Burak Erman

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248 7,424 4.4 5.73 ext. papers ext. citations avg, IF L-index

#	Paper	IF	Citations
198	Direct evaluation of thermal fluctuations in proteins using a single-parameter harmonic potential. <i>Folding & Design</i> , 1997 , 2, 173-81		1073
197	Electrospinning of polyurethane fibers. <i>Polymer</i> , 2002 , 43, 3303-3309	3.9	813
196	Gaussian Dynamics of Folded Proteins. <i>Physical Review Letters</i> , 1997 , 79, 3090-3093	7.4	582
195	Theory of elasticity of polymer networks. 3. <i>Macromolecules</i> , 1982 , 15, 800-806	5.5	349
194	Vibrational Dynamics of Folded Proteins: Significance of Slow and Fast Motions in Relation to Function and Stability. <i>Physical Review Letters</i> , 1998 , 80, 2733-2736	7.4	326
193	Palladium Nanoparticles by Electrospinning from Poly(acrylonitrile-co-acrylic acid) P dCl2 Solutions. Relations between Preparation Conditions, Particle Size, and Catalytic Activity. <i>Macromolecules</i> , 2004 , 37, 1787-1792	5.5	249
192	Structures and Properties of Rubberlike Networks 1997 ,		243
191	Collective motions in HIV-1 reverse transcriptase: examination of flexibility and enzyme function. Journal of Molecular Biology, 1999 , 285, 1023-37	6.5	186
190	Relationships between stress, strain, and molecular constitution of polymer networks. Comparison of theory with experiments. <i>Macromolecules</i> , 1982 , 15, 806-811	5.5	156
189	Theory of elasticity of polymer networks. II. The effect of geometric constraints on junctions. Journal of Chemical Physics, 1978 , 68, 5363-5369	3.9	106
188	Identification of kinetically hot residues in proteins. <i>Protein Science</i> , 1998 , 7, 2522-32	6.3	105
187	Understanding the recognition of protein structural classes by amino acid composition. <i>Proteins: Structure, Function and Bioinformatics</i> , 1997 , 29, 172-185	4.2	104
186	Rubberlike Elasticity: A Molecular Primer 2007 ,		97
185	Mechanisms of the Exchange of Diblock Copolymers between Micelles at Dynamic Equilibrium. <i>Macromolecules</i> , 1996 , 29, 4764-4771	5.5	79
184	Efficient characterization of collective motions and interresidue correlations in proteins by low-resolution simulations. <i>Biochemistry</i> , 1997 , 36, 13512-23	3.2	72
183	Theory of elasticity of amorphous networks: effect of constraints along chains. <i>Macromolecules</i> , 1989 , 22, 3342-3348	5.5	69
182	A Diffused-Constraint Theory for the Elasticity of Amorphous Polymer Networks. 1. Fundamentals and Stress-Strain Isotherms in Elongation. <i>Macromolecules</i> , 1995 , 28, 5089-5096	5.5	59

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181	Experimental results relating stress and birefringence to strain in poly(dimethylsiloxane) networks. Comparisons with theory. <i>Macromolecules</i> , 1983 , 16, 1607-1613	5.5	59	
180	Theory of strain birefringence of amorphous polymer networks. <i>Macromolecules</i> , 1983 , 16, 1601-1606	5.5	54	
179	A Theoretical and Experimental Study of Filler Effect on Stress-Deformation-Segmental Orientation Relations for Poly(dimethylsiloxane) Networks. <i>Macromolecules</i> , 2000 , 33, 8858-8864	5.5	52	
178	The gaussian network model: precise prediction of residue fluctuations and application to binding problems. <i>Biophysical Journal</i> , 2006 , 91, 3589-99	2.9	51	
177	Solution Cross-Linked Poly(isobutylene) Gels: Synthesis and Swelling Behavior. <i>Macromolecules</i> , 2000 , 33, 4822-4827	5.5	51	
176	Free radical crosslinking of unsaturated bacterial polyesters obtained from soybean oily acids. <i>Polymer Bulletin</i> , 2001 , 46, 389-394	2.4	45	
175	Effect of filler amount on thermoelastic properties of poly(dimethylsiloxane) networks. <i>Polymer</i> , 2005 , 46, 4127-4134	3.9	41	
174	Dynamic mechanical study of amorphous phases in poly(ethylene terephthalate) /nylon-6 blends. <i>Polymer</i> , 1995 , 36, 2371-2377	3.9	41	
173	DNABINDPROT: fluctuation-based predictor of DNA-binding residues within a network of interacting residues. <i>Nucleic Acids Research</i> , 2010 , 38, W417-23	20.1	40	
