Burak Erman

List of Publications by Year in Descending Order

198 papers	6,869 citations	33 h-index	79 g-index
248 ext. papers	7,424 ext. citations	4.4 avg, IF	5.73 L-index

#	Paper	IF	Citations
198	Information flow and allosteric communication in proteins.. *Journal of Chemical Physics*, **2022**, 156, 185101	3.9	0
197	Subsets of Slow Dynamic Modes Reveal Global Information Sources as Allosteric Sites. *Journal of Molecular Biology*, **2022**, 167644	6.5	0
196	Targeting mitochondrial DNA polymerase gamma for selective inhibition of MLH1 deficient colon cancer growth. *PLoS ONE*, **2022**, 17, e0268391	3.7	1
195	Synchronous and Asynchronous Response in Dynamically Perturbed Proteins. *Journal of Physical Chemistry B*, **2021**, 125, 729-739	3.4	2
194	Binding Mechanism of Neutralizing Nanobodies Targeting SARS-CoV-2 Spike Glycoprotein. *Journal of Chemical Information and Modeling*, **2021**, 61, 5152-5160	6.1	1
193	ModiBodies: A computational method for modifying nanobodies in nanobody-antigen complexes to improve binding affinity and specificity. *Journal of Biological Physics*, **2020**, 46, 189-208	1.6	3
192	Comparative effects of oncogenic mutations G12C, G12V, G13D, and Q61H on local conformations and dynamics of K-Ras. *Computational and Structural Biotechnology Journal*, **2020**, 18, 1000-1011	6.8	19
191	Molecular dynamics simulations provide molecular insights into the role of HLA-B51 in Behçet's disease pathogenesis. *Chemical Biology and Drug Design*, **2020**, 96, 644-658	2.9	3
190	Oncogenic G12D mutation alters local conformations and dynamics of K-Ras. *Scientific Reports*, **2019**, 9, 11730	4.9	20
189	Effects of Timolol Treatment on Pancreatic Antioxidant Enzymes in Streptozotocin-induced Diabetic Rats: An Experimental and Computational Study. *Journal of Medical Biochemistry*, **2019**, 38, 306-316	1.9	2
188	Molecular dynamics simulations of site point mutations in the TPR domain of cyclophilin 40 identify conformational states with distinct dynamic and enzymatic properties. *Journal of Chemical Physics*, **2018**, 148, 145101	3.9	7
187	A computational model for controlling conformational cooperativity and function in proteins. *Proteins: Structure, Function and Bioinformatics*, **2018**, 86, 1001-1009	4.2	1
186	Binding stability of peptides on major histocompatibility complex class I proteins: role of entropy and dynamics. *Physical Biology*, **2018**, 15, 026005	3	2
185	Reducing Virulence and Biofilm of Pseudomonas aeruginosa by Potential Quorum Sensing Inhibitor Carotenoid: Zeaxanthin. *Microbial Ecology*, **2017**, 74, 466-473	4.4	39
184	Causality, transfer entropy, and allosteric communication landscapes in proteins with harmonic interactions. *Proteins: Structure, Function and Bioinformatics*, **2017**, 85, 1056-1064	4.2	14
183	Entropy Transfer between Residue Pairs and Allostery in Proteins: Quantifying Allosteric Communication in Ubiquitin. *PLoS Computational Biology*, **2017**, 13, e1005319	5	26
182	A small molecule identified through an in silico screen inhibits Aurora B-INCENP interaction. *Chemical Biology and Drug Design*, **2016**, 88, 783-794	2.9	5

181	Intrinsic K-Ras dynamics: A novel molecular dynamics data analysis method shows causality between residue pair motions. *Scientific Reports*, **2016**, 6, 37012	4.9	19
180	Engineering molecular machines. *New Journal of Physics*, **2016**, 18, 041002	2.9	4
179	Universal features of fluctuations in globular proteins. *Proteins: Structure, Function and Bioinformatics*, **2016**, 84, 721-5	4.2	4
178	A Molecular Dynamics Study of Allosteric Transitions in Leishmania mexicana Pyruvate Kinase. *Biophysical Journal*, **2015**, 109, 1149-56	2.9	13
