Markus HÃ¼tter

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/6301195/publications.pdf

Version: 2024-02-01

88 papers	1,351 citations	430874 18 h-index	395702 33 g-index
90 all docs	90 docs citations	90 times ranked	1194 citing authors

#	Article	IF	Citations
1	Constitutive framework for rheologically complex interfaces with an application to elastoviscoplasticity. Journal of Non-Newtonian Fluid Mechanics, 2022, 301, 104726.	2.4	6
2	Configurational entropy of a finite number of dumbbells close to a wall. European Physical Journal E, 2022, 45, 6.	1.6	1
3	Structure formation in suspensions under uniform electric or magnetic field. Multiscale and Multidisciplinary Modeling, Experiments and Design, 2021, 4, 77-97.	2.1	4
4	Microscopic Carriers of Plasticity in Glassy Polystyrene. Macromolecular Theory and Simulations, 2021, 30, 2100021.	1.4	2
5	Structural Transitions in Glassy Atactic Polystyrene Using Transition-State Theory. Journal of Physical Chemistry B, 2021, 125, 7273-7289.	2.6	5
6	Improved associated flow rule for anisotropic viscoplasticity in thermoplastic polymer systems. Mechanics of Materials, 2021, 163, 104087.	3.2	2
7	Free energy calculations by molecular simulations of deformed polymer glasses. Computer Physics Communications, 2020, 249, 107008.	7.5	8
8	Fluctuating viscoelasticity based on a finite number of dumbbells. European Physical Journal E, 2020, 43, 71.	1.6	4
9	Behavior of viscoelastic models with thermal fluctuations. European Physical Journal E, 2020, 43, 24.	1.6	6
10	Transient dynamics of coldâ€rolled and subsequently thermally rejuvenated atacticâ€polystyrene using broadband dielectric spectroscopy. Journal of Polymer Science, 2020, 58, 1998-2009.	3.8	4
11	Roadmap on multiscale materials modeling. Modelling and Simulation in Materials Science and Engineering, 2020, 28, 043001.	2.0	100
12	Characterization of structures of particles. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	2.3	3
13	Multiscale modeling beyond equilibrium. Physics Today, 2020, 73, 36-42.	0.3	7
14	Physical Ageing of Polystyrene: Does Tacticity Play a Role?. Macromolecules, 2019, 52, 5948-5954.	4.8	13
15	Viscoelastic fluid flow simulation using the contravariant deformation formulation. Journal of Non-Newtonian Fluid Mechanics, 2019, 270, 23-35.	2.4	14
16	Network Topology of the States Probed by a Glassy Polymer during Physical Aging. Macromolecular Theory and Simulations, 2019, 28, 1900036.	1.4	5
17	Effect of lowâ€temperature physical aging on the dynamic transitions of atactic polystyrene in the glassy state. Journal of Polymer Science, Part B: Polymer Physics, 2019, 57, 1394-1401.	2.1	12
18	Gauge conditions on the â€œsquare rootâ€•of the conformation tensor in rheological models. Journal of Non-Newtonian Fluid Mechanics, 2019, 271, 104145.	2.4	5

#	Article	IF	Citations
19	Effect of particle-size dynamics on flow properties of dense spongy-particle systems. Journal of Rheology, 2018, 62, 543-557.	2.6	8
20	Stress relaxation of dense spongy-particle systems. Journal of Rheology, 2018, 62, 831-843.	2.6	6
21	Fluctuating viscoelasticity. Journal of Non-Newtonian Fluid Mechanics, 2018, 256, 42-56.	2.4	15
22	Modeling the shape dynamics of suspensions of permeable ellipsoidal particles. Journal of Non-Newtonian Fluid Mechanics, 2018, 259, 23-31.	2.4	4
23	Two-subsystem thermodynamics for the mechanics of aging amorphous solids. Continuum Mechanics and Thermodynamics, 2017, 29, 647-663.	2.2	10
24	Detecting precursors of localization by strain-field analysis. Mechanics of Materials, 2017, 110, 84-97.	3.2	6
25	Two-scale model for the effect of physical aging in elastomers filled with hard nanoparticles. Journal of Computational Physics, 2017, 350, 184-206.	3.8	2
26	Effect of particle-size dynamics on properties of dense spongy-particle systems: Approach towards equilibrium. Physical Review E, 2017, 96, 012604.	2.1	10
27	Formulation of strongly non-local, non-isothermal dynamics for heterogeneous solids based on the GENERIC with application to phase-field modeling. Materials Theory, 2017, 1, .	4.3	1
28	Thermodynamic Model Formulations for Inhomogeneous Solids with Application to Non-isothermal Phase Field Modelling. Journal of Non-Equilibrium Thermodynamics, 2016, 41, 131-139.	4.2	3
29	Finite element formulation of fluctuating hydrodynamics for fluids filled with rigid particles using boundary fitted meshes. Journal of Computational Physics, 2016, 316, 632-651.	3.8	17
30	Concurrent two-scale model for the viscoelastic behavior of elastomers filled with hard nanoparticles. Continuum Mechanics and Thermodynamics, 2016, 28, 1711-1739.	2.2	4
31	Free energy of dislocations in a multi-slip geometry. Journal of the Mechanics and Physics of Solids, 2016, 88, 267-273.	4.8	3
32	Viscoplastic flow rule for dislocation-mediated plasticity from systematic coarse-graining. Journal of the Mechanics and Physics of Solids, 2016, 90, 77-90.	4.8	5
33	Modeling Aging and Mechanical Rejuvenation of Amorphous Solids. Journal of Non-Equilibrium Thermodynamics, 2016, 41, 79-88.	4.2	9
34	Effective mobility of dislocations from systematic coarse-graining. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P06005.	2.3	7
35	Microscopically derived free energy of dislocations. Journal of the Mechanics and Physics of Solids, 2015, 78, 186-209.	4.8	18
36	Statistical-mechanics based modeling of anisotropic viscoplastic deformation. Mechanics of Materials, 2015, 80, 37-51.	3.2	4

