Connie B Roth

List of Publications by Year
in descending order

49 papers	2,347 citations	27 h-index	46 g-index
50 all docs	50 docs citations	50 times ranked	1575 citing authors

#	Article	IF	Citations
1	Physically intuitive continuum mechanics model for quartz crystal microbalance: Viscoelasticity of rubbery polymers at <scp>MHz</scp> frequencies. Journal of Polymer Science, 2022, 60, 244-257.	3.8	2
2	Polymers under nanoconfinement: where are we now in understanding local property changes?. Chemical Society Reviews, 2021, 50, 8050-8066.	38.1	34
3	Gradient in refractive indexÂreveals denser near free surface region in thin polymer films. Journal of Chemical Physics, 2021, 155, 144901.	3.0	8
4	Comparing refractive index and density changes with decreasing film thickness in thin supported films across different polymers. Journal of Chemical Physics, 2020, 153, 044902.	3.0	29
5	Local Glass Transition Temperature <i>T</i>_g(<i>z</i>) Within Polystyrene Is Strongly Impacted by the Modulus of the Neighboring PDMS Domain. ACS Macro Letters, 2020, 9, 1625-1631.	4.8	18
6	Experimental study of substrate roughness on the local glass transition of polystyrene. Journal of Chemical Physics, 2020, 152, 244901.	3.0	13
7	Review and reproducibility of forming adsorbed layers from solvent washing of melt annealed films. Soft Matter, 2020, 16, 5366-5387.	2.7	30
8	Jumping In and Out of the Phase Diagram Using Electric Fields: Time Scale for Remixing of Polystyrene/Poly(vinyl methyl ether) Blends. ACS Macro Letters, 2019, 8, 188-192.	4.8	6
9	Unexpected Molecular Weight Dependence to the Physical Aging of Thin Polystyrene Films Present at Ultraâ€High Molecular Weights. Journal of Polymer Science, Part B: Polymer Physics, 2019, 57, 1224-1238.	2.1	9
10	Optimizing the Grafting Density of Tethered Chains to Alter the Local Glass Transition Temperature of Polystyrene near Silica Substrates: The Advantage of Mushrooms over Brushes. ACS Macro Letters, 2018, 7, 269-274.	4.8	33
11	Local Glass Transition Temperature <i>T</i>_g(<i>z</i>) Profile in Polystyrene next to Polybutadiene with and without Plasticization Effects. Macromolecular Chemistry and Physics, 2018, 219, 1700328.	2.2	13
12	Local glass transition temperature <i>T</i>g(<i>z</i>) of polystyrene next to different polymers: Hard vs. soft confinement. Journal of Chemical Physics, 2017, 146, 203307.	3.0	74
13	Experimental Study of the Influence of Periodic Boundary Conditions: Effects of Finite Size and Faster Cooling Rates on Dissimilar Polymerâ€“Polymer Interfaces. ACS Macro Letters, 2017, 6, 887-891.	4.8	14
14	Aging near rough and smooth boundaries in colloidal glasses. Journal of Chemical Physics, 2017, 147, 224505.	3.0	6
15	Changes in the temperature-dependent specific volume of supported polystyrene films with film thickness. Journal of Chemical Physics, 2016, 144, 234903.	3.0	27
16	Fundamentals of polymers and glasses. , 2016, , 1-22.		4
17	Correlating glass transition and physical aging in thin polymer films. , 2016, , 181-204.		10
18	Communication: Experimentally determined profile of local glass transition temperature across a glassy-rubbery polymer interface with a <i>T</i>g difference of 80 K. Journal of Chemical Physics, 2015, 143, 111101.	3.0	67

