4793-4801	3.8	42
21	Field Effect Control of Surface Charge Property and Electroosmotic Flow in Nanofluidics. *Journal of Physical Chemistry C*, **2012**, 116, 4209-4216	3.8	86
20	Diffusiophoresis of a polyelectrolyte in a salt concentration gradient. *Electrophoresis*, **2012**, 33, 1068-78	3.6	16

19	Electrophoresis of Soft Particles in a Confi ned Space **2012**, 61-94		
18	Influence of boundary on the effect of double-layer polarization and the electrophoretic behavior of soft biocolloids. *Colloids and Surfaces B: Biointerfaces*, **2011**, 88, 559-67	6	22
17	Effects of double-layer polarization and counterion condensation on the electrophoresis of polyelectrolytes. *Soft Matter*, **2011**, 7, 396-411	3.6	62
16	Electrophoresis of a charge-regulated sphere in a narrow cylindrical pore filled with multiple ionic species. *Journal of Physical Chemistry B*, **2011**, 115, 3972-80	3.4	15
15	Electrophoresis of a charge-regulated soft sphere in a charged cylindrical pore. *Journal of Physical Chemistry B*, **2010**, 114, 1621-31	3.4	23
14	Diffusiophoresis of a soft sphere normal to two parallel disks. *Langmuir*, **2010**, 26, 16037-47	4	14
13	Electrophoresis of a Membrane-Coated Cylindrical Particle Positioned Eccentrically along the Axis of a Narrow Cylindrical Pore. *Journal of Physical Chemistry C*, **2010**, 114, 16576-16587	3.8	21
12	Diffusiophoresis of a charge-regulated spherical particle normal to two parallel disks. *Journal of Physical Chemistry B*, **2010**, 114, 2766-78	3.4	18
11	Electrophoresis of a finite rod along the axis of a long cylindrical microchannel filled with Carreau fluids. *Microfluidics and Nanofluidics*, **2009**, 7, 383-392	2.8	16
10	Boundary effect on electrophoresis in a Carreau fluid: simulated biocolloids at an arbitrary position in a charged spherical cavity. *Colloids and Surfaces B: Biointerfaces*, **2009**, 69, 8-14	6	5
9	Translation of two coaxial, nonhomogeneously structured flocs normal to a plate. *Colloid and Polymer Science*, **2008**, 286, 1593-1604	2.4	
8	Effect of a charged boundary on electrophoresis in a Carreau fluid: a sphere at an arbitrary position in a spherical cavity. *Langmuir*, **2007**, 23, 8637-46	4	14
7	Electrophoresis of two identical rigid spheres in a charged cylindrical pore. *Journal of Physical Chemistry B*, **2007**, 111, 2579-86	3.4	12
6	Electrophoresis of a rigid sphere in a Carreau fluid normal to a large charged disk. *Journal of Physical Chemistry B*, **2007**, 111, 12351-61	3.4	12
5	Evaluation of the electric force in electrophoresis. *Journal of Colloid and Interface Science*, **2007**, 305, 324-9	9.3	74
4	Effect of a charged boundary on electrophoresis: a sphere at an arbitrary position in a spherical cavity. *Journal of Colloid and Interface Science*, **2007**, 310, 281-91	9.3	11
3	Effect of charged boundary on electrophoresis: Sphere in spherical cavity at arbitrary potential and double-layer thickness. *Journal of Colloid and Interface Science*, **2007**, 314, 256-63	9.3	15
2	Electrophoresis of a spherical particle along the axis of a cylindrical pore filled with a Carreau fluid. *Colloid and Polymer Science*, **2006**, 284, 886-892	2.4	18

1	Current Progress and Scalable Approach toward the Synthesis of 2D Metal-Organic Frameworks. *Advanced Materials Interfaces*,2102560	4.6	1