

Mark Warner

List of Publications by Year in descending order

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165
papers

7,559
citations

36271

51
h-index

60583

81
g-index

170
all docs

170
docs citations

170
times ranked

2908
citing authors

#	ARTICLE	IF	CITATIONS
1	Interfacial metric mechanics: stitching patterns of shape change in active sheets. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2022, 478, .	1.0	4
2	LEDs driven by AC without transformers or rectifiers. Scientific Reports, 2021, 11, 963.	1.6	5
3	Shape programming lines of concentrated Gaussian curvature. Journal of Applied Physics, 2021, 129, .	1.1	12
4	Metric mechanics with nontrivial topology: Actuating irises, cylinders, and evertors. Physical Review E, 2021, 104, 065004.	0.8	6
5	Topographic Mechanics and Applications of Liquid Crystalline Solids. Annual Review of Condensed Matter Physics, 2020, 11, 125-145.	5.2	58
6	Evolving, complex topography from combining centers of Gaussian curvature. Physical Review E, 2020, 102, 013003.	0.8	12
7	Inflationary routes to Gaussian curved topography. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20200047.	1.0	10
8	Geometry for evolving topographies of light-responsive plastic sheets. Journal of Physics Communications, 2019, 3, 065005.	0.5	1
9	Nematic director fields and topographies of solid shells of revolution. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20170566.	1.0	28
10	Curvature by design and on demand in liquid crystal elastomers. Physical Review E, 2018, 97, 012504.	0.8	53
11	Frame, metric and geodesic evolution in shape-changing nematic shells. Soft Matter, 2017, 13, 8858-8863.	1.2	13
12	Sir Sam Edwards. 1 February 1928 – 7 July 2015. Biographical Memoirs of Fellows of the Royal Society, 2017, 63, 243-271.	0.1	3
13	Shape-programmable materials. Physics Today, 2016, 69, 32-38.	0.3	39
14	Encoding Gaussian curvature in glassy and elastomeric liquid crystal solids. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20160112.	1.0	64
15	Localized soft elasticity in liquid crystal elastomers. Nature Communications, 2016, 7, 10781.	5.8	132
16	Negative Gaussian curvature from induced metric changes. Physical Review E, 2015, 92, 010401.	0.8	19
17	Deep optical penetration dynamics in photobending. Physical Review E, 2015, 92, 013206.	0.8	21
18	Computational analysis of liquid crystalline elastomer membranes: Changing Gaussian curvature without stretch energy. International Journal of Solids and Structures, 2014, 51, 144-153.	1.3	31

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19	Understanding the chain fountain. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2014, 470, 20130689.	1.0	28
20	Optomechanical Conversion by Mechanical Turbines. Physical Review Applied, 2014, 2, .	1.5	5
21	Angular deficits in flat space: remotely controllable apertures in nematic solid sheets. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20120631.	1.0	19
22	Photoferroelectric solar to electrical conversion. Applied Physics Letters, 2013, 102, .	1.5	5
23	Photodynamics of stress in clamped nematic elastomers. Physical Review E, 2013, 87, 062503.	0.8	27
24	Optomechanical elastomeric engine. Physical Review E, 2013, 88, 040501.	0.8	9
25	Mechanical and optical bending of nematic elastomer cantilevers. Physical Review E, 2012, 86, 022701.	0.8	6
26	Theory of photoferroelectric response in SmC* liquids. Journal of Chemical Physics, 2012, 137, 144902.	1.2	2
27	Mechanical frustration and spontaneous polygonal folding in active nematic sheets. Physical Review E, 2012, 86, 060701.	0.8	24
28	The activated morphology of grain boundaries in nematic solid sheets. Proceedings of SPIE, 2012, , .	0.8	7
29	Responsive nematic solid shells: Topology, compatibility, and shape. Europhysics Letters, 2012, 97, 36007.	0.7	31
30	Elasticity of polydomain liquid crystal elastomers. Journal of the Mechanics and Physics of Solids, 2012, 60, 573-590.	2.3	72
31	Blueprinting nematic glass: Systematically constructing and combining active points of curvature for emergent morphology. Physical Review E, 2011, 84, 021711.	0.8	87
32	Solar to electrical conversion via liquid crystal elastomers. Journal of Applied Physics, 2011, 109, 104506.	1.1	26
33	Gaussian curvature from flat elastica sheets. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2011, 467, 1121-1140.	1.0	137
34	Smectic Elastomers. Liquid Crystals Book Series, 2011, , 487-527.	0.0	0
35	Suppression of curvature in nematic elastica. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2010, 466, 3561-3578.	1.0	42
36	Disclination-mediated thermo-optical response in nematic glass sheets. Physical Review E, 2010, 81, 060701.	0.8	100