177	MATHEMATICAL MODELING OF BEHET'S DISEASE: A DYNAMICAL SYSTEMS APPROACH. *Journal of Biological Systems*, **2015**, 23, 231-257	1.6	
176	Cyclophilin40 isomerase activity is regulated by a temperature-dependent allosteric interaction with Hsp90. *Bioscience Reports*, **2015**, 35,	4.1	8
175	Effects of ligand binding upon flexibility of proteins. *Proteins: Structure, Function and Bioinformatics* , **2015**, 83, 805-8	4.2	8
174	Unified Modeling of Familial Mediterranean Fever and Cryopyrin Associated Periodic Syndromes. *Computational and Mathematical Methods in Medicine*, **2015**, 2015, 893507	2.8	9
173	Regulation of ryanodine receptor RyR2 by protein-protein interactions: prediction of a PKA binding site on the N-terminal domain of RyR2 and its relation to disease causing mutations. *F1000Research* , **2015**, 4, 29	3.6	1
172	Conformational transitions in the Ramachandran space of amino acids using the dynamic rotational isomeric state (DRIS) model. *Molecular BioSystems*, **2014**, 10, 663-71		2
171	Mode coupling points to functionally important residues in myosin II. *Proteins: Structure, Function and Bioinformatics*, **2014**, 82, 1777-86	4.2	1
170	A fast approximate method of identifying paths of allosteric communication in proteins. *Proteins: Structure, Function and Bioinformatics*, **2013**, 81, 1097-101	4.2	15
169	Computational and experimental investigation of DNA repair protein photolyase interactions with low molecular weight drugs. *Journal of Molecular Recognition*, **2013**, 26, 297-307	2.6	1
168	Turkey must end violent response to protests. *Science*, **2013**, 341, 236	33.3	2
167	Predicting most probable conformations of a given peptide sequence in the random coil state. *Molecular BioSystems*, **2012**, 8, 3010-6		1
166	Quasi-harmonic fluctuations of two bound peptides. *Proteins: Structure, Function and Bioinformatics* , **2012**, 80, 2769-79	4.2	2
165	Structural cooperativity in histone H3 tail modifications. *Protein Science*, **2011**, 20, 1982-90	6.3	3
164	Native Proteins as Physical Networks: Energy and Geometry Fluctuations and Their Relation to Function. *Macromolecular Symposia*, **2011**, 306-307, 1-10	0.8	

163	Relationships between ligand binding sites, protein architecture and correlated paths of energy and conformational fluctuations. *Physical Biology*, **2011**, 8, 056003	3	13
162	Molecular recognition of H3/H4 histone tails by the tudor domains of JMJD2A: a comparative molecular dynamics simulations study. *PLoS ONE*, **2011**, 6, e14765	3.7	23
161	Identification of ligand binding sites of proteins using the Gaussian Network Model. *PLoS ONE*, **2011**, 6, e16474	3.7	16
160	A comparative molecular dynamics study of methylation state specificity of JMJD2A. *PLoS ONE*, **2011**, 6, e24664	3.7	12
159	VitAL: Viterbi algorithm for de novo peptide design. *PLoS ONE*, **2010**, 5, e10926	3.7	28
158	DNABINDPROT: fluctuation-based predictor of DNA-binding residues within a network of interacting residues. *Nucleic Acids Research*, **2010**, 38, W417-23	20.1	40
157	Anharmonicity, mode-coupling and entropy in a fluctuating native protein. *Physical Biology*, **2010**, 7, 046005	3	8
156	Predicting important residues and interaction pathways in proteins using Gaussian Network Model: binding and stability of HLA proteins. *PLoS Computational Biology*, **2010**, 6, e1000845	5	23
155	Quasi-harmonic analysis of mode coupling in fluctuating native proteins. *Physical Biology*, **2010**, 7, 046006	3	8
154	Evidence of Strain Hardening in DNA Gels. *Macromolecules*, **2010**, 43, 1530-1538	5.5	34
