R Tao

List of Publications by Year
in descending order

87 papers	2,765 citations	236925 25 h-index	175258 52 g-index
88 all docs	88 docs citations	88 times ranked	1165 citing authors

#	Article	IF	Citations
1	Three-dimensional structure of induced electrorheological solid. Physical Review Letters, 1991, 67, 398-401.	7.8	462
2	Structure-enhanced yield stress of magnetorheological fluids. Journal of Applied Physics, 2000, 87, 2634-2638.	2.5	190
3	Laser diffraction determination of the crystalline structure of an electrorheological fluid. Physical Review Letters, 1992, 68, 2555-2558.	7.8	183
4	Reducing the Viscosity of Crude Oil by Pulsed Electric or Magnetic Field. Energy & Fuels, 2006, 20, 2046-2051.	5.1	160
5	Fractional quantization of Hall conductance. Physical Review B, 1983, 28, 1142-1144.	3.2	151
6	Simulation of structure formation in an electrorheological fluid. Physical Review Letters, 1994, 73, 205-208.	7.8	147
7	Super-strong magnetorheological fluids. Journal of Physics Condensed Matter, 2001, 13, R979-R999.	1.8	147
8	Gauge invariance and fractional quantum Hall effect. Physical Review B, 1984, 30, 1097-1098.	3.2	101
9	Ground state of electrorheological fluids from Monte Carlo simulations. Physical Review A, 1991, 44, R6181-R6184.	2.5	77
10	Impurity effect, degeneracy, and topological invariant in the quantum Hall effect. Physical Review B, 1986, 33, 3844-3850.	3.2	68
11	Reducing blood viscosity with magnetic fields. Physical Review E, 2011, 84, 011905.	2.1	66
12	Electric field induced solidification. Applied Physics Letters, 1989, 55, 1844-1846.	3.3	64
13	Reducing viscosity of paraffin base crude oil with electric field for oil production and transportation. Fuel, 2014, 118, 69-72.	6.4	59
14	Structures of an electrorheological fluid. Physical Review E, 1997, 56, 4328-4336.	2.1	58
15	Finite-element analysis of electrostatic interactions in electrorheological fluids. Physical Review E, 1995, 52, 2727-2735.	2.1	54
16	Electric-field-induced phase transition in electrorheological fluids. Physical Review E, 1993, 47, 423-426.	2.1	53
17	Flexible Fixturing with Phase-Change Materials. Part 1. Experimental Study on Magnetorheological Fluids. International Journal of Advanced Manufacturing Technology, 2000, 16, 822-829.	3.0	43
18	Formation of High Temperature Superconducting Balls. Physical Review Letters, 1999, 83, 5575-5578.	7.8	41

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19	Electrorheology Leads to Efficient Combustion. Energy & Fuels, 2008, 22, 3785-3788.	5.1	41
20	Fractional quantization of Hall conductance. II. Physical Review B, 1984, 29, 636-644.	3.2	36
21	Neutron scattering studies of crude oil viscosity reduction with electric field. Fuel, 2014, 134, 493-498.	6.4	36
22	Static shear stress of electrorheological fluids. Physical Review E, 1993, 48, 2744-2751.	2.1	35
23	Structural transitions of an electrorheological and magnetorheological fluid. Physical Review E, 1998, 57, 5761-5765.	2.1	35
24	Fractional statistics and fractional quantized Hall effect. Physical Review B, 1985, 31, 6859-6860.	3.2	33
25	Structures of a Magnetorheological Fluid. International Journal of Modern Physics B, 2001, 15, 851-858.	2.0	28
26	Flexible Fixture Device with Magneto-Rheological Fluids. Journal of Intelligent Material Systems and Structures, 1999, 10, 690-694.	2.5	25
27	Enhance the Yield Shear Stress of Magnetorheological Fluids. International Journal of Modern Physics B, 2001, 15, 549-556.	2.0	23
28	Electrorheology Improves Transportation of Crude Oil. Journal of Intelligent Material Systems and Structures, 2011, 22, 1673-1676.	2.5	23
29	THE PHYSICAL MECHANISM TO REDUCE VISCOSITY OF LIQUID SUSPENSIONS. International Journal of Modern Physics B, 2007, 21, 4767-4773.	2.0	21
30	Electric-field induced low temperature superconducting granular balls. Physica C: Superconductivity and Its Applications, 2002, 377, 357-361.	1.2	20
31	Three-dimensional dielectric photonic crystals of body-centered-tetragonal lattice structure. Applied Physics Letters, 2002, 80, 4702-4704.	3.3	19
32	Electric field suppressed turbulence and reduced viscosity of asphaltene base crude oil sample. Fuel, 2018, 220, 358-362.	6.4	19
33	Viscosity of a one-component polarizable fluid. Physical Review E, 1995, 52, 813-818.	2.1	16
34	Shear flow of one-component polarizable fluid in a strong electric field. Physical Review E, 1996, 53, 3732-3737.	2.1	16
35	Electrorheology for Efficient Energy Production and Conservation. Journal of Intelligent Material Systems and Structures, 2011, 22, 1667-1671.	2.5	16
36	Interactions between a rotating polarized sphere and a stationary one in an electric field. Physical Review E, 2005, 72, 041508.	2.1	13