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37	Curvature in nematic elastica responding to light and heat. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2010, 466, 2975-2989.	1.0	88
38	Anisotropic response of glassy splay-bend and twist nematic cantilevers to light and heat. Physical Review E, 2010, 82, 041111.	0.8	34
39	Mechanical switching of ferroelectric rubber. Physical Review E, 2009, 79, 061704.	0.8	7
40	Two-color nonlinear absorption of light in dye layers. Physical Review A, 2009, 80, .	1.0	8
41	Anisotropic electrostatic actuation. Journal Physics D: Applied Physics, 2009, 42, 115505.	1.3	10
42	Electromechanical elongation of nematic elastomers for actuation. Sensors and Actuators A: Physical, 2009, 149, 120-129.	2.0	24
43	Supersoft Elasticity in Polydomain Nematic Elastomers. Physical Review Letters, 2009, 103, 037802.	2.9	65
44	Changing liquid crystal elastomer ordering with light â€“ a route to opto-mechanically responsive materials. Liquid Crystals, 2009, 36, 1263-1280.	0.9	77
45	Deformation and rotations of free nematic elastomers in response to electric fields. Soft Matter, 2009, 5, 1433.	1.2	40
46	Nonlinear dynamics of optical absorption of intense beams. Physical Review A, 2008, 78, .	1.0	54
47	Bending Dynamics and Directionality Reversal in Liquid Crystal Network Photoactuators. Macromolecules, 2008, 41, 8592-8596.	2.2	180
48	Semisoft elastic response of nematic elastomers to complex deformations. Physical Review E, 2008, 78, 041704.	0.8	56
49	Smectic-Ctilt under shear in smectic-Aelastomers. Physical Review E, 2008, 78, 021705.	0.8	12
50	Smectic- A elastomers with weak director anchoring. Physical Review E, 2008, 78, 011703.	0.8	18
51	Bleaching and stimulated recovery of dyes and of photocantilevers. Physical Review E, 2008, 77, 051710.	0.8	59
52	Mechanical response of smectic-Celastomers. Physical Review E, 2008, 77, 021702.	0.8	15
53	Polarization dependence of optically driven polydomain elastomer mechanics. Physical Review E, 2008, 78, 061701.	0.8	42
54	Linear and Nonlinear Photoinduced Deformations of Cantilevers. Physical Review Letters, 2007, 99, 174302.	2.9	106