153	Advances in constraint theories of rubber-like elasticity of polymers. *Current Opinion in Solid State and Materials Science*, **2010**, 14, 35-37	12	5
152	Prediction of optimal folding routes of proteins that satisfy the principle of lowest entropy loss: dynamic contact maps and optimal control. *PLoS ONE*, **2010**, 5, e13275	3.7	4
151	The introduction of hydrogen bond and hydrophobicity effects into the rotational isomeric states model for conformational analysis of unfolded peptides. *Physical Biology*, **2009**, 6, 016001	3	6
150	Long time stress relaxation of filled amorphous networks under uniaxial tension: dynamic constrained junction model. *Plastics, Rubber and Composites*, **2009**, 38, 327-332	1.5	1
149	Conformational energies and entropies of peptides, and the peptide-protein binding problem. *Physical Biology*, **2009**, 6, 036014	3	9
148	Analysis of correlations between energy and residue fluctuations in native proteins and determination of specific sites for binding. *Physical Review Letters*, **2009**, 102, 088103	7.4	33
147	Statistical thermodynamics of residue fluctuations in native proteins. *Journal of Chemical Physics*, **2009**, 130, 095103	3.9	16
146	Determination of pair-wise inter-residue interaction forces from folding pathways and their implementation in coarse-grained folding prediction. *Physical Chemistry Chemical Physics*, **2009**, 11, 1949-61	3.6	

145	Probing Protein Folding Dynamics Using Multivariate Statistical Techniques. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2009**, 42, 171-176		
144	Prediction of binding sites in receptor-ligand complexes with the Gaussian Network Model. *Physical Review Letters*, **2008**, 100, 228102	7.4	35
143	Chapter 9 Polymer Networks: Elastomers. *Comprehensive Analytical Chemistry*, **2008**, 53, 337-383	1.9	2
142	Long time stress relaxation of amorphous networks under uniaxial tension:The Dynamic Constrained Junction Model. *Polymer*, **2008**, 49, 1056-1065	3.9	8
141	Optimum folding pathways for growing protein chains. *Physical Biology*, **2007**, 4, 305-16	3	2
140	Reply to Comment on elastic network models and proteins*Physical Biology*, **2007**, 4, 64-65	3	4
139	Computational basis of knowledge-based conformational probabilities derived from local- and long-range interactions in proteins. *Proteins: Structure, Function and Bioinformatics*, **2007**, 66, 29-40	4.2	13
138	Rubberlike Elasticity: A Molecular Primer **2007**,		97
137	Control of optical anisotropy at large deformations in PMMA/chlorinated-PHB (PHB-Cl) blends: Mechano-optical behavior. *Polymer*, **2006**, 47, 8183-8193	3.9	16
136	Aggregation of Fillers Blended into Random Elastomeric Networks: Theory and Comparison with Experiments. *Macromolecular Chemistry and Physics*, **2006**, 207, 1515-1524	2.6	13
135	Optimum folding pathways of proteins: their determination and properties. *Journal of Chemical Physics*, **2006**, 124, 134911	3.9	8
134	The gaussian network model: precise prediction of residue fluctuations and application to binding problems. *Biophysical Journal*, **2006**, 91, 3589-99	2.9	51
133	Quantum mechanical calculations of tryptophan and comparison with conformations in native proteins. *Journal of Physical Chemistry A*, **2006**, 110, 13933-8	2.8	7
132	Relationships between unfolded configurations of proteins and dynamics of folding to the native state. *Journal of Polymer Science, Part B: Polymer Physics*, **2006**, 44, 3667-3678	2.6	2
131	The Molecular Basis of Rubberlike Elasticity **2005**, 157-182		5
130	Effect of flow on solutions of rod-coil block co-polymers. *Polymer*, **2005**, 46, 275-281	3.9	3
