

# Vincent Chan

## List of Publications by Year in descending order

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103  
papers

2,997  
citations

147801  
31  
h-index

189892  
50  
g-index

108  
all docs

108  
docs citations

108  
times ranked

4032  
citing authors

#	ARTICLE	IF	CITATIONS
1	The biophysics of DNA hybridization with immobilized oligonucleotide probes. Biophysical Journal, 1995, 69, 2243-2255.	0.5	205
2	Interactions of Phospholipid Bilayer with Chitosan:Â Effect of Molecular Weight and pH. Biomacromolecules, 2001, 2, 1161-1168.	5.4	198
3	Engineering closed-cell structure in lightweight and flexible carbon foam composite for high-efficient electromagnetic interference shielding. Carbon, 2018, 136, 299-308.	10.3	117
4	Human red blood cell deformed under thermal fluid flow. Biomedical Materials (Bristol), 2006, 1, 1-7.	3.3	112
5	Adsorption and Surface Diffusion of DNA Oligonucleotides at Liquid/Solid Interfaces. Langmuir, 1997, 13, 320-329.	3.5	111
6	Full-scale temperature response function (G-function) for heat transfer by borehole ground heat exchangers (GHEs) from sub-hour to decades. Applied Energy, 2014, 136, 197-205.	10.1	84
7	Dynamic Kinetic Resolution of Atropisomeric Amides. Organic Letters, 2004, 6, 2051-2053.	4.6	83
8	Three-Dimensional Microchannels in Biodegradable Polymeric Films for Control Orientation and Phenotype of Vascular Smooth Muscle Cells. Tissue Engineering, 2006, 12, 2229-2240.	4.6	81
9	Transient Analysis of Electroosmotic Flow in a Slit Microchannel. Journal of Colloid and Interface Science, 2002, 248, 524-527.	9.4	73
10	Effect of Hydrophobicity and Electrostatics on Adsorption and Surface Diffusion of DNA Oligonucleotides at Liquid/Solid Interfaces. Journal of Colloid and Interface Science, 1998, 203, 197-207.	9.4	69
11	Enhanced drug delivery, mechanical properties and antimicrobial activities in poly(lactic acid) nanofiber with mesoporous Fe <sub>3</sub> O <sub>4</sub> -COOH nanoparticles. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 559, 104-114.	4.7	68
12	MnCo <sub>2</sub> O <sub>4</sub> @nitrogen-doped carbon nanofiber composites with meso-microporous structure for high-performance symmetric supercapacitors. Journal of Alloys and Compounds, 2019, 782, 251-262.	5.5	68
13	Regulating orientation and phenotype of primary vascular smooth muscle cells by biodegradable films patterned with arrays of microchannels and discontinuous microwalls. Biomaterials, 2010, 31, 6228-6238.	11.4	61
14	Adhesion contact dynamics of HepG2 cells on galactose-immobilized substrates. Biomaterials, 2003, 24, 837-850.	11.4	54
15	Disinfection efficacy of ultraviolet germicidal irradiation on airborne bacteria in ventilation ducts. Indoor Air, 2018, 28, 806-817.	4.3	47
16	Covalent layer-by-layer assembly of polyethyleneimine multilayer for antibacterial applications. Journal of Biomedical Materials Research - Part A, 2010, 95A, 454-464.	4.0	46
17	Cellular Graphene: Fabrication, Mechanical Properties, and Strain-Sensing Applications. Matter, 2019, 1, 1148-1202.	10.0	46
18	The effect of adhesive ligands on bacterial and fibroblast adhesions to surfaces. Biomaterials, 2009, 30, 317-326.	11.4	45