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55	Spontaneous shears in smectic elastomers. <i>Physical Review E</i> , 2006, 73, 031706.	0.8	21
56	Mechanical strains and electric fields applied to topologically imprinted elastomers. <i>Physical Review E</i> , 2006, 74, 021708.	0.8	7
57	Nonlinear Photoresponse of Disordered Elastomers. <i>Physical Review Letters</i> , 2006, 96, 237802.	2.9	74
58	Hairpin rubber elasticity. <i>European Physical Journal E</i> , 2005, 16, 97-107.	0.7	24
59	Elasticity of smectic-Elastomers. <i>Physical Review E</i> , 2005, 71, 021708.	0.8	63
60	Soft elasticity in smectic elastomers. <i>Physical Review E</i> , 2005, 72, 011703.	0.8	38
61	Chiral-mechanical transitions in topologically imprinted elastomers. <i>Physical Review E</i> , 2005, 72, 051718.	0.8	4
62	Commentary on "Mechanical properties of monodomain side-chain nematic elastomers" by P. Martiny, P. Stein, H. Finkelmann, H. Pleiner and H.R. Brand. <i>European Physical Journal E</i> , 2004, 14, 323-327.	0.7	18
63	Photoinduced Deformations of Beams, Plates, and Films. <i>Physical Review Letters</i> , 2004, 92, 134302.	2.9	153
64	Reflectivity of cholesteric liquid crystals with spatially varying pitch. <i>European Physical Journal E</i> , 2003, 12, 515-521.	0.7	13
65	Isotropic-to-cholesteric transition in liquid crystal elastomers. <i>Physical Review E</i> , 2003, 67, 011701.	0.8	8
66	Thermal and photo-actuation in nematic elastomers. <i>Macromolecular Symposia</i> , 2003, 200, 81-92.	0.4	46
67	Liquid crystalline elastomers: dynamics and relaxation of microstructure. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2003, 361, 653-664.	1.6	36
68	Uniaxial and biaxial soft deformations of nematic elastomers. <i>Physical Review E</i> , 2002, 65, 051707.	0.8	11
69	Photonic band structure of cholesteric elastomers. <i>Physical Review E</i> , 2002, 65, 056614.	0.8	61
70	A New Opto-Mechanical Effect in Solids. <i>Physical Review Letters</i> , 2001, 87, 015501.	2.9	922
71	Cholesteric elastomers: Deformable photonic solids. <i>Physical Review E</i> , 2001, 64, 041803.	0.8	54
72	The elastic anisotropy of nematic elastomers. <i>European Physical Journal E</i> , 2001, 5, 281-293.	0.7	123

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73	Mechanical and order rigidity of nematic elastomers. <i>European Physical Journal E</i> , 2001, 5, 295-307.	0.7	17
74	Linear hydrodynamics and viscoelasticity of nematic elastomers. <i>European Physical Journal E</i> , 2001, 4, 343-353.	0.7	67
75	Hyperbranched Architectures for NLO Polymers. <i>Molecular Crystals and Liquid Crystals</i> , 2001, 356, 175-183.	0.3	6
76	Photonic band structure of highly deformable self-assembling systems. <i>Physical Review E</i> , 2001, 65, 010702.	0.8	15
77	Anomalous Viscoelastic Response of Nematic Elastomers. <i>Physical Review Letters</i> , 2001, 86, 4044-4047.	2.9	72
78	Imprinted Networks as Chiral Pumps. <i>Physical Review Letters</i> , 2001, 86, 5309-5312.	2.9	21
79	Theory of Chiral Imprinting. <i>Physical Review Letters</i> , 2000, 84, 5335-5338.	2.9	30
80	Untwisting of a Cholesteric Elastomer by a Mechanical Field. <i>Physical Review Letters</i> , 2000, 85, 2320-2323.	2.9	76
81	Director rotation via photoinduced differential depletion in nematic dyes. <i>Physical Review E</i> , 2000, 62, 4431-4434.	0.8	5
82	The elasticity and failure of fluid-filled cellular solids: Theory and experiment. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2000, 97, 1370-1375.	3.3	39
83	Electric field dependence of poling response for nematic liquid crystalline main chain polymers with large second order optical nonlinearities. <i>Synthetic Metals</i> , 2000, 115, 151-155.	2.1	2
84	Dynamics of soft and semisoft nematic elastomers. <i>Physical Review E</i> , 1999, 60, 603-609.	0.8	17
85	Electromechanical Fredericks effects in nematic gels. <i>Physical Review E</i> , 1999, 60, 1872-1879.	0.8	37
86	New elastic behaviour arising from the unusual constitutive relation of nematic solids. <i>Journal of the Mechanics and Physics of Solids</i> , 1999, 47, 1355-1377.	2.3	63
87	Piezoelectricity of chiral nematic elastomers. <i>European Physical Journal B</i> , 1999, 8, 595-601.	0.6	27
88	Second order nonlinear optical response of nematic liquid crystalline main chain polymers. <i>Synthetic Metals</i> , 1999, 101, 244-245.	2.1	2
89	The coupling of chiral chains to mechanical distortions in elastomers. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 1999, 455, 3629-3644.	1.0	1
90	Nematic Main Chain Polymers with Head-to-Tail Structure: Synthesis and Enhanced NLO Response. <i>Macromolecules</i> , 1998, 31, 3519-3531.	2.2	26