129	Effect of filler amount on thermoelastic properties of poly(dimethylsiloxane) networks. *Polymer*, **2005**, 46, 4127-4134	3.9	41
128	Folding dynamics of proteins from denatured to native state: principal component analysis. *Journal of Computational Biology*, **2004**, 11, 1149-68	1.7	14

127	Palladium Nanoparticles by Electrospinning from Poly(acrylonitrile-co-acrylic acid)–PdCl2 Solutions. Relations between Preparation Conditions, Particle Size, and Catalytic Activity. *Macromolecules*, **2004**, 37, 1787-1792	5.5	249
126	Dynamics of large-scale fluctuations in native proteins. Analysis based on harmonic inter-residue potentials and random external noise. *Polymer*, **2004**, 45, 641-648	3.9	16
125	Relationships between amino acid sequence and backbone torsion angle preferences. *Proteins: Structure, Function and Bioinformatics*, **2004**, 55, 992-8	4.2	40
124	Effect of Chemical Composition on Large Deformation Mechanooptical Properties of High Strength Thermoplastic Poly(urethane urea)s. *Macromolecules*, **2004**, 37, 8676-8685	5.5	24
123	Molecular Aspects of Rubber Elasticity **2004**, 63-89		7
122	Pulse Propagation in End-Linked Poly(dimethylsiloxane) Networks. *Macromolecules*, **2003**, 36, 6127-6134	5.5	10
121	Conformational Properties of the Bacterial Polyester Poly(3-hydroxy-5,8-decadienoate). *Macromolecules*, **2003**, 36, 1132-1137	5.5	3
120	The elastic net algorithm and protein structure prediction. *Journal of Computational Chemistry*, **2002**, 23, 77-83	3.5	19
119	Collective deformations in proteins determined by a mode analysis of molecular dynamics trajectories. *Polymer*, **2002**, 43, 431-439	3.9	8
118	Electrospinning of polyurethane fibers. *Polymer*, **2002**, 43, 3303-3309	3.9	813
117	Parameter optimization for the Gaussian model of protein folding. *Polymer*, **2002**, 43, 495-501	3.9	5
116	Minimum energy configurations of the 2-dimensional HP-model of proteins by self-organizing networks. *Journal of Computational Biology*, **2002**, 9, 613-20	1.7	13
115	Dimensions of Polystyrene Particles Deposited on Mica from Dilute Cyclohexane Solution at Different Temperatures. *Macromolecules*, **2002**, 35, 7986-7992	5.5	1
114	Conformational Analysis of Model Poly(ether urethane) Chains in the Unperturbed State and under External Forces. *Macromolecules*, **2002**, 35, 9825-9831	5.5	5
113	Free radical crosslinking of unsaturated bacterial polyesters obtained from soybean oily acids. *Polymer Bulletin*, **2001**, 46, 389-394	2.4	45
112	Elastic behaviour of solution cross-linked poly(isobutylene) gels under large compression. *Polymer*, **2001**, 42, 3771-3777	3.9	3
111	Property optimization in nitrile rubber composites via hybrid filler systems. *Journal of Applied Polymer Science*, **2001**, 79, 366-374	2.9	32
110	High-pressure cell for simultaneous small-angle x-ray scattering and laser light scattering measurements. *Review of Scientific Instruments*, **2001**, 72, 2679-2685	1.7	12

109	Conformational features of poly(1,1-dihydroperfluorooctyl acrylate) and poly(vinyl acetate) diblock oligomers in supercritical carbon dioxide. *Journal of Chemical Physics*, **2001**, 114, 5444-5449	3.9	15
108	Analysis of multiple folding routes of proteins by a coarse-grained dynamics model. *Biophysical Journal*, **2001**, 81, 3534-44	2.9	15
107	Hybrid reinforcement in nitrile rubber composites. *Macromolecular Symposia*, **2001**, 169, 269-274	0.8	2
106	Gaussian model of protein folding. *Journal of Chemical Physics*, **2000**, 112, 1050-1056	3.9	22