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19	Interaction between O-carboxymethylchitosan and dipalmitoyl-sn-glycero-3-phosphocholine bilayer. <i>Biomaterials</i> , 2005, 26, 6873-6879.	11.4	44
20	Bacteriaâ€‘ surface interaction in the presence of proteins and surface attached poly(ethylene glycol) methacrylate chains. <i>Journal of Biomedical Materials Research - Part A</i> , 2007, 82A, 479-491.	4.0	44
21	Solubility of lovastatin in a family of six alcohols: Ethanol, 1-propanol, 1-butanol, 1-pentanol, 1-hexanol, and 1-octanol. <i>International Journal of Pharmaceutics</i> , 2008, 359, 111-117.	5.2	44
22	Combinatorial effect of substratum properties on mesenchymal stem cell sheet engineering and subsequent multi-lineage differentiation. <i>Acta Biomaterialia</i> , 2015, 23, 52-62.	8.3	44
23	Chitosan-Induced Restructuration of a Mica-Supported Phospholipid Bilayer:Â An Atomic Force Microscopy Study. <i>Biomacromolecules</i> , 2003, 4, 1596-1604.	5.4	42
24	Chitosan-Induced Perturbation of Dipalmitoyl-sn-glycero-3-phosphocholine Membrane Bilayer. <i>Langmuir</i> , 2001, 17, 3749-3756.	3.5	40
25	Adhesion contact dynamics of 3T3 fibroblasts on poly (lactide-co-glycolide acid) surface modified by photochemical immobilization of biomacromolecules. <i>Biomaterials</i> , 2006, 27, 2566-2576.	11.4	39
26	Dynamics of smooth muscle cell deadhesion from thermosensitive hydroxybutyl chitosan. <i>Biomaterials</i> , 2007, 28, 1503-1514.	11.4	38
27	Influence of mechanical ventilation system on indoor carbon dioxide and particulate matter concentration. <i>Building and Environment</i> , 2014, 76, 73-80.	6.9	38
28	Development and Applications of MOFs Derivative One-Dimensional Nanofibers via Electrospinningi¼ŠA Mini-Review. <i>Nanomaterials</i> , 2019, 9, 1306.	4.1	38
29	Hydrogels Based on Dual Curable Chitosan- <i>graft</i> -Polyethylene Glycol- <i>graft</i> -Methacrylate: Application to Layer-by-Layer Cell Encapsulation. <i>ACS Applied Materials &amp; Interfaces</i> , 2010, 2, 2012-2025.	8.0	37
30	UV-embossed microchannel in biocompatible polymeric film: Application to control of cell shape and orientation of muscle cells. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2006, 77B, 423-430.	3.4	36
31	MXene-carbon nanotubes layer-by-layer assembly based on-chip micro-supercapacitor with improved capacitive performance. <i>Electrochimica Acta</i> , 2021, 386, 138420.	5.2	34
32	Inorganic/polymer-graphene hybrid gel as versatile electrochemical platform for electrochemical capacitor and biosensor. <i>Carbon</i> , 2018, 132, 589-597.	10.3	32
33	Rac1 GTPase is activated by hepatitis B virus replication â€‘ involvement of HBX. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2008, 1783, 360-374.	4.1	29
34	Constitutive equation for elastic indentation of a thin-walled bio-mimetic microcapsule by an atomic force microscope tip. <i>Colloids and Surfaces B: Biointerfaces</i> , 2003, 27, 241-248.	5.0	28
35	Thermal-Induced Modification of the Contact Mechanics of Adhering Liposomes. <i>Langmuir</i> , 2002, 18, 3134-3141.	3.5	25
36	Quick Layer-by-Layer Assembly of Aligned Multilayers of Vascular Smooth Muscle Cells in Deep Microchannels. <i>Tissue Engineering</i> , 2007, 13, 1003-1012.	4.6	25

