

# Markus Härtter

## List of Publications by Year in descending order

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88  
papers

1,351  
citations

489802

18  
h-index

445137

33  
g-index

90  
all docs

90  
docs citations

90  
times ranked

1357  
citing authors

#	ARTICLE	IF	CITATIONS
1	Constitutive framework for rheologically complex interfaces with an application to elastoviscoplasticity. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2022, 301, 104726.	1.0	6
2	Configurational entropy of a finite number of dumbbells close to a wall. <i>European Physical Journal E</i> , 2022, 45, 6.	0.7	1
3	Structure formation in suspensions under uniform electric or magnetic field. <i>Multiscale and Multidisciplinary Modeling, Experiments and Design</i> , 2021, 4, 77-97.	0.9	4
4	Microscopic Carriers of Plasticity in Glassy Polystyrene. <i>Macromolecular Theory and Simulations</i> , 2021, 30, 2100021.	0.6	2
5	Structural Transitions in Glassy Atactic Polystyrene Using Transition-State Theory. <i>Journal of Physical Chemistry B</i> , 2021, 125, 7273-7289.	1.2	5
6	Improved associated flow rule for anisotropic viscoplasticity in thermoplastic polymer systems. <i>Mechanics of Materials</i> , 2021, 163, 104087.	1.7	2
7	Free energy calculations by molecular simulations of deformed polymer glasses. <i>Computer Physics Communications</i> , 2020, 249, 107008.	3.0	8
8	Fluctuating viscoelasticity based on a finite number of dumbbells. <i>European Physical Journal E</i> , 2020, 43, 71.	0.7	4
9	Behavior of viscoelastic models with thermal fluctuations. <i>European Physical Journal E</i> , 2020, 43, 24.	0.7	6
10	Transient dynamics of cold-rolled and subsequently thermally rejuvenated atactic polystyrene using broadband dielectric spectroscopy. <i>Journal of Polymer Science</i> , 2020, 58, 1998-2009.	2.0	4
11	Roadmap on multiscale materials modeling. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2020, 28, 043001.	0.8	100
12	Characterization of structures of particles. <i>Applied Physics A: Materials Science and Processing</i> , 2020, 126, 1.	1.1	3
13	Multiscale modeling beyond equilibrium. <i>Physics Today</i> , 2020, 73, 36-42.	0.3	7
14	Physical Ageing of Polystyrene: Does Tacticity Play a Role?. <i>Macromolecules</i> , 2019, 52, 5948-5954.	2.2	13
15	Viscoelastic fluid flow simulation using the contravariant deformation formulation. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2019, 270, 23-35.	1.0	14
16	Network Topology of the States Probed by a Glassy Polymer during Physical Aging. <i>Macromolecular Theory and Simulations</i> , 2019, 28, 1900036.	0.6	5
17	Effect of low-temperature physical aging on the dynamic transitions of atactic polystyrene in the glassy state. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2019, 57, 1394-1401.	2.4	12
18	Gauge conditions on the square root of the conformation tensor in rheological models. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2019, 271, 104145.	1.0	5

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19	Effect of particle-size dynamics on flow properties of dense spongy-particle systems. <i>Journal of Rheology</i> , 2018, 62, 543-557.	1.3	8
20	Stress relaxation of dense spongy-particle systems. <i>Journal of Rheology</i> , 2018, 62, 831-843.	1.3	6
21	Fluctuating viscoelasticity. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2018, 256, 42-56.	1.0	15
22	Modeling the shape dynamics of suspensions of permeable ellipsoidal particles. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2018, 259, 23-31.	1.0	4
23	Two-subsystem thermodynamics for the mechanics of aging amorphous solids. <i>Continuum Mechanics and Thermodynamics</i> , 2017, 29, 647-663.	1.4	10
24	Detecting precursors of localization by strain-field analysis. <i>Mechanics of Materials</i> , 2017, 110, 84-97.	1.7	6
25	Two-scale model for the effect of physical aging in elastomers filled with hard nanoparticles. <i>Journal of Computational Physics</i> , 2017, 350, 184-206.	1.9	2
26	Effect of particle-size dynamics on properties of dense spongy-particle systems: Approach towards equilibrium. <i>Physical Review E</i> , 2017, 96, 012604.	0.8	10
27	Formulation of strongly non-local, non-isothermal dynamics for heterogeneous solids based on the GENERIC with application to phase-field modeling. <i>Materials Theory</i> , 2017, 1, .	2.2	1
28	Thermodynamic Model Formulations for Inhomogeneous Solids with Application to Non-isothermal Phase Field Modelling. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2016, 41, 131-139.	2.4	3
29	Finite element formulation of fluctuating hydrodynamics for fluids filled with rigid particles using boundary fitted meshes. <i>Journal of Computational Physics</i> , 2016, 316, 632-651.	1.9	17
30	Concurrent two-scale model for the viscoelastic behavior of elastomers filled with hard nanoparticles. <i>Continuum Mechanics and Thermodynamics</i> , 2016, 28, 1711-1739.	1.4	4
31	Free energy of dislocations in a multi-slip geometry. <i>Journal of the Mechanics and Physics of Solids</i> , 2016, 88, 267-273.	2.3	3
32	Viscoplastic flow rule for dislocation-mediated plasticity from systematic coarse-graining. <i>Journal of the Mechanics and Physics of Solids</i> , 2016, 90, 77-90.	2.3	5
33	Modeling Aging and Mechanical Rejuvenation of Amorphous Solids. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2016, 41, 79-88.	2.4	9
34	Effective mobility of dislocations from systematic coarse-graining. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2015, 2015, P06005.	0.9	7
35	Microscopically derived free energy of dislocations. <i>Journal of the Mechanics and Physics of Solids</i> , 2015, 78, 186-209.	2.3	18
36	Statistical-mechanics based modeling of anisotropic viscoplastic deformation. <i>Mechanics of Materials</i> , 2015, 80, 37-51.	1.7	4