105	A Theoretical and Experimental Study of Filler Effect on Stress-Deformation-Segmental Orientation Relations for Poly(dimethylsiloxane) Networks. *Macromolecules*, **2000**, 33, 8858-8864	5.5	52
104	Relating the Structure of HIV-1 Reverse Transcriptase to Its Processing Step. *Journal of Biomolecular Structure and Dynamics*, **2000**, 17 Suppl 1, 49-55	3.6	9
103	Solution Cross-Linked Poly(isobutylene) Gels: Synthesis and Swelling Behavior. *Macromolecules*, **2000**, 33, 4822-4827	5.5	51
102	Application of the Gaussian theory of elastomeric networks to native proteins: analysis of fluctuations and the dynamic scattering function. *Computational and Theoretical Polymer Science*, **1999**, 9, 295-299		1
101	Local Dynamics of cis-1,4-Polybutadiene and cis-1,4-Polyisoprene. A Comparative Study Based on Cooperative Kinematics Theory and NMR Experiments. *Macromolecules*, **1999**, 32, 3017-3024	5.5	12
100	Collective motions in HIV-1 reverse transcriptase: examination of flexibility and enzyme function. *Journal of Molecular Biology*, **1999**, 285, 1023-37	6.5	186
99	Swelling of sodium chloride filled polybutadiene networks in water, water/ acetone and water/THF mixtures. *Polymer*, **1998**, 39, 2035-2041	3.9	8
98	Identification of kinetically hot residues in proteins. *Protein Science*, **1998**, 7, 2522-32	6.3	105
97	Novel High-Performance Materials from Starch. 1. Factors Influencing the Lyotropic Liquid Crystallinity of Some Starch Ethers. *Chemistry of Materials*, **1998**, 10, 784-793	9.6	6
96	Calculations on Trimodal Elastomeric Networks. Effects of Chain Length and Composition on Ultimate Properties. *Macromolecules*, **1998**, 31, 3099-3103	5.5	26
95	Novel High-Performance Materials from Starch. 3. Influence of Degree of Substitution and Amylose/Amylopectin Ratio on Performance. *Chemistry of Materials*, **1998**, 10, 804-811	9.6	7
94	Novel High-Performance Materials from Starch. 2. Orientation and Mechanical Properties of Lightly Cross-Linked Starch Ether Films. *Chemistry of Materials*, **1998**, 10, 794-803	9.6	12
93	Vibrational Dynamics of Folded Proteins: Significance of Slow and Fast Motions in Relation to Function and Stability. *Physical Review Letters*, **1998**, 80, 2733-2736	7.4	326
92	Local dynamics and glass transition. *Macromolecular Symposia*, **1998**, 133, 33-46	0.8	2

91	Significance of different modes in dynamics of chains in a dense medium. *Macromolecular Symposia*, **1997**, 121, 163-173	0.8	
90	Efficient characterization of collective motions and interresidue correlations in proteins by low-resolution simulations. *Biochemistry*, **1997**, 36, 13512-23	3.2	72
89	Gaussian Dynamics of Folded Proteins. *Physical Review Letters*, **1997**, 79, 3090-3093	7.4	582
88	Direct evaluation of thermal fluctuations in proteins using a single-parameter harmonic potential. *Folding & Design*, **1997**, 2, 173-81		1073
87	Understanding the recognition of protein structural classes by amino acid composition. *Proteins: Structure, Function and Bioinformatics*, **1997**, 29, 172-185	4.2	104
86	Structures and Properties of Rubberlike Networks **1997**,		243
85	Relative Contributions of Coupled Rotations and Small-Amplitude Torsions to Conformational Relaxation in Polymers. *Macromolecules*, **1996**, 29, 8942-8947	5.5	8
84	Molecular Dynamics Analysis of Coupling between Librational Motions and Isomeric Jumps in Chain Molecules. *Macromolecules*, **1996**, 29, 2510-2514	5.5	17
83	Mechanisms of the Exchange of Diblock Copolymers between Micelles at Dynamic Equilibrium. *Macromolecules*, **1996**, 29, 4764-4771	5.5	79
82	Main-Chain Lyotropic Liquid-Crystalline Elastomers. 1. Syntheses of Cross-Linked Polyisocyanate Gels Acquiring Liquid-Crystalline Behavior in the Swollen State. *Macromolecules*, **1996**, 29, 2796-2804	5.5	20