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37	Fabrication of polylactic acid/paclitaxel nano fibers by electrospinning for cancer therapeutics. BMC Chemistry, 2020, 14, 63.	3.8	25
38	Interaction of Liposome with Immobilized Chitosan during Main Phase Transition. Biomacromolecules, 2003, 4, 581-588.	5.4	24
39	Engineering cell de-adhesion dynamics on thermoresponsive poly(N-isopropylacrylamide). Acta Biomaterialia, 2008, 4, 218-229.	8.3	24
40	Modulating Cell Adhesion Dynamics on Carbon Nanotube Monolayer Engineered with Extracellular Matrix Proteins. ACS Applied Materials & Interfaces, 2010, 2, 1038-1047.	8.0	24
41	Biomechanical study of the edge outgrowth phenomenon of encapsulated chondrocytic isogenous groups in the surface layer of hydrogel scaffolds for cartilage tissue engineering. Acta Biomaterialia, 2012, 8, 244-252.	8.3	24
42	Microfluidic Assay To Study the Combinatorial Impact of Substrate Properties on Mesenchymal Stem Cell Migration. ACS Applied Materials & Interfaces, 2015, 7, 17095-17103.	8.0	24
43	The influence of GFP-actin expression on the adhesion dynamics of HepG2 cells on a model extracellular matrix. Biomaterials, 2005, 26, 5348-5358.	11.4	23
44	Adhesion contact dynamics of primary hepatocytes on poly(ethylene terephthalate) surface. Biomaterials, 2005, 26, 891-898.	11.4	22
45	The HBSP gene is expressed during HBV replication, and its coded BH3-containing spliced viral protein induces apoptosis in HepG2 cells. Biochemical and Biophysical Research Communications, 2006, 351, 64-70.	2.1	22
46	Solubility and limiting activity coefficient of simvastatin in different organic solvents. Fluid Phase Equilibria, 2009, 280, 35-41.	2.5	22
47	Experimental and numerical determination of cellular traction force on polymeric hydrogels. Interface Focus, 2011, 1, 777-791.	3.0	22
48	Adhesion Contact Dynamics of Fibroblasts on Biomacromolecular Surfaces. Macromolecular Bioscience, 2005, 5, 1022-1031.	4.1	21
49	Adhesion contact kinetics of HepG2 cells during Hepatitis B virus replication: Involvement of SH3-binding motif in HBX. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2006, 1762, 755-766.	3.8	21
50	Engineering Sustainable Antimicrobial Release in Silica-Cellulose Membrane with CaCO <sub>3</sub> -Aided Processing for Wound Dressing Application. Polymers, 2019, 11, 808.	4.5	21
51	Capsule-substrate contact deformation: Determination of adhesion energy. Medical and Biological Engineering and Computing, 2002, 40, 491-495.	2.8	20
52	Thermal Effect on a Viscously Deformed Liposome in a Laser Trap. Annals of Biomedical Engineering, 2003, 31, 354-362.	2.5	20
53	Antimicrobial hydroxyapatite reinforced-polyelectrolyte complex nanofibers with long-term controlled release activity for potential wound dressing application. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 624, 126722.	4.7	20
54	Colloidal adhesion of phospholipid vesicles: high-resolution reflection interference contrast microscopy and theory. Colloids and Surfaces B: Biointerfaces, 2002, 25, 347-362.	5.0	19