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91	Finite extensibility effects in nematic elastomers. <i>Journal of Chemical Physics</i> , 1998, 108, 8743-8748.	1.2	9
92	Comment on "Director reorientation in nematic liquid-single-crystal elastomers by external mechanical stress". <i>Europhysics Letters</i> , 1997, 37, 495-498.	0.7	4
93	Nuclear Magnetic Resonance Line Shape from Strained Gaussian Networks. <i>Macromolecules</i> , 1997, 30, 4733-4736.	2.2	19
94	Compositional Fluctuations and Semisoftness in Nematic Elastomers. <i>Macromolecules</i> , 1997, 30, 4189-4195.	2.2	57
95	Nematic Elastomers Cross-Linked by Rigid Rod Linkers. <i>Macromolecules</i> , 1997, 30, 4196-4204.	2.2	36
96	Critical Stripe-Domain Instability of Nematic Elastomers. <i>Journal De Physique II</i> , 1997, 7, 1059-1069.	0.9	87
97	The swelling of nematic elastomers by nematogenic solvents. <i>Macromolecular Theory and Simulations</i> , 1997, 6, 37-52.	0.6	33
98	Elastic Instability and Stripe Domains in Liquid Crystalline Elastomers. <i>Journal De Physique II</i> , 1996, 6, 1273-1290.	0.9	109
99	Nematic elastomers "A new state of matter?". <i>Progress in Polymer Science</i> , 1996, 21, 853-891.	11.8	257
100	Non-Uniform Deformations in Liquid Crystalline Elastomers. <i>Journal De Physique II</i> , 1996, 6, 1049-1060.	0.9	14
101	Pulsed gradient spin-echo nuclear magnetic resonance of confined Brownian particles. <i>Journal of Chemical Physics</i> , 1995, 102, 4619-4624.	1.2	7
102	Fluctuations and Long-Range Order in Smectic Elastomers. <i>Europhysics Letters</i> , 1995, 30, 343-348.	0.7	23
103	Multistage Crosslinking of Nematic Networks. <i>Macromolecules</i> , 1995, 28, 4299-4302.	2.2	13
104	Analysis of Experiments on Nematic Elastomers. <i>Macromolecules</i> , 1995, 28, 4296-4298.	2.2	5
105	Soft Rubber Elasticity. <i>Macromolecules</i> , 1995, 28, 4303-4306.	2.2	55
106	Deformation-induced orientational transitions in liquid crystals elastomer. <i>Journal De Physique II</i> , 1994, 4, 75-91.	0.9	62
107	"Soft elasticity" deformation without resistance in liquid crystal elastomers. <i>Journal De Physique II</i> , 1994, 4, 93-102.	0.9	120
108	Layer-network coupling in smectic elastomers. <i>Journal De Physique II</i> , 1994, 4, 1457-1459.	0.9	18