81	Main-Chain Lyotropic Liquid-Crystalline Elastomers. 2. Orientation and Mechanical Properties of Polyisocyanate Films. *Macromolecules*, **1996**, 29, 2805-2812	5.5	15
80	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. *Journal of Chemical Physics*, **1996**, 104, 4828-4834	3.9	11
79	Response of a single grafted polyethylene chain to simple shear flow: A Brownian dynamics simulation study. *Journal of Chemical Physics*, **1996**, 105, 2919-2926	3.9	10
78	Oriented Gelatin□A New Source for High-Performance Materials. *Journal of Macromolecular Science - Pure and Applied Chemistry*, **1996**, 33, 525-540	2.2	7
77	Dynamic mechanical study of amorphous phases in poly(ethylene terephthalate) /nylon-6 blends. *Polymer*, **1995**, 36, 2371-2377	3.9	41
76	A Diffused-Constraint Theory for the Elasticity of Amorphous Polymer Networks. 1. Fundamentals and Stress-Strain Isotherms in Elongation. *Macromolecules*, **1995**, 28, 5089-5096	5.5	59
75	Segmental Orientation in Deformed Networks. 2. Molecular Theory for Biaxial Deformation. *Macromolecules*, **1995**, 28, 582-588	5.5	3
74	Coupling between different modes in local chain dynamics: a modal correlation analysis. *Journal of the Chemical Society, Faraday Transactions*, **1995**, 91, 2483		6

73	A simple derivation of the exponent for Gaussian chains with excluded volume. *Macromolecular Theory and Simulations*, **1995**, 4, 245-252	1.5	
72	Dependence of segmental orientation on polymer conformational characteristics. *Polymer*, **1995**, 36, 4131-4134	3.9	2
71	A novel orientation technique for semi-rigid polymers. 1. Preparation of cross-linked cellulose acetate and hydroxypropylcellulose films having permanent anisotropy in the swollen state. *Colloid and Polymer Science*, **1994**, 272, 284-292	2.4	15
70	A novel orientation technique for semi-rigid polymers. 2. Mechanical properties of cellulose acetate and hydroxypropylcellulose films. *Colloid and Polymer Science*, **1994**, 272, 393-399	2.4	13
69	Computer simulations of two-dimensional trifunctional bimodal networks. *Macromolecular Theory and Simulations*, **1994**, 3, 151-161	1.5	16
68	Mechanical properties of thermoplastic elastomers of poly(butylene terephthalate) and poly(ethylene glycol) in a bending deformation. *Journal of Applied Polymer Science*, **1994**, 51, 145-151	2.9	6
67	Intramolecular Contributions to Stretched-Exponential Relaxation Behavior in Polymers. *Macromolecules*, **1994**, 27, 5200-5205	5.5	26
66	Role of Structural Heterogeneities on Segmental Orientation in Deformed Chains: Application to Alternating Copolymers. *Macromolecules*, **1994**, 27, 1703-1709	5.5	3
65	Contribution of Short-Range Intramolecular Interactions to Local Chain Dynamics. *Macromolecules*, **1994**, 27, 3650-3657	5.5	6
64	Comparison of the constrained junction and the slip-link models of rubber elasticity. *Macromolecules*, **1993**, 26, 6657-6659	5.5	23
63	Entanglements in amorphous polymer networks. *Makromolekulare Chemie Macromolecular Symposia*, **1993**, 76, 53-62		
62	Stress-strain relations and molecular orientation in highly crosslinked cis-polyisoprene networks. *Polymer*, **1993**, 34, 4997-4999	3.9	1
61	An infra-red dichroism investigation of segmental orientation in dry and swollen poly(dimethylsiloxane) networks. *Polymer*, **1993**, 34, 1179-1182	3.9	9
60	Moduli of model elastomeric networks prepared from polymer chains having a high plateau modulus, and their interpretation in terms of the constrained-chain model. *Journal of Polymer Science, Part B: Polymer Physics*, **1993**, 31, 481-486	2.6	1