172	Relationships between amino acid sequence and backbone torsion angle preferences. <i>Proteins: Structure, Function and Bioinformatics</i> , 2004 , 55, 992-8	4.2	40	
171	Lattice model for segmental orientation in deformed polymeric networks. 1. Contribution of intermolecular correlations. <i>Macromolecules</i> , 1990 , 23, 5335-5340	5.5	40	
170	Reducing Virulence and Biofilm of Pseudomonas aeruginosa by Potential Quorum Sensing Inhibitor Carotenoid: Zeaxanthin. <i>Microbial Ecology</i> , 2017 , 74, 466-473	4.4	39	
169	Optical anisotropies of model analogs of polycarbonates. <i>Macromolecules</i> , 1982 , 15, 664-669	5.5	38	
168	Prediction of binding sites in receptor-ligand complexes with the Gaussian Network Model. <i>Physical Review Letters</i> , 2008 , 100, 228102	7.4	35	
167	Investigation of local motions in polymers by the dynamic rotational isomeric state model. <i>Macromolecules</i> , 1987 , 20, 1368-1376	5.5	35	
166	Evidence of Strain Hardening in DNA Gels. <i>Macromolecules</i> , 2010 , 43, 1530-1538	5.5	34	
165	Analysis of correlations between energy and residue fluctuations in native proteins and determination of specific sites for binding. <i>Physical Review Letters</i> , 2009 , 102, 088103	7.4	33	
164	Property optimization in nitrile rubber composites via hybrid filler systems. <i>Journal of Applied Polymer Science</i> , 2001 , 79, 366-374	2.9	32	

163	VitAL: Viterbi algorithm for de novo peptide design. <i>PLoS ONE</i> , 2010 , 5, e10926	3.7	28
162	Entropy Transfer between Residue Pairs and Allostery in Proteins: Quantifying Allosteric Communication in Ubiquitin. <i>PLoS Computational Biology</i> , 2017 , 13, e1005319	5	26
161	Calculations on Trimodal Elastomeric Networks. Effects of Chain Length and Composition on Ultimate Properties. <i>Macromolecules</i> , 1998 , 31, 3099-3103	5.5	26
160	Intramolecular Contributions to Stretched-Exponential Relaxation Behavior in Polymers. <i>Macromolecules</i> , 1994 , 27, 5200-5205	5.5	26
159	A lattice model for segmental orientation in deformed polymeric networks. 2. Effect of chain stiffness and thermotropic interactions. <i>Macromolecules</i> , 1990 , 23, 5341-5346	5.5	25
158	Effect of Chemical Composition on Large Deformation Mechanooptical Properties of High Strength Thermoplastic Poly(urethane urea)s. <i>Macromolecules</i> , 2004 , 37, 8676-8685	5.5	24
157	Determination of polymer-solvent interaction parameter from swelling of networks: the system poly(2-hydroxyethyl methacrylate)-diethylene glycol. <i>Macromolecules</i> , 1987 , 20, 1353-1356	5.5	24
156	Predicting important residues and interaction pathways in proteins using Gaussian Network Model: binding and stability of HLA proteins. <i>PLoS Computational Biology</i> , 2010 , 6, e1000845	5	23
155	Comparison of the constrained junction and the slip-link models of rubber elasticity. <i>Macromolecules</i> , 1993 , 26, 6657-6659	5.5	23
154	Osmotic compressibility and mechanical moduli of swollen polymeric networks. <i>Macromolecules</i> , 1987 , 20, 1696-1701	5.5	23
153	Rubber elasticity in the range of small uniaxial tensions and compressions. Results for poly(dimethylsiloxane). <i>Journal of Polymer Science, Polymer Physics Edition</i> , 1978 , 16, 1115-1121		23
152	Molecular recognition of H3/H4 histone tails by the tudor domains of JMJD2A: a comparative molecular dynamics simulations study. <i>PLoS ONE</i> , 2011 , 6, e14765	3.7	23
151	Gaussian model of protein folding. <i>Journal of Chemical Physics</i> , 2000 , 112, 1050-1056	3.9	22
150	Oncogenic G12D mutation alters local conformations and dynamics of K-Ras. <i>Scientific Reports</i> , 2019 , 9, 11730	4.9	20
149	Main-Chain Lyotropic Liquid-Crystalline Elastomers. 1. Syntheses of Cross-Linked Polyisocyanate Gels Acquiring Liquid-Crystalline Behavior in the Swollen State. <i>Macromolecules</i> , 1996 , 29, 2796-2804	5.5	20
148	Comparative effects of oncogenic mutations G12C, G12V, G13D, and Q61H on local conformations and dynamics of K-Ras. <i>Computational and Structural Biotechnology Journal</i> , 2020 , 18, 1000-1011	6.8	19