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37	Collective behaviour of dislocations in a finite medium. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2014, 2014, P04028.	0.9	13
38	Parameterization of a reactive force field using a Monte Carlo algorithm. <i>Journal of Computational Chemistry</i> , 2013, 34, 1143-1154.	1.5	74
39	Quasi-linear versus potential-based formulations of force-flux relations and the GENERIC for irreversible processes: comparisons and examples. <i>Continuum Mechanics and Thermodynamics</i> , 2013, 25, 803-816.	1.4	30
40	Comment on the use of the associated flow rule for transversely isotropic elasto-viscoplastic materials. <i>International Journal of Plasticity</i> , 2013, 51, 132-144.	4.1	8
41	Tracking a glassy polymer on its energy landscape in the course of elastic deformation. <i>Molecular Physics</i> , 2013, 111, 3430-3441.	0.8	21
42	Kinetic model for the mechanical response of suspensions of sponge-like particles. <i>Faraday Discussions</i> , 2012, 158, 407.	1.6	5
43	Microstructural model for the plasticity of amorphous solids. <i>Journal of Applied Polymer Science</i> , 2012, 125, 4376-4389.	1.3	7
44	Thermodynamic model formulation for viscoplastic solids as general equations for non-equilibrium reversible-irreversible coupling. <i>Continuum Mechanics and Thermodynamics</i> , 2012, 24, 211-227.	1.4	19
45	The influence of the degree of heterogeneity on the elastic properties of random sphere packings. <i>Granular Matter</i> , 2012, 14, 333-340.	1.1	6
46	On the Formulation of Continuum Thermodynamic Models for Solids as General Equations for Non-equilibrium Reversible-Irreversible Coupling. <i>Journal of Elasticity</i> , 2011, 104, 357-368.	0.9	12
47	Ideal contribution to the macroscopic quasiequilibrium entropy of anisotropic fluids. <i>Physical Review E</i> , 2011, 83, 061713.	0.8	8
48	Backbone of conductivity in two-dimensional metal-insulator composites. <i>Journal of Applied Physics</i> , 2011, 110, 024909.	1.1	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. <i>Computer Physics Communications</i> , 2010, 181, 2149-2157.	3.0	30
51	More on the microstructural characterization of dense particle gels. <i>Journal of the European Ceramic Society</i> , 2010, 30, 1237-1243.	2.8	3
52	Viscoplasticity of metals: Comments on statistical approaches to dislocation reactions. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2010, 165, 1014-1019.	1.0	0
53	Nonlocal effects in nonisothermal hydrodynamics from the perspective of beyond-equilibrium thermodynamics. <i>Journal of Chemical Physics</i> , 2009, 130, 214908.	1.2	8
54	Energy elastic effects and the concept of temperature in flowing polymeric liquids. <i>Rheologica Acta</i> , 2009, 48, 301-316.	1.1	22