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55	Synergistic effect of graphene oxide-silver nanofillers on engineering performances of polyelectrolyte complex nanofiber membranes. Journal of Applied Polymer Science, 2018, 135, 46238.	2.6	19
56	Recent Advances in Fluorescence Recovery after Photobleaching for Decoupling Transport and Kinetics of Biomacromolecules in Cellular Physiology. Polymers, 2022, 14, 1913.	4.5	19
57	Development and experimental validation of a mathematical model for the irradiance of in-duct ultraviolet germicidal lamps. Building and Environment, 2019, 152, 160-171.	6.9	17
58	A multi-module microfluidic platform for continuous pre-concentration of water-soluble ions and separation of oil droplets from oil-in-water (O/W) emulsions using a DC-biased AC electrokinetic technique. Electrophoresis, 2017, 38, 645-652.	2.4	16
59	Dual-functional Ti <sub>3</sub> C <sub>2</sub> MXene for wastewater treatment and electrochemical energy storage. Sustainable Energy and Fuels, 2020, 4, 3566-3573.	4.9	16
60	pH responsive adhesion of phospholipid vesicle on poly(acrylic acid) cushion grafted to poly(ethylene) Tj ETQqO 0 0 rgBT /Overlock 10 T	5.0	13
61	BHEM-Chol/DOPE liposome induced perturbation of phospholipid bilayer. Colloids and Surfaces B: Biointerfaces, 2003, 29, 233-245.	5.0	12
62	Hepatitis B virus induced coupling of deadhesion and migration of HepG2 cells on thermo-responsive polymer. Biomaterials, 2010, 31, 1894-1903.	11.4	12
63	Aligned 3D human aortic smooth muscle tissue via layer by layer technique inside microchannels with novel combination of collagen and oxidized alginate hydrogel. Journal of Biomedical Materials Research - Part A, 2011, 98A, 235-244.	4.0	12
64	Continuous Droplet-Based Liquid-Liquid Extraction of Phenol from Oil. Separation Science and Technology, 2015, 50, 1023-1029.	2.5	12
65	Progress in Integrative Biomaterial Systems to Approach Three-Dimensional Cell Mechanotransduction. Bioengineering, 2017, 4, 72.	3.5	12
66	Contact Deformation of Liposome in the Presence of Osmosis. Annals of Biomedical Engineering, 2003, 31, 1279-1286.	2.5	11
67	Bioadhesive characterization of poly(methylidene malonate 2.12) microparticle on model extracellular matrix. Biomaterials, 2004, 25, 4327-4332.	11.4	11
68	Adhesion dynamics of porcine esophageal fibroblasts on extracellular matrix protein-functionalized poly(lactic acid). Biomedical Materials (Bristol), 2008, 3, 015014.	3.3	11
69	Collective cell traction force analysis on aligned smooth muscle cell sheet between three-dimensional microwalls. Interface Focus, 2014, 4, 20130056.	3.0	11
70	Molecular engineering of supercapacitor electrodes with monodispersed N-doped carbon nanoporous spheres. New Journal of Chemistry, 2019, 43, 15892-15898.	2.8	11
71	Substrate-induced deformation and adhesion of phospholipid vesicles at the main phase transition. Biophysical Chemistry, 2002, 99, 245-258.	2.8	10
72	Shape Recovery of an Optically Trapped Vesicle: Effect of Flow Velocity and Temperature. IEEE Transactions on Nanobioscience, 2004, 3, 96-100.	3.3	9

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73	Biomaterials patterned with discontinuous microwalls for vascular smooth muscle cell culture: biodegradable small diameter vascular grafts and stable cell culture substrates. Journal of Biomaterials Science, Polymer Edition, 2016, 27, 1477-1494.	3.5	9
74	Continuous detection of trace level concentration of oil droplets in water using microfluidic AC electroosmosis (ACEO). RSC Advances, 2015, 5, 70197-70203.	3.6	8
75	Engineering 3D-architected Gyroid MXene Scaffolds for Ultrasensitive Micromechanical Sensing. Advanced Engineering Materials, 2022, 24, .	3.5	8
76	Crystalline fibers in chemically polymerized ultrathin polypyrrole films. Journal of Applied Physics, 1995, 77, 6658-6663.	2.5	7
77	Dual requirements of extracellular matrix protein and chitosan for inducing adhesion contact evolution of esophageal epithelia. Journal of Biomedical Materials Research - Part A, 2007, 82A, 788-801.	4.0	7
78	Engineering bio-adhesive functions in an antimicrobial polymer multilayer. Biomedical Materials (Bristol), 2015, 10, 015015.	3.3	7
79	Study of synergistic disinfection by UVC and positive/negative air ions for aerosolized <i>Escherichia coli</i> , <i>Salmonella typhimurium</i> , and <i>Staphylococcus epidermidis</i> in ventilation duct flow. Indoor Air, 2022, 32, .	4.3	7
80	Thermal induced modification of the contact mechanics of adhering liposomes on cationic substrate. Chemistry and Physics of Lipids, 2002, 120, 131-143.	3.2	6
81	Coupling bending and shear effects on liposome deformation. Journal of Biomechanics, 2006, 39, 2338-2343.	2.1	6
82	Neuronal differentiation of human placenta-derived multi-potent stem cells enhanced by cell body oscillation on gelatin hydrogel. Journal of Bioactive and Compatible Polymers, 2014, 29, 529-544.	2.1	6
83	Biomechanistic Study of Smooth Muscle Cell Sheet during Circumferential Alignment in Circular Micropatterns. ACS Biomaterials Science and Engineering, 2015, 1, 549-558.	5.2	6
84	Aminal/Schiff-Base Polymer to Fabricate Nitrogen-Doped Porous Carbon Nanospheres for High-Performance Supercapacitors. ChemElectroChem, 2020, 7, 3859-3865.	3.4	6
85	MnO <sub>1.88</sub> /R-MnO <sub>2</sub> /Ti <sub>3</sub> C <sub>2</sub> (OH/F) <sub>x</sub> composite electrodes for high-performance pseudo-supercapacitors prepared from reduced MXenes. New Journal of Chemistry, 2020, 44, 6583-6588.	2.8	6
86	The role of bifurcation angles on collective smooth muscle cell biomechanics and the implication in atherosclerosis development. Biomaterials Science, 2016, 4, 430-438.	5.4	5
87	Effect of acyl chain mismatch on the contact mechanics of two-component phospholipid vesicle during main phase transition. Biophysical Chemistry, 2003, 104, 141-153.	2.8	4
88	Temporal Effect of Functional Blocking of $\beta$ 1 Integrin on Cell Adhesion Strength under Serum Depletion. Langmuir, 2009, 25, 10939-10947.	3.5	4
89	Effect of cytoskeleton inhibitors on deadhesion kinetics of HepG2 cells on biomimetic surface. Colloids and Surfaces B: Biointerfaces, 2010, 75, 67-74.	5.0	4
90	Experimental and theoretical characterization of the interfacial adhesion of 2D heterogeneous materials: A review. Journal of Micromechanics and Molecular Physics, 2021, 06, 31-48.	1.2	4