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109	Orientation of nematic elastomers and gels by electric fields. Journal De Physique II, 1994, 4, 667-676.	0.9	36
110	Orientalational Order in Strained Nematic Networks. Macromolecules, 1994, 27, 7067-7075.	2.2	55
111	Continuum theory of elasticity and piezoelectric effects in smectic A elastomers. Journal De Physique II, 1994, 4, 111-126.	0.9	22
112	Instabilities and melting in a two-dimensional magnetic dipolar system. Physica A: Statistical Mechanics and Its Applications, 1993, 194, 199-208.	1.2	1
113	Elasticity of nematic networks and nematic effects in conventional rubbers. Macromolecules, 1993, 26, 1078-1085.	2.2	21
114	Transesterification in nematic polymers. Macromolecules, 1993, 26, 4499-4505.	2.2	7
115	A new main-chain thermotropic liquid-crystalline polymer based on a substituted cyanostilbene: synthesis, thermo-optic observations and linear electro-optic effect measurements. Synthetic Metals, 1993, 61, 159-162.	2.1	16
116	Transitions and instabilities in liquid crystal elastomers. Physical Review E, 1993, 47, R3838-R3840.	0.8	147
117	The elasticity of nematic networks. Makromolekulare Chemie Macromolecular Symposia, 1993, 76, 257-267.	0.6	0
118	Nonlocal dielectric response in dipolar polymers. Journal De Physique II, 1993, 3, 503-513.	0.9	5
119	Mathematical modelling of retinal tear formation: Implications for the use of heavy liquids. Eye, 1992, 6, 69-74.	1.1	10
120	Discrete and continuum models of nematic polymers. Journal of Physics A, 1992, 25, 2831-2841.	1.6	1
121	Phase equilibria of swollen nematic elastomers. Macromolecules, 1992, 25, 445-449.	2.2	41
122	Biaxial effects in nematic comblike polymers. Macromolecules, 1992, 25, 4329-4338.	2.2	7
123	Mathematical modelling of the elastic properties of retina: A determination of Young's modulus. Eye, 1992, 6, 556-559.	1.1	80
124	Theory of main chain nematic polymers with spacers of varying degree of flexibility. Liquid Crystals, 1992, 12, 385-401.	0.9	19
125	Aggregation in dense solutions of rods. Journal of the Chemical Society, Faraday Transactions, 1991, 87, 861.	1.7	2
126	Elasticity and phase behavior of nematic elastomers. Macromolecules, 1991, 24, 4932-4941.	2.2	73

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127	Nematic elastomers. <i>Physica Scripta</i> , 1991, T35, 53-56.	1.2	3
128	Statics and dynamics of hairpins in worm-like main chain nematic polymer liquid crystals. <i>Journal De Physique</i> , 1990, 51, 317-339.	1.8	44
129	Torsional defects, dielectric response and dynamics of comb polymer liquid crystals. <i>Liquid Crystals</i> , 1989, 4, 325-340.	0.9	3
130	Transitions in Nematic Networks. <i>Molecular Crystals and Liquid Crystals Incorporating Nonlinear Optics</i> , 1988, 155, 539-547.	0.3	3
131	Higher-order director fluctuations. <i>Journal of the Chemical Society, Faraday Transactions 2</i> , 1988, 84, 997.	1.1	52
132	Theory of nematic networks. <i>Journal of Chemical Physics</i> , 1988, 88, 4008-4013.	1.2	204
133	Phases and Conformations Of Comb Polymer Liquid Crystals. <i>Molecular Crystals and Liquid Crystals Incorporating Nonlinear Optics</i> , 1988, 155, 433-442.	0.3	8
134	A Scaling Approach to Elasticity and Flow in Solid Foams. <i>Europhysics Letters</i> , 1988, 5, 623-628.	0.7	26
135	Anomalous Dielectric and Non-Linear Optical Response in Main and Side Chain Polymer Nematics and Smectics. <i>Materials Research Society Symposia Proceedings</i> , 1988, 134, 61.	0.1	5
136	Theory of nematic comb-like polymers. <i>Journal of Physics A</i> , 1987, 20, 713-731.	1.6	63
137	Giant dielectric response and hairpins in polymeric nematics. <i>Physical Review Letters</i> , 1987, 58, 393-396.	2.9	52
138	Field effects and the critical end point in polymeric nematics. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1986, 119, 181-184.	0.9	13
139	Theory of nematic backbone polymer phases and conformations. <i>Journal of Physics A</i> , 1986, 19, 2215-2227.	1.6	81
140	Layer Hopping by Chains in Polymeric Smectics?. <i>Physical Review Letters</i> , 1986, 56, 1268-1271.	2.9	60
141	The stability of quasi 2D lattices of magnetic holes. <i>Journal of Physics A</i> , 1985, 18, 2325-2341.	1.6	18
142	Rod to coil transitions in nematic polymers. <i>Journal of Physics A</i> , 1985, 18, 3007-3026.	1.6	116
143	Neutron refractive index: A Fermi-Huygens theory. <i>Physical Review B</i> , 1985, 32, 6347-6357.	1.1	19
144	Frequency dependence of NMR spin lattice relaxation in bilayer membranes. <i>Journal of Chemical Physics</i> , 1984, 81, 6404-6405.	1.2	75