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37	Suppressing turbulence and enhancing liquid suspension flow in pipelines with electrorheology. Physical Review E, 2015, 91, 012304.	2.1	13
38	ELECTRORHEOLOGICAL FLUIDS UNDER SHEAR. International Journal of Modern Physics B, 2001, 15, 918-929.	2.0	12
39	Comment on Laughlin's wavefunction for the quantised Hall effect. Journal of Physics C: Solid State Physics, 1984, 17, L53-L58.	1.5	11
40	MgB2 superconducting particles in a strong electric field. Physica C: Superconductivity and Its Applications, 2003, 398, 78-84.	1.2	10
41	Structure and dynamics of dipolar fluids under strong shear. Chemical Engineering Science, 2006, 61, 2186-2190.	3.8	10
42	Structure of Polydisperse Inverse Ferrofluids:Â Theory and Computer Simulation. Journal of Physical Chemistry B, 2008, 112, 715-721.	2.6	10
43	Response to the Comments: Fuel Efficiency of Internal Combustion Engines. Energy & Fuels, 2009, 23, 3339-3342.	5.1	10
44	High temperature superconducting ball formation in low frequency ac fields. Physical Review B, 2003, 68, .	3.2	9
45	VISCOSITY REDUCTION IN LIQUID SUSPENSIONS BY ELECTRIC OR MAGNETIC FIELDS. International Journal of Modern Physics B, 2005, 19, 1283-1289.	2.0	9
46	Apply the Electrorheological Effect to Produce Three-Dimensional Photonic Crystals for Laser Applications. International Journal of Modern Physics B, 1999, 13, 2189-2196.	2.0	8
47	Reducing the Viscosity of Diesel Fuel with Electrorheological Effect. Journal of Intelligent Material Systems and Structures, 2011, 22, 1713-1716.	2.5	8
48	STRUCTURE-ENHANCED YIELD SHEAR STRESS IN ELECTRORHEOLOGICAL FLUIDS. International Journal of Modern Physics B, 2002, 16, 2622-2628.	2.0	7
49	Deformation of an electrorheological chain under flow. Journal of Applied Physics, 1993, 74, 942-944.	2.5	6
50	Electrorheological Effect at Cryogenic Temperature. International Journal of Modern Physics B, 1999, 13, 1697-1704.	2.0	6
51	Electrorheology Improves E85 Engine Efficiency and Performance. Journal of Intelligent Material Systems and Structures, 2011, 22, 1707-1711.	2.5	6
52	Ground state energy of the fractional quantised Hall system. Journal of Physics C: Solid State Physics, 1984, 17, L419-L423.	1.5	5
53	Structure and Dynamics of Dipolar Fluids Under Strong Shear. International Journal of Modern Physics B, 2003, 17, 3057-3063.	2.0	4
54	Bunker diesel viscosity is dramatically reduced by electrorheological treatment. International Journal of Modern Physics B, 2018, 32, 1850012.	2.0	4

