Edwin P Chan

List of Publications by Year
in descending order

60 papers	3,730 citations	159585 30 h-index	144013 57 g-index
61 all docs	61 docs citations	61 times ranked	4813 citing authors

#	Article	IF	Citations
1	A biodegradable and biocompatible gecko-inspired tissue adhesive. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 2307-2312.	7.1	490
2	Surface Wrinkles for Smart Adhesion. Advanced Materials, 2008, 20, 711-716.	21.0	451
3	Fabricating Microlens Arrays by Surface Wrinkling. Advanced Materials, 2006, 18, 3238-3242.	21.0	325
4	Molecular Layerâ€byâ€Layer Assembled Thinâ€Film Composite Membranes for Water Desalination. Advanced Materials, 2013, 25, 4778-4782.	21.0	258
5	Correlations between Mechanical and Electrical Properties of Polythiophenes. ACS Nano, 2010, 4, 7538-7544.	14.6	210
6	Spontaneous formation of stable aligned wrinkling patterns. Soft Matter, 2006, 2, 324.	2.7	160
7	Mechanochromic Photonic Gels. Advanced Materials, 2013, 25, 3934-3947.	21.0	154
8	Thin film composite reverse osmosis membranes prepared via layered interfacial polymerization. Journal of Membrane Science, 2017, 527, 121-128.	8.2	117
9	Tailor-Made Polyamide Membranes for Water Desalination. ACS Nano, 2015, 9, 345-355.	14.6	109
10	Spherical indentation testing of poroelastic relaxations in thin hydrogel layers. Soft Matter, 2012, 8, 1492-1498.	2.7	101
11	Block Copolymer Photonic Gel for Mechanochromic Sensing. Advanced Materials, 2011, 23, 4702-4706.	21.0	100
12	Designing Model Systems for Enhanced Adhesion. MRS Bulletin, 2007, 32, 496-503.	3.5	72
13	An Orientationally Ordered Hierarchical Exfoliated Clayâˆ’Block Copolymer Nanocomposite. Macromolecules, 2005, 38, 5170-5179.	4.8	64
14	Viscoelastic properties of confined polymer films measured via thermal wrinkling. Soft Matter, 2009, 5, 4638.	2.7	61
15	Poroelastic relaxation indentation of thin layers of gels. Journal of Applied Physics, 2011, 110, 086103.	2.5	61
16	Correlating chlorine-induced changes in mechanical properties to performance in polyamide-based thin film composite membranes. Journal of Membrane Science, 2013, 433, 72-79.	8.2	56
17	Quantifying the Stress Relaxation Modulus of Polymer Thin Films via Thermal Wrinkling. ACS Applied Materials & Interfaces, 2011, 3, 331-338.	8.0	54
18	Compressing and Swelling To Study the Structure of Extremely Soft Bottlebrush Networks Prepared by ROMP. Macromolecules, 2018, 51, 2359-2366.	4.8	51

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19	Impact of Surface-Modified Nanoparticles on Glass Transition Temperature and Elastic Modulus of Polymer Thin Films. Macromolecules, 2007, 40, 7755-7757.	4.8	48
20	An automated spin-assisted approach for molecular layer-by-layer assembly of crosslinked polymer thin films. Review of Scientific Instruments, 2012, 83, 114102.	1.3	46
21	Nanoscale Pillar-Enhanced Tribological Surfaces as Antifouling Membranes. ACS Applied Materials & Interfaces, 2016, 8, 31433-31441.	8.0	46
22	A â€œselfâ€pinningâ€• adhesive based on responsive surface wrinkles. Journal of Polymer Science, Part B: Polymer Physics, 2011, 49, 40-44.	2.1	44
23	Signatures of Intracrystallite and Intercrystallite Limitations of Charge Transport in Polythiophenes. Macromolecules, 2016, 49, 7359-7369.	4.8	43
24	Tailoring interlayer structure of molecular layer-by-layer assembled polyamide membranes for high separation performance. Applied Surface Science, 2015, 356, 659-667.	6.1	38
25	Swelling of ultrathin crosslinked polyamide water desalination membranes. Journal of Polymer Science, Part B: Polymer Physics, 2013, 51, 385-391.	2.1	37
26	Star polymer-assembled thin film composite membranes with high separation performance and low fouling. Journal of Membrane Science, 2018, 555, 369-378.	8.2	37
27	Swelling of Ultrathin Molecular Layerâ€byâ€Layer Polyamide Water Desalination Membranes. Journal of Polymer Science, Part B: Polymer Physics, 2013, 51, 1647-1655.	2.1	36
28	Entanglement Density-Dependent Energy Absorption of Polycarbonate Films via Supersonic Fracture. ACS Macro Letters, 2019, 8, 806-811.	4.8	36
29	Characterizing salt permeability in polyamide desalination membranes using electrochemical impedance spectroscopy. Journal of Membrane Science, 2019, 583, 248-257.	8.2	35
30	Utilizing vapor swelling of surface-initiated polymer brushes toÂdevelop quantitative measurements of brush thermodynamics andÂgrafting density. Polymer, 2015, 72, 471-478.	3.8	32
31	Insights into the Water Transport Mechanism in Polymeric Membranes from Neutron Scattering. Macromolecules, 2020, 53, 1443-1450.	4.8	30
32	Adhesion of Patterned Reactive Interfaces. Journal of Adhesion, 2007, 83, 473-489.	3.0	25
33	Tailoring the Permselectivity of Water Desalination Membranes via Nanoparticle Assembly. Langmuir, 2014, 30, 611-616.	3.5	25
34	Poroelastic relaxation of polymer-loaded hydrogels. Soft Matter, 2012, 8, 8234.	2.7	23
35	Using Indentation to Quantify Transport Properties of Nanophaseâ€Segregated Polymer Thin Films. Advanced Materials, 2015, 27, 4924-4930.	21.0	23
36	Deswelling of ultrathin molecular layer-by-layer polyamide water desalination membranes. Soft Matter, 2014, 10, 2949.	2.7	22