147	Intrinsic K-Ras dynamics: A novel molecular dynamics data analysis method shows causality between residue pair motions. <i>Scientific Reports</i> , 2016 , 6, 37012	4.9	19
146	The elastic net algorithm and protein structure prediction. <i>Journal of Computational Chemistry</i> , 2002 , 23, 77-83	3.5	19

145	Theory of segmental orientation in amorphous polymer networks. <i>Macromolecules</i> , 1985 , 18, 1985-199	15.5	19	
144	Optical anisotropies of aromatic esters and of oligomers of poly(p-oxybenzoate). <i>The Journal of Physical Chemistry</i> , 1983 , 87, 2929-2935		18	
143	Temperature dependence of swelling of polystyrene networks. <i>Macromolecules</i> , 1985 , 18, 1696-1700	5.5	18	
142	Molecular Dynamics Analysis of Coupling between Librational Motions and Isomeric Jumps in Chain Molecules. <i>Macromolecules</i> , 1996 , 29, 2510-2514	5.5	17	
141	Statistical thermodynamics of residue fluctuations in native proteins. <i>Journal of Chemical Physics</i> , 2009 , 130, 095103	3.9	16	
140	Control of optical anisotropy at large deformations in PMMA/chlorinated-PHB (PHB-Cl) blends: Mechano-optical behavior. <i>Polymer</i> , 2006 , 47, 8183-8193	3.9	16	
139	Dynamics of large-scale fluctuations in native proteins. Analysis based on harmonic inter-residue potentials and random external noise. <i>Polymer</i> , 2004 , 45, 641-648	3.9	16	
138	Computer simulations of two-dimensional trifunctional bimodal networks. <i>Macromolecular Theory and Simulations</i> , 1994 , 3, 151-161	1.5	16	
137	Local orientational motions in flexible polymeric chains. <i>Macromolecules</i> , 1990 , 23, 1174-1180	5.5	16	
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135	Identification of ligand binding sites of proteins using the Gaussian Network Model. <i>PLoS ONE</i> , 2011 , 6, e16474	3.7	16	
134	A fast approximate method of identifying paths of allosteric communication in proteins. <i>Proteins: Structure, Function and Bioinformatics</i> , 2013 , 81, 1097-101	4.2	15	
133	Conformational features of poly(1,1-dihydroperfluorooctyl acrylate) and poly(vinyl acetate) diblock oligomers in supercritical carbon dioxide. <i>Journal of Chemical Physics</i> , 2001 , 114, 5444-5449	3.9	15	
132	Analysis of multiple folding routes of proteins by a coarse-grained dynamics model. <i>Biophysical Journal</i> , 2001 , 81, 3534-44	2.9	15	
131	Main-Chain Lyotropic Liquid-Crystalline Elastomers. 2. Orientation and Mechanical Properties of Polyisocyanate Films. <i>Macromolecules</i> , 1996 , 29, 2805-2812	5.5	15	
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129	Theory of Elasticity of amorphous networks: Effects of Constraints Along Chains. <i>Macromolecules</i> , 1992 , 25, 4456-4456	5.5	15	
128	Comparison of dynamic rotational isomeric state results with previous expressions for local chain motion. <i>Macromolecules</i> , 1989 , 22, 431-437	5.5	15	

127	Segmental orientation in uniaxially deformed networks: a higher order approximation for finite chains and large deformations. <i>Macromolecules</i> , 1991 , 24, 901-907	5.5	15
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124	Causality, transfer entropy, and allosteric communication landscapes in proteins with harmonic interactions. <i>Proteins: Structure, Function and Bioinformatics</i> , 2017 , 85, 1056-1064	4.2	14
123	Folding dynamics of proteins from denatured to native state: principal component analysis. <i>Journal of Computational Biology</i> , 2004 , 11, 1149-68	1.7	14
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121	Activation energies of local conformational transitions in polymer chains. <i>Macromolecules</i> , 1987 , 20, 23	31 9 :331	1114
120	Anisotropy of static and dynamic orientational correlations in N-alkanes. <i>Journal of Chemical Physics</i> , 1988 , 88, 1228-1234	3.9	14
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114	Minimum energy configurations of the 2-dimensional HP-model of proteins by self-organizing networks. <i>Journal of Computational Biology</i> , 2002 , 9, 613-20	1.7	13