#	Article	IF	Citations
37	Collective behaviour of dislocations in a finite medium. Journal of Statistical Mechanics: Theory and Experiment, 2014, 2014, P04028.	2.3	13
38	Parameterization of a reactive force field using a Monte Carlo algorithm. Journal of Computational Chemistry, 2013, 34, 1143-1154.	3.3	74
39	Quasi-linear versus potential-based formulations of forceâ€“flux relations and the GENERIC for irreversible processes: comparisons and examples. Continuum Mechanics and Thermodynamics, 2013, 25, 803-816.	2.2	30
40	Comment on the use of the associated flow rule for transversely isotropic elasto-viscoplastic materials. International Journal of Plasticity, 2013, 51, 132-144.	8.8	8
41	Tracking a glassy polymer on its energy landscape in the course of elastic deformation. Molecular Physics, 2013, 111, 3430-3441.	1.7	21
42	Kinetic model for the mechanical response of suspensions of sponge-like particles. Faraday Discussions, 2012, 158, 407.	3.2	5
43	Microstructural model for the plasticity of amorphous solids. Journal of Applied Polymer Science, 2012, 125, 4376-4389.	2.6	7
44	Thermodynamic model formulation for viscoplastic solids as general equations for non-equilibrium reversibleâ€“irreversible coupling. Continuum Mechanics and Thermodynamics, 2012, 24, 211-227.	2.2	19
45	The influence of the degree of heterogeneity on the elastic properties of random sphere packings. Granular Matter, 2012, 14, 333-340.	2.2	6
46	On the Formulation of Continuum Thermodynamic Models for Solids as General Equations forÂNon-equilibrium Reversible-Irreversible Coupling. Journal of Elasticity, 2011, 104, 357-368.	1.9	12
47	Ideal contribution to the macroscopic quasiequilibrium entropy of anisotropic fluids. Physical Review E, 2011, 83, 061713.	2.1	8
48	Backbone of conductivity in two-dimensional metal-insulator composites. Journal of Applied Physics, 2011, 110, 024909.	2.5	6
49	On the Formulation of Continuum Thermodynamic Models for Solids as General Equations for Non-equilibrium Reversible-Irreversible Coupling. , 2011, , 357-368.		1
50	Automated symbolic calculations in nonequilibrium thermodynamics. Computer Physics Communications, 2010, 181, 2149-2157.	7.5	30
51	More on the microstructural characterization of dense particle gels. Journal of the European Ceramic Society, 2010, 30, 1237-1243.	5.7	3
52	Viscoplasticity of metals: Comments on statistical approaches to dislocation reactions. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 1014-1019.	2.4	0
53	Nonlocal effects in nonisothermal hydrodynamics from the perspective of beyond-equilibrium thermodynamics. Journal of Chemical Physics, 2009, 130, 214908.	3.0	8
54	Energy elastic effects and the concept of temperature in flowing polymeric liquids. Rheologica Acta, 2009, 48, 301-316.	2.4	22