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19	Role of neighboring domains in determining the magnitude and direction of Tg-confinement effects in binary, immiscible polymer systems. Polymer, 2015, 80, 180-187.	3.8	34
20	Above, below, and inâ€between the two glass transitions of ultrathin freeâ€standing polystyrene films: Thermal expansion coefficient and physical aging. Journal of Polymer Science, Part B: Polymer Physics, 2015, 53, 64-75.	2.1	41
21	Stability of polymer glasses vitrified under stress. Soft Matter, 2014, 10, 1572.	2.7	17
22	Electric fields enhance miscibility of polystyrene/poly(vinyl methyl ether) blends. Journal of Chemical Physics, 2014, 141, 134908.	3.0	7
23	Effect of Adjacent Rubbery Layers on the Physical Aging of Glassy Polymers. Macromolecules, 2013, 46, 9806-9817.	4.8	39
24	Physical Aging of Polymer Films Quenched and Measured Free-Standing via Ellipsometry: Controlling Stress Imparted by Thermal Expansion Mismatch between Film and Support. Macromolecules, 2013, 46, 9455-9463.	4.8	59
25	Importance of Quench Conditions on the Subsequent Physical Aging Rate of Glassy Polymer Films. Macromolecules, 2012, 45, 1701-1709.	4.8	35
26	Characterization of phase separation of polystyrene/poly(vinyl methyl ether) blends using fluorescence. Journal of Polymer Science, Part B: Polymer Physics, 2012, 50, 250-256.	2.1	10
27	Two Simultaneous Mechanisms Causing Glass Transition Temperature Reductions in High Molecular Weight Freestanding Polymer Films as Measured by Transmission Ellipsometry. Physical Review Letters, 2011, 107, 235701.	7.8	143
28	Mobility and stability of glasses. Journal of Polymer Science, Part B: Polymer Physics, 2010, 48, 2558-2560.	2.1	9
29	Physical Aging in Ultrathin Polystyrene Films: Evidence of a Gradient in Dynamics at the Free Surface and Its Connection to the Glass Transition Temperature Reductions. Macromolecules, 2010, 43, 8296-8303.	4.8	136
30	Suppression of the <i>T</i>_g-Nanoconfinement Effect in Thin Poly(vinyl acetate) Films by Sorbed Water. Macromolecules, 2010, 43, 5158-5161.	4.8	54
31	Streamlined ellipsometry procedure for characterizing physical aging rates of thin polymer films. Journal of Polymer Science, Part B: Polymer Physics, 2009, 47, 2509-2519.	2.1	52
32	Confinement effects on glass transition temperature, transition breadth, and expansivity: Comparison of ellipsometry and fluorescence measurements on polystyrene films. European Physical Journal E, 2009, 30, 83-92.	1.6	133
33	Effect of nanoscale confinement on the glass transition temperature of freeâ€standing polymer films: Novel, selfâ€referencing fluorescence method. Journal of Polymer Science, Part B: Polymer Physics, 2008, 46, 2754-2764.	2.1	93
34	Critical micelle concentrations of block and gradient copolymers in homopolymer: Effects of sequence distribution, composition, and molecular weight. Journal of Polymer Science, Part B: Polymer Physics, 2008, 46, 2672-2682.	2.1	37
35	Novel Effects of Confinement and Interfaces on the Glass Transition Temperature and Physical Aging in Polymer Films and Nanocomposites. AIP Conference Proceedings, 2008, , .	0.4	9
36	Eliminating the Enhanced Mobility at the Free Surface of Polystyrene:Â Fluorescence Studies of the Glass Transition Temperature in Thin Bilayer Films of Immiscible Polymers. Macromolecules, 2007, 40, 2568-2574.	4.8	201

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37	Selectively Probing the Glass Transition Temperature in Multilayer Polymer Films:Â Equivalence of Block Copolymers and Multilayer Films of Different Homopolymers. Macromolecules, 2007, 40, 3328-3336.	4.8	105
38	Comparison of Critical Micelle Concentrations of Gradient Copolymer and Block Copolymer in Homopolymer:â€‰ Novel Characterization by Intrinsic Fluorescence. Macromolecules, 2007, 40, 5631-5633.	4.8	57
39	Molecular-weight dependence of the glass transition temperature of freely-standing poly(methyl) Tj ETQq1 1 0.784314 rgBT /Overlock 1	1.6	94
40	Hole growth as a microrheological probe to measure the viscosity of polymers confined to thin films. Journal of Polymer Science, Part B: Polymer Physics, 2006, 44, 3011-3021.	2.1	27
41	Glass transition and chain mobility in thin polymer films. Journal of Electroanalytical Chemistry, 2005, 584, 13-22.	3.8	269
42	Evidence of convective constraint release during hole growth in freely standing polystyrene films at low temperatures. Physical Review E, 2005, 72, 021802.	2.1	25
43	Hole growth in freely standing polystyrene films probed using a differential pressure experiment. Physical Review E, 2005, 72, 021803.	2.1	29
44	Mobility on Different Length Scales in Thin Polymer Films. , 2004, , 1-38.		13
45	Glass transition temperature of freely-standing films of atactic poly(methyl methacrylate). European Physical Journal E, 2003, 12, 103-107.	1.6	115
46	Differential pressure experiment to probe hole growth in freely standing polymer films. Review of Scientific Instruments, 2003, 74, 2796-2804.	1.3	14
47	Effect of end group chemistry on surface molecular motion of monodisperse polystyrene films. Macromolecular Symposia, 2000, 159, 35-42.	0.7	4
48	Instabilities in thin polymer films: from pattern formation to rupture. Macromolecular Symposia, 2000, 159, 143-150.	0.7	16
49	Hole formation and growth in freely standing polystyrene films. Physical Review E, 1999, 59, 2153-2156.	2.1	73