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55	Dynamic current oscillations in the quantum hall effect. Physics Letters, Section A: General, Atomic and Solid State Physics, 1986, 117, 481-484.	2.1	3
56	Theory of the fractional quantum Hall effect. Journal of Physics C: Solid State Physics, 1986, 19, 173-180.	1.5	3
57	ORDER PARAMETERS AND PHASE TRANSITIONS IN ELECTRORHEOLOGICAL FLUIDS. International Journal of Modern Physics B, 1992, 06, 2635-2649.	2.0	3
58	High temperature superconducting granular balls. Physica C: Superconductivity and Its Applications, 2000, 341-348, 1575-1578.	1.2	3
59	Electric-Field Induced Formation of Superconducting Granular Balls. International Journal of Modern Physics B, 2002, 16, 2529-2535.	2.0	3
60	Integral and fractional quantization of a class of quantum systems. Physical Review B, 1987, 35, 9853-9855.	3.2	2
61	SIMULATION OF SOLID STRUCTURE FORMATION IN AN ELECTRORHEOLOGICAL FLUID. International Journal of Modern Physics B, 1994, 08, 2721-2730.	2.0	2
62	FLUID FLOW AND FALLING BALL EXPERIMENTS IN ER FLUIDS. International Journal of Modern Physics B, 1994, 08, 2823-2833.	2.0	2
63	Path-Integral Approach to the Statistical Physics of One-Dimensional Random Systems. Journal of Statistical Physics, 2001, 103, 575-588.	1.2	2
64	Electrostatic separation of superconducting particles from a mixture. Applied Physics Letters, 2006, 88, 082503.	3.3	2
65	Eliminating the major tornado threat in Tornado Alley. International Journal of Modern Physics B, 2014, 28, 1450175.	2.0	2
66	The Physical Mechanism to Reduce Viscosity of Liquid Suspensions. , 2007, , .		2
67	Response to the comment by N d'Ambrumenil. Journal of Physics C: Solid State Physics, 1984, 17, L977-L978.	1.5	1
68	Finite Element Analysis of Electrorheological Fluids. International Journal of Modern Physics B, 1996, 10, 2877-2884.	2.0	1
69	Constitutive equations for electrorheological fluids based on molecular dynamics. Rheology Series, 1999, , 659-676.	0.1	1
70	STRUCTURE-ENHANCED YIELD SHEAR STRESS IN ELECTRORHEOLOGICAL FLUIDS. , 2002, , .		1
71	Electrorheology improves engine efficiency. Journal of Physics: Conference Series, 2009, 149, 012030.	0.4	1
72	REDUCING THE VISCOSITY OF DIESEL FUEL WITH ELECTROREHOLOGICAL EFFECT. , 2011, , .		1

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73	Comment on â€œSpherical agglomeration of superconducting and normal microparticles with and without applied electric fieldâ€ Physical Review B, 2013, 87, .	3.2	1
74	Electric Field Induced Solidification â€” Theory of Electro-Rheology Fluids. , 1991, , 155-160.		1
75	THERMODYNAMIC STABILITY OF THE TWO-DIMENSIONAL JELLIUM MODEL IN A STRONG MAGNETIC FIELD. International Journal of Modern Physics B, 1989, 03, 129-134.	2.0	0
76	Falling ball experiments in a dilute electrorheological fluid. Journal of Applied Physics, 1994, 75, 193-196.	2.5	0
77	Effective Viscosity of an Electrorheological Fluid. Journal of Intelligent Material Systems and Structures, 1996, 7, 555-559.	2.5	0
78	Electric-Field Induced Formation of Superconducting Granular Balls. , 2002, , .		0
79	INTERACTIONS BETWEEN TWO ROTATING POLARIZED SPHERES. , 2005, , .		0
80	INTERACTIONS BETWEEN TWO ROTATING POLARIZED SPHERES. International Journal of Modern Physics B, 2005, 19, 1215-1221.	2.0	0
81	VISCOSITY REDUCTION IN LIQUID SUSPENSIONS BY ELECTRIC OR MAGNETIC FIELDS. , 2005, , .		0
82	ELECTRORHEOLOGY FOR EFFICIENT ENERGY PRODUCTION AND CONSERVATION. , 2011, , .		0
83	ELECTRORHEOLOGY IMPROVES TRANSPORTATION OF CRUDE OIL. , 2011, , .		0
84	Can we eliminate major tornadoes in Tornado Alley? â€” Response to the Comments. International Journal of Modern Physics B, 2014, 28, 1475005.	2.0	0
85	Application of Electrorheology to Improve Crude Oil Flowing Properties Through Pipeline. , 2016, , .		0
86	ELECTRORHEOLOGY IMPROVES E85-ENGINE PERFORMANCE AND EFFICIENCY. , 2011, , .		0
87	Symmetry Breaking and Fractional Quantization of Quantum Systems. , 1991, , 519-525.		0