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91	The effect of electrostatics on the contact mechanics of adherent phospholipid vesicles. Colloids and Surfaces B: Biointerfaces, 2003, 27, 83-94.	5.0	2
92	Effects of carbon chain difference and lipid composition on the contact mechanics of two-component vesicle. Colloids and Surfaces B: Biointerfaces, 2003, 32, 19-28.	5.0	2
93	Epigallocatechinâ€³gallate induced modulation of cell deadhesion and migration on thermosensitive poly(Nâ€³isopropylacrylamide). Journal of Biomedical Materials Research - Part A, 2011, 98A, 450-460.	4.0	2
94	Cyclopropylamine modified plasma polymerised poly(methyl methacrylate) thin films for cell culture. International Journal of Nanotechnology, 2017, 14, 1045.	0.2	2
95	Scalable synthesis, characterization and testing of 3D architected gyroid graphene lattices from additively manufactured templates. Journal of Micromechanics and Molecular Physics, 2021, 06, 13-24.	1.2	2
96	Numerical computations of Factor Xa and thrombin productions using a finite-volume method. International Journal of Heat and Mass Transfer, 2002, 45, 785-792.	4.8	1
97	A quantitative contour analysis of axisymmetric vesicles spontaneously adhering onto a substrate. Colloids and Surfaces B: Biointerfaces, 2004, 34, 25-31.	5.0	1
98	Nanoengineering life: from cell to tissue. Interface Focus, 2011, 1, 699-701.	3.0	1
99	pH-responsive kinematics of photocatalytic degradation of Rh B with polypyrene microspheres. Materials Research Express, 2019, 6, 105916.	1.6	1
100	Proteomics Based Identification of Cell Migration Related Proteins in HBV Expressing HepG2 Cells. PLoS ONE, 2014, 9, e95621.	2.5	1
101	Effect of adhesive ligand on cell deadhesion kinetics on poly(N-isopropylacrylamide). Bio-Medical Materials and Engineering, 2014, 24, 1433-1445.	0.6	0
102	Lightweight and Flexible Carbon Foam Composite for High-efficient Electromagnetic Interference Shielding. , 0, , .		0
103	Novel Biophysical Techniques for Investigating Long-Term Cell Adhesion Dynamics on Biomaterial Surfaces. , 2006, 585, 151-165.		0