59	Orientational mobility in uniaxially deformed polymer chains: a Brownian dynamics simulation study. *Polymer*, **1993**, 34, 440-442	3.9	1
58	Interpretation of segmental orientation in deformed networks in terms of constrained junction model of rubber elasticity. *Polymer*, **1993**, 34, 1858-1864	3.9	4
57	Configurational properties of polypyrrole chains. *Polymer*, **1993**, 34, 3887-3892	3.9	6
56	Orientational and conformational correlations in deformed polymer chains with fixed end-to-end separation: A Brownian dynamics simulation study. *Journal of Chemical Physics*, **1992**, 97, 4428-4437	3.9	8

55	Time-dependent probability distribution functions for orientational motions of segments in polymer chains. *Journal of Chemical Physics*, **1992**, 97, 4438-4444	3.9	2
54	Theory of Elasticity of amorphous networks: Effects of Constraints Along Chains. *Macromolecules*, **1992**, 25, 4456-4456	5.5	15
53	Stochastic treatment of conformational transitions of polymer chains in the sub-Rouse regime. *Macromolecules*, **1991**, 24, 3618-3626	5.5	9
52	Segmental orientation in uniaxially deformed networks: a higher order approximation for finite chains and large deformations. *Macromolecules*, **1991**, 24, 901-907	5.5	15
51	A closed form solution for the internal dynamics of polymer chains. I. Bonds with independent rotational potentials. *Journal of Chemical Physics*, **1990**, 92, 4513-4518	3.9	4
50	A lattice model for segmental orientation in deformed polymeric networks. 2. Effect of chain stiffness and thermotropic interactions. *Macromolecules*, **1990**, 23, 5341-5346	5.5	25
49	Lattice model for segmental orientation in deformed polymeric networks. 1. Contribution of intermolecular correlations. *Macromolecules*, **1990**, 23, 5335-5340	5.5	40
48	Effect of surrounding medium on intramolecular conformational changes in probe molecules. *Macromolecules*, **1990**, 23, 3805-3811	5.5	6
47	Local orientational motions in flexible polymeric chains. *Macromolecules*, **1990**, 23, 1174-1180	5.5	16
46	Determination of Cross-Link Density in Amorphous Networks by Stress-Strain-Swelling Experiments **1990**, 153-169		3
45	Characterization of Segmental Orientation in Stretched Rubbery Networks by the Stationary Fluorescence Polarization Technique. *Journal of Macromolecular Science Part A, Chemistry*, **1989**, 26, 93-123		
44	Comparison of dynamic rotational isomeric state results with previous expressions for local chain motion. *Macromolecules*, **1989**, 22, 431-437	5.5	15
43	Rheology of solutions of rodlike polymers: theory and comparison with experiments. *Macromolecules*, **1989**, 22, 358-364	5.5	10
42	Stress-strain-swelling behavior of amorphous polymeric networks: comparison of experimental data with theory. *Macromolecules*, **1989**, 22, 3352-3355	5.5	11
41	Mechanical properties of dry and swollen cis-1,4-polyisoprene networks in simple tension: experiment and comparison with theory. *Macromolecules*, **1989**, 22, 3348-3352	5.5	12
40	Theory of elasticity of amorphous networks: effect of constraints along chains. *Macromolecules*, **1989**, 22, 3342-3348	5.5	69
39	Application of the dynamic rotational isomeric states model to poly(ethylene oxide) and comparison with nuclear magnetic relaxation data. *Macromolecules*, **1989**, 22, 2396-2403	5.5	14
38	Mechanical instability of amorphous polymeric networks: Asymmetric deformation under symmetric biaxial tension. *Journal of Polymer Science, Part B: Polymer Physics*, **1988**, 26, 1297-1305	2.6	

37	Orientation of flexible probes dissolved in deformed networks. *Polymer*, **1988**, 29, 1818-1822	3.9	4