#	Article	IF	Citations
55	What is behind the plastic strain rate?. Rheologica Acta, 2009, 48, 769-778.	2.4	4
56	Coarse Graining in Elasto-viscoplasticity: Bridging the Gap from Microscopic Fluctuations to Dissipation. Advances in Applied Mechanics, 2009, , 253-317.	2.3	15
57	Continuum damage mechanics: combining thermodynamics with a thoughtful characterization of the microstructure. Acta Mechanica, 2008, 201, 297-312.	2.1	9
58	Thermodynamic considerations on non-isothermal finite anisotropic elasto-viscoplasticity. Journal of Non-Newtonian Fluid Mechanics, 2008, 152, 53-65.	2.4	36
59	Finite anisotropic elasticity and material frame indifference from a nonequilibrium thermodynamics perspective. Journal of Non-Newtonian Fluid Mechanics, 2008, 152, 45-52.	2.4	44
60	Continuum model for the simulation of fiber spinning, with quiescent and flow-induced crystallization. Journal of Non-Newtonian Fluid Mechanics, 2008, 150, 177-195.	2.4	43
61	Kinetic Toy Model for Crystal Plasticity. AIP Conference Proceedings, 2008, , .	0.4	0
62	Energy Elastic Effects in Flowing Polymeric Liquids, and the Concept of Nonequilibrium Temperature. AIP Conference Proceedings, 2008, , .	0.4	0
63	Monte Carlo Simulations of Semicrystalline Polyethylene: Interlamellar Domain and Crystal-Melt Interface. , 2007, , 261-284.		3
64	Temperature-Dependent Thermal and Elastic Properties of the Interlamellar Phase of Semicrystalline Polyethylene by Molecular Simulation. Macromolecules, 2006, 39, 439-447.	4.8	65
65	Symbolic computation of the phoretic acceleration of convex particles suspended in a non-uniform gas. Computer Physics Communications, 2006, 175, 650-664.	7.5	2
66	Polyethylene {201} crystal surface: interface stresses and thermodynamics. Polymer, 2006, 47, 5494-5504.	3.8	30
67	Thermodynamic admissibility of the extended Pom-Pom model for branched polymers. Journal of Non-Newtonian Fluid Mechanics, 2006, 139, 209-213.	2.4	9
68	Dissipative electromagnetism from a nonequilibrium thermodynamics perspective. Physical Review E, 2006, 74, 041126.	2.1	9
69	Phoretic forces on convex particles from kinetic theory and nonequilibrium thermodynamics. Journal of Chemical Physics, 2006, 124, 044511.	3.0	5
70	Unifying kinetic approach to phoretic forces and torques onto moving and rotating convex particles. Journal of Chemical Physics, 2006, 125, 044105.	3.0	13
71	Volume Change and Non-Local Driving Force in Crystallization. Journal of Non-Equilibrium Thermodynamics, 2006, 31, .	4.2	1
72	Crystal shapes and crystallization in continuum modeling. Physics of Fluids, 2005, 17, 014107.	4.0	12

#	Article	IF	Citations
73	About the Proper Choice of Variables to Describe Flow-Induced Crystallization in Polymer Melts. Solid Mechanics and Its Applications, 2005, , 315-320.	0.2	0
74	Towards a rheological classification of flow induced crystallization experiments of polymer melts. Rheologica Acta, 2004, 44, 119-134.	2.4	187
75	Crystallization under external pressure. Journal of Non-Newtonian Fluid Mechanics, 2004, 120, 55-68.	2.4	5
76	Solidification in Closed Systems: Cluster Size Distribution and Its Driving Force. Multiscale Modeling and Simulation, 2003, 1, 371-390.	1.6	4
77	Heterogeneity of colloidal particle networks analyzed by means of Minkowski functionals. Physical Review E, 2003, 68, 031404.	2.1	14
78	Dynamic mean-field models from a nonequilibrium thermodynamics perspective. Physical Review E, 2003, 68, 016115.	2.1	13
79	GENERIC Treatment of Compressible Two-Phase Flow: Convection Mechanism of Scalar Morphological Variables. Journal of Non-Equilibrium Thermodynamics, 2002, 27, .	4.2	7
80	Quantification of Microstructures in Stable and Gelated Suspensions from Cryo-SEM. Journal of Colloid and Interface Science, 2002, 248, 340-346.	9.4	27
81	Symbolic test of the Jacobi identity for given generalized â€˜Poissonâ€™ bracket. Computer Physics Communications, 2001, 137, 325-340.	7.5	17
82	Thermodynamically consistent incorporation of the Schneider rate equations into two-phase models. Physical Review E, 2001, 64, 011209.	2.1	15
83	Lack of Syneresis during Gelation of Dense Colloidal Suspensions. Journal of Colloid and Interface Science, 2000, 222, 46-50.	9.4	7
84	Local Structure Evolution in Particle Network Formation Studied by Brownian Dynamics Simulation. Journal of Colloid and Interface Science, 2000, 231, 337-350.	9.4	82
85	Coagulation rates in concentrated colloidal suspensions studied by Brownian dynamics simulation. Physical Chemistry Chemical Physics, 1999, 1, 4429-4436.	2.8	22
86	Fluctuation-dissipation theorem, kinetic stochastic integral and efficient simulations. Journal of the Chemical Society, Faraday Transactions, 1998, 94, 1403-1405.	1.7	37
87	Modification of linear response theory for mean-field approximations. Physical Review E, 1996, 54, 2526-2530.	2.1	7
88	Structure evolution of suspensions under time-dependent electric or magnetic field. Multiscale and Multidisciplinary Modeling, Experiments and Design, 0, , 1.	2.1	1