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145	Powder averages for neutron spectroscopy of anisotropic molecular oscillators. <i>Molecular Physics</i> , 1984, 51, 381-392.	0.8	40
146	Fluctuations, mean fields and the order parameters in nematics. <i>Molecular Physics</i> , 1984, 52, 677-690.	0.8	44
147	The effect of high momentum transfer on scattering from oscillators and crystals. <i>European Physical Journal B</i> , 1984, 56, 13-20.	0.6	30
148	Inelastic Neutron Scattering from Lattices, Molecular Crystals and Powders. NATO ASI Series Series B: Physics, 1984, , 289-326.	0.2	0
149	A New Theory of Nematic Liquid Crystal Mixtures. <i>Molecular Crystals and Liquid Crystals</i> , 1983, 100, 307-326.	0.9	12
150	The theory of neutron scattering from mixed harmonic solids. <i>European Physical Journal B</i> , 1983, 51, 109-126.	0.6	47
151	Theory of light scattering from vesicles. <i>Colloid and Polymer Science</i> , 1983, 261, 508-519.	1.0	12
152	Chain dimensions and interaction parameters in neutron scattering from polymer blends with a labeled component. <i>Macromolecules</i> , 1983, 16, 1931-1935.	2.2	61
153	The Specification of Steric Effects in The Flory Approach to Nematic Fluids. <i>Molecular Crystals and Liquid Crystals</i> , 1982, 80, 67-78.	0.9	12
154	A New Theory of the Equilibrium Properties of Nematic Liquid Crystals. <i>Molecular Crystals and Liquid Crystals</i> , 1982, 80, 79-104.	0.9	25
155	Elasticity of entangled networks. <i>Polymer</i> , 1981, 22, 1010-1018.	1.8	365
156	The dynamics of particular points on a polymer chain. <i>Journal of Physics C: Solid State Physics</i> , 1981, 14, 4985-4994.	1.5	26
157	A van der waals theory with quartic density gradients. <i>Chemical Physics Letters</i> , 1980, 70, 155-158.	1.2	1
158	Interaction energies in nematogens. <i>Journal of Chemical Physics</i> , 1980, 73, 5874-5883.	1.2	29
159	The phase equilibria in thermotropic liquid crystalline systems. <i>Journal of Chemical Physics</i> , 1980, 73, 6327-6332.	1.2	109
160	The effect of disorder on the spectrum of a Hermitian matrix. <i>Journal of Physics A</i> , 1980, 13, 381-396.	1.6	17
161	Spin correlations close to the critical concentration in -Fe alloys. <i>Journal of Magnetism and Magnetic Materials</i> , 1980, 15-18, 259-261.	1.0	3
162	The long-time fluctuations of a Brownian sphere. <i>Journal of Physics A</i> , 1979, 12, 1511-1519.	1.6	6

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163	A dislocation theory of crystal melting and of glasses. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1979, 40, 257-278.	0.7	84
164	Neutron scattering from strained polymer networks. Journal of Physics A, 1978, 11, 1649-1655.	1.6	66
165	Excluded volume effect on quasielastic neutron scattering from concentrated polymer solutions. Journal of Chemical Physics, 1976, 64, 5132-5141.	1.2	17