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37	Thicknessâ€dependent swelling of molecular layerâ€byâ€layer polyamide nanomembranes. Journal of Polymer Science, Part B: Polymer Physics, 2017, 55, 412-417.	2.1	18
38	Quantifying release in step-and-flash imprint lithography. Journal of Vacuum Science & Technology B, 2006, 24, 2716.	1.3	16
39	Functional group quantification of polymer nanomembranes with soft x-rays. Physical Review Materials, 2018, 2, .	2.4	16
40	Bilayer Mass Transport Model for Determining Swelling and Diffusion in Coated, Ultrathin Membranes. ACS Applied Materials & Interfaces, 2015, 7, 3492-3502.	8.0	15
41	Maximizing Contact of Supersoft Bottlebrush Networks with Rough Surfaces To Promote Particulate Removal. ACS Applied Materials & Interfaces, 2019, 11, 45310-45318.	8.0	15
42	Quantifying the elasticity and viscosity of geometrically confined polymer films via thermal wrinkling. Journal of Polymer Science, Part B: Polymer Physics, 2012, 50, 1556-1561.	2.1	14
43	Using microprojectiles to study the ballistic limit of polymer thin films. Soft Matter, 2020, 16, 3886-3890.	2.7	14
44	Creating Aligned Nanopores by Magnetic Field Processing of Block Copolymer/Homopolymer Blends. ACS Macro Letters, 2019, 8, 261-266.	4.8	13
45	Importance of Sub-Nanosecond Fluctuations on the Toughness of Polycarbonate Glasses. Macromolecules, 2020, 53, 6672-6681.	4.8	12
46	Why Enhanced Subnanosecond Relaxations Are Important for Toughness in Polymer Glasses. Macromolecules, 2021, 54, 2518-2528.	4.8	12
47	Viscoplastic fracture transition of a biopolymer gel. Soft Matter, 2018, 14, 4696-4701.	2.7	10
48	Supersonic Impact Response of Polymer Thin Films via Large-Scale Atomistic Simulations. Nano Letters, 2021, 21, 5991-5997.	9.1	10
49	Controlling toughness of polymer-grafted nanoparticle composites for impact mitigation. Soft Matter, 2022, 18, 256-261.	2.7	10
50	Quantifying the sensitivity of the network structure and properties from simultaneous measurements during photopolymerization. Soft Matter, 2017, 13, 3975-3983.	2.7	8
51	Quantifying the â€˜press and peelâ€™ removal of particulates using elastomers and gels. Journal of Cultural Heritage, 2021, 48, 236-243.	3.3	8
52	Cutting to measure the elasticity and fracture of soft gels. Soft Matter, 2020, 16, 8826-8831.	2.7	5
53	Corona Treatment for Nanotransfer Molding Adhesion. ACS Applied Polymer Materials, 2019, 1, 997-1005.	4.4	4
54	Tuning the mechanical impedance of disordered networks for impact mitigation. Soft Matter, 2022, 18, 2039-2045.	2.7	3

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55	Comment on â€œViscoelastic properties of confined polymer films measured via thermal wrinklingâ€•by E. P. Chan, K. A. Page, S. H. Im, D. L. Patton, R. Huang, and C. M. Stafford, Soft Matter, 2009,5, 4638â€“4641. Soft Matter, 2011, 7, 788-790.	2.7	2
56	Studying water and solute transport through desalination membranes via neutron radiography. Journal of Membrane Science, 2018, 548, 667-675.	8.2	2
57	Adhesion Behavior of Soft Materials. , 2012, , 89-125.		2
58	Size effects in plasma-enhanced nano-transfer adhesion. Soft Matter, 2018, 14, 9220-9226.	2.7	1
59	WRINKLING POLYMERS FOR SURFACE STRUCTURE CONTROL AND FUNCTIONALITY. Series in Sof Condensed Matter, 2008, , 141-161.	0.1	0
60	Model Polymer Thin Films To Measure Structure and Dynamics of Confined, Swollen Networks. ACS Symposium Series, 2018, , 91-115.	0.5	0