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55	What is behind the plastic strain rate?. <i>Rheologica Acta</i> , 2009, 48, 769-778.	1.1	4
56	Coarse Graining in Elasto-viscoplasticity: Bridging the Gap from Microscopic Fluctuations to Dissipation. <i>Advances in Applied Mechanics</i> , 2009, , 253-317.	1.4	15
57	Continuum damage mechanics: combining thermodynamics with a thoughtful characterization of the microstructure. <i>Acta Mechanica</i> , 2008, 201, 297-312.	1.1	9
58	Thermodynamic considerations on non-isothermal finite anisotropic elasto-viscoplasticity. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2008, 152, 53-65.	1.0	36
59	Finite anisotropic elasticity and material frame indifference from a nonequilibrium thermodynamics perspective. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2008, 152, 45-52.	1.0	44
60	Continuum model for the simulation of fiber spinning, with quiescent and flow-induced crystallization. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2008, 150, 177-195.	1.0	43
61	Kinetic Toy Model for Crystal Plasticity. <i>AIP Conference Proceedings</i> , 2008, , .	0.3	0
62	Energy Elastic Effects in Flowing Polymeric Liquids, and the Concept of Nonequilibrium Temperature. <i>AIP Conference Proceedings</i> , 2008, , .	0.3	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. <i>Macromolecules</i> , 2006, 39, 439-447.	2.2	65
65	Symbolic computation of the phoretic acceleration of convex particles suspended in a non-uniform gas. <i>Computer Physics Communications</i> , 2006, 175, 650-664.	3.0	2
66	Polyethylene {201} crystal surface: interface stresses and thermodynamics. <i>Polymer</i> , 2006, 47, 5494-5504.	1.8	30
67	Thermodynamic admissibility of the extended Pom-Pom model for branched polymers. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2006, 139, 209-213.	1.0	9
68	Dissipative electromagnetism from a nonequilibrium thermodynamics perspective. <i>Physical Review E</i> , 2006, 74, 041126.	0.8	9
69	Phoretic forces on convex particles from kinetic theory and nonequilibrium thermodynamics. <i>Journal of Chemical Physics</i> , 2006, 124, 044511.	1.2	5
70	Unifying kinetic approach to phoretic forces and torques onto moving and rotating convex particles. <i>Journal of Chemical Physics</i> , 2006, 125, 044105.	1.2	13
71	Volume Change and Non-Local Driving Force in Crystallization. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2006, 31, .	2.4	1
72	Crystal shapes and crystallization in continuum modeling. <i>Physics of Fluids</i> , 2005, 17, 014107.	1.6	12

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73	About the Proper Choice of Variables to Describe Flow-Induced Crystallization in Polymer Melts. Solid Mechanics and Its Applications, 2005, , 315-320.	0.1	0
74	Towards a rheological classification of flow induced crystallization experiments of polymer melts. Rheologica Acta, 2004, 44, 119-134.	1.1	187
75	Crystallization under external pressure. Journal of Non-Newtonian Fluid Mechanics, 2004, 120, 55-68.	1.0	5
76	Solidification in Closed Systems: Cluster Size Distribution and Its Driving Force. Multiscale Modeling and Simulation, 2003, 1, 371-390.	0.6	4
77	Heterogeneity of colloidal particle networks analyzed by means of Minkowski functionals. Physical Review E, 2003, 68, 031404.	0.8	14
78	Dynamic mean-field models from a nonequilibrium thermodynamics perspective. Physical Review E, 2003, 68, 016115.	0.8	13
79	GENERIC Treatment of Compressible Two-Phase Flow: Convection Mechanism of Scalar Morphological Variables. Journal of Non-Equilibrium Thermodynamics, 2002, 27, .	2.4	7
80	Quantification of Microstructures in Stable and Gelated Suspensions from Cryo-SEM. Journal of Colloid and Interface Science, 2002, 248, 340-346.	5.0	27
81	Symbolic test of the Jacobi identity for given generalized "Poisson" bracket. Computer Physics Communications, 2001, 137, 325-340.	3.0	17
82	Thermodynamically consistent incorporation of the Schneider rate equations into two-phase models. Physical Review E, 2001, 64, 011209.	0.8	15
83	Lack of Syneresis during Gelation of Dense Colloidal Suspensions. Journal of Colloid and Interface Science, 2000, 222, 46-50.	5.0	7
84	Local Structure Evolution in Particle Network Formation Studied by Brownian Dynamics Simulation. Journal of Colloid and Interface Science, 2000, 231, 337-350.	5.0	82
85	Coagulation rates in concentrated colloidal suspensions studied by Brownian dynamics simulation. Physical Chemistry Chemical Physics, 1999, 1, 4429-4436.	1.3	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.	0.8	7
88	Structure evolution of suspensions under time-dependent electric or magnetic field. Multiscale and Multidisciplinary Modeling, Experiments and Design, 0, , 1.	0.9	1