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111	High-pressure cell for simultaneous small-angle x-ray scattering and laser light scattering measurements. <i>Review of Scientific Instruments</i> , 2001 , 72, 2679-2685	1.7	12
110	Novel High-Performance Materials from Starch. 2. Orientation and Mechanical Properties of Lightly Cross-Linked StarchEther Films. <i>Chemistry of Materials</i> , 1998 , 10, 794-803	9.6	12

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108	Mechanical properties of dry and swollen cis-1,4-polyisoprene networks in simple tension: experiment and comparison with theory. <i>Macromolecules</i> , 1989 , 22, 3348-3352	5.5	12	
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105	A dynamic rotational isomeric state approach for extension of the time scale of the local dynamics observed in fully atomistic molecular dynamics simulations: Application to polybutadiene. <i>Journal of Chemical Physics</i> , 1996 , 104, 4828-4834	3.9	11	
104	Stress-strain-swelling behavior of amorphous polymeric networks: comparison of experimental data with theory. <i>Macromolecules</i> , 1989 , 22, 3352-3355	5.5	11	
103	Orientation of rigid rods dissolved in deformed networks. <i>Polymer</i> , 1987 , 28, 727-732	3.9	11	
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101	Response of a single grafted polyethylene chain to simple shear flow: A Brownian dynamics simulation study. <i>Journal of Chemical Physics</i> , 1996 , 105, 2919-2926	3.9	10	
100	Rheology of solutions of rodlike polymers: theory and comparison with experiments. <i>Macromolecules</i> , 1989 , 22, 358-364	5.5	10	
99	Chain dimensions in deformed networks: theory and comparison with experiment. <i>Macromolecules</i> , 1987 , 20, 1917-1924	5.5	10	
98	Experimental determination of segmental orientation in polyisoprene networks by fluorescence polarization and comparison with theory. <i>Macromolecules</i> , 1985 , 18, 1991-1994	5.5	10	
97	Unified Modeling of Familial Mediterranean Fever and Cryopyrin Associated Periodic Syndromes. <i>Computational and Mathematical Methods in Medicine</i> , 2015 , 2015, 893507	2.8	9	
96	Conformational energies and entropies of peptides, and the peptide-protein binding problem. <i>Physical Biology</i> , 2009 , 6, 036014	3	9	
95	Relating the Structure of HIV-1 Reverse Transcriptase to Its Processing Step. <i>Journal of Biomolecular Structure and Dynamics</i> , 2000 , 17 Suppl 1, 49-55	3.6	9	
94	An infra-red dichroism investigation of segmental orientation in dry and swollen poly(dimethylsiloxane) networks. <i>Polymer</i> , 1993 , 34, 1179-1182	3.9	9	
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87	Swelling of sodium chloride filled polybutadiene networks in water, water/ acetone and water/THF mixtures. <i>Polymer</i> , 1998 , 39, 2035-2041	3.9	8
86	Long time stress relaxation of amorphous networks under uniaxial tension: The Dynamic Constrained Junction Model. <i>Polymer</i> , 2008 , 49, 1056-1065	3.9	8
85	Optimum folding pathways of proteins: their determination and properties. <i>Journal of Chemical Physics</i> , 2006 , 124, 134911	3.9	8
84	Collective deformations in proteins determined by a mode analysis of molecular dynamics trajectories. <i>Polymer</i> , 2002 , 43, 431-439	3.9	8
83	Relative Contributions of Coupled Rotations and Small-Amplitude Torsions to Conformational Relaxation in Polymers. <i>Macromolecules</i> , 1996 , 29, 8942-8947	5.5	8
82	Orientational and conformational correlations in deformed polymer chains with fixed end-to-end separation: A Brownian dynamics simulation study. <i>Journal of Chemical Physics</i> , 1992 , 97, 4428-4437	3.9	8
81	Effect of flow on solutions of rodlike molecules. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1986 , 24, 1361-1371	2.6	8
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79	Quantum mechanical calculations of tryptophan and comparison with conformations in native proteins. <i>Journal of Physical Chemistry A</i> , 2006 , 110, 13933-8	2.8	7