36	Orientation and anisotropy of dangling chains in a deformed network. *Polymer*, **1988**, 29, 1823-1826	3.9	4
35	Effects of chain structure and network constitution on segmental orientation in deformed amorphous networks. *Macromolecules*, **1988**, 21, 452-457	5.5	6
34	Anisotropy of static and dynamic orientational correlations in N-alkanes. *Journal of Chemical Physics* , **1988**, 88, 1228-1234	3.9	14
33	The Scattering of Light by Swollen Networks **1988**, 383-400		3
32	Anisotropy of Rubber Networks Crosslinked in States of Strain **1988**, 497-508		2
31	Activation energies of local conformational transitions in polymer chains. *Macromolecules*, **1987**, 20, 2310-2311	5.5	14
30	Chain dimensions in deformed networks: theory and comparison with experiment. *Macromolecules*, **1987**, 20, 1917-1924	5.5	10
29	Osmotic compressibility and mechanical moduli of swollen polymeric networks. *Macromolecules*, **1987**, 20, 1696-1701	5.5	23
28	Determination of polymer-solvent interaction parameter from swelling of networks: the system poly(2-hydroxyethyl methacrylate)-diethylene glycol. *Macromolecules*, **1987**, 20, 1353-1356	5.5	24
27	Investigation of local motions in polymers by the dynamic rotational isomeric state model. *Macromolecules*, **1987**, 20, 1368-1376	5.5	35
26	Orientation of rigid rods dissolved in deformed networks. *Polymer*, **1987**, 28, 727-732	3.9	11
25	Polymers and Rubber Elasticity: Thermodynamics of Large Dimensional Changes in Amorphous Systems **1987**, 197-207		
24	Effect of flow on solutions of rodlike molecules. *Journal of Polymer Science, Part B: Polymer Physics*, **1986**, 24, 1361-1371	2.6	8
23	Local solvent effects on configurational characteristics of polymer chains: poly(p-chlorostyrene) in benzene. *Macromolecules*, **1986**, 19, 1703-1709	5.5	9
22	Calculation of Molecular Deformation and Orientation in Elastomers Using the Flory Network Model **1986**, 279-290		
21	Elasticity of real networks: Comparison of molecular theory with experiments. *British Polymer Journal*, **1985**, 17, 140-143		12
20	Theory of segmental orientation in amorphous polymer networks. *Macromolecules*, **1985**, 18, 1985-1991	5.5	19

19	Temperature dependence of swelling of polystyrene networks. *Macromolecules*, **1985**, 18, 1696-1700	5.5	18
18	Experimental determination of segmental orientation in polyisoprene networks by fluorescence polarization and comparison with theory. *Macromolecules*, **1985**, 18, 1991-1994	5.5	10
17	Silicone networks with junctions of high functionality and the theory of rubber elasticity. *Journal of Polymer Science, Polymer Physics Edition*, **1984**, 22, 49-55		15
16	Nonhomogeneous state of stress, strain, and swelling in amorphous polymer networks. *Journal of Polymer Science, Polymer Physics Edition*, **1983**, 21, 893-905		13
15	Experimental results relating stress and birefringence to strain in poly(dimethylsiloxane) networks. Comparisons with theory. *Macromolecules*, **1983**, 16, 1607-1613	5.5	59
14	Theory of strain birefringence of amorphous polymer networks. *Macromolecules*, **1983**, 16, 1601-1606	5.5	54
13	Optical anisotropies of aromatic esters and of oligomers of poly(p-oxybenzoate). *The Journal of Physical Chemistry*, **1983**, 87, 2929-2935		18
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11	Optical anisotropies of model analogs of polycarbonates. *Macromolecules*, **1982**, 15, 664-669	5.5	38
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List of Publications

1 Binding mechanism of neutralizing Nanobodies targeting SARS-CoV-2 Spike Glycoprotein 1