78	Novel High-Performance Materials from Starch. 3. Influence of Degree of Substitution and Amylose/Amylopectin Ratio on Performance. <i>Chemistry of Materials</i> , 1998 , 10, 804-811	9.6	7
77	Oriented Gelatin New Source for High-Performance Materials. <i>Journal of Macromolecular Science - Pure and Applied Chemistry</i> , 1996 , 33, 525-540	2.2	7
76	Molecular Aspects of Rubber Elasticity 2004 , 63-89		7
75	The introduction of hydrogen bond and hydrophobicity effects into the rotational isomeric states model for conformational analysis of unfolded peptides. <i>Physical Biology</i> , 2009 , 6, 016001	3	6
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73	Coupling between different modes in local chain dynamics: a modal correlation analysis. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1995 , 91, 2483		6
72	Mechanical properties of thermoplastic elastomers of poly(butylene terephthalate) and poly(ethylene glycol) in a bending deformation. <i>Journal of Applied Polymer Science</i> , 1994 , 51, 145-151	2.9	6
71	Contribution of Short-Range Intramolecular Interactions to Local Chain Dynamics. <i>Macromolecules</i> , 1994 , 27, 3650-3657	5.5	6
70	Configurational properties of polypyrrole chains. <i>Polymer</i> , 1993 , 34, 3887-3892	3.9	6
69	Effect of surrounding medium on intramolecular conformational changes in probe molecules. <i>Macromolecules</i> , 1990 , 23, 3805-3811	5.5	6
68	Effects of chain structure and network constitution on segmental orientation in deformed amorphous networks. <i>Macromolecules</i> , 1988 , 21, 452-457	5.5	6
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66	Advances in constraint theories of rubber-like elasticity of polymers. <i>Current Opinion in Solid State and Materials Science</i> , 2010 , 14, 35-37	12	5
65	The Molecular Basis of Rubberlike Elasticity 2005 , 157-182		5
64	Parameter optimization for the Gaussian model of protein folding. <i>Polymer</i> , 2002 , 43, 495-501	3.9	5
63	Conformational Analysis of Model Poly(ether urethane) Chains in the Unperturbed State and under External Forces. <i>Macromolecules</i> , 2002 , 35, 9825-9831	5.5	5
62	Engineering molecular machines. New Journal of Physics, 2016, 18, 041002	2.9	4
61	Reply to Comment on elastic network models and proteins Physical Biology, 2007, 4, 64-65	3	4
60	Interpretation of segmental orientation in deformed networks in terms of constrained junction model of rubber elasticity. <i>Polymer</i> , 1993 , 34, 1858-1864	3.9	4
59	A closed form solution for the internal dynamics of polymer chains. I. Bonds with independent rotational potentials. <i>Journal of Chemical Physics</i> , 1990 , 92, 4513-4518	3.9	4
58	Orientation of flexible probes dissolved in deformed networks. <i>Polymer</i> , 1988 , 29, 1818-1822	3.9	4
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52	Conformational Properties of the Bacterial Polyester Poly(3-hydroxy-5,8-decadienoate). <i>Macromolecules</i> , 2003 , 36, 1132-1137	5.5	3
51	Effect of flow on solutions of rod-coil block co-polymers. <i>Polymer</i> , 2005 , 46, 275-281	3.9	3
50	Elastic behaviour of solution cross-linked poly(isobutylene) gels under large compression. <i>Polymer</i> , 2001 , 42, 3771-3777	3.9	3
49	Segmental Orientation in Deformed Networks. 2. Molecular Theory for Biaxial Deformation. <i>Macromolecules</i> , 1995 , 28, 582-588	5.5	3
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47	The Scattering of Light by Swollen Networks 1988 , 383-400		3
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39	Model elastomers93-108		2
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34	Dependence of segmental orientation on polymer conformational characteristics. <i>Polymer</i> , 1995 , 36, 4131-4134	3.9	2
33	Time-dependent probability distribution functions for orientational motions of segments in polymer chains. <i>Journal of Chemical Physics</i> , 1992 , 97, 4438-4444	3.9	2
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