

# James Langer

## List of Publications by Year in descending order

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34  
papers

1,428  
citations

361045

20  
h-index

377514

34  
g-index

34  
all docs

34  
docs citations

34  
times ranked

1057  
citing authors

#	ARTICLE	IF	CITATIONS
1	Fracture toughness of crystalline solids. <i>Physical Review E</i> , 2021, 103, 063004.	0.8	5
2	Scaling confirmation of the thermodynamic dislocation theory. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 29431-29434.	3.3	17
3	Brittle-ductile transitions in a metallic glass. <i>Physical Review E</i> , 2020, 101, 063004.	0.8	6
4	Statistical Thermodynamics of Crystal Plasticity. <i>Journal of Statistical Physics</i> , 2019, 175, 531-541.	0.5	17
5	Thermodynamic analysis of the Livermore molecular-dynamics simulations of dislocation-mediated plasticity. <i>Physical Review E</i> , 2018, 98, 023006.	0.8	6
6	Thermal effects in dislocation theory. II. Shear banding. <i>Physical Review E</i> , 2017, 95, 013004.	0.8	27
7	Yielding transitions and grain-size effects in dislocation theory. <i>Physical Review E</i> , 2017, 95, 033004.	0.8	17
8	Thermodynamic theory of dislocation-enabled plasticity. <i>Physical Review E</i> , 2017, 96, 053005.	0.8	20
9	Thermodynamic dislocation theory of high-temperature deformation in aluminum and steel. <i>Physical Review E</i> , 2017, 96, 013004.	0.8	48
10	Thermal effects in dislocation theory. <i>Physical Review E</i> , 2016, 94, 063004.	0.8	41
11	Shear-transformation-zone theory of yielding in athermal amorphous materials. <i>Physical Review E</i> , 2015, 92, 012318.	0.8	24
12	Statistical thermodynamics of strain hardening in polycrystalline solids. <i>Physical Review E</i> , 2015, 92, 032125.	0.8	45
13	Stick-slip instabilities in sheared granular flow: The role of friction and acoustic vibrations. <i>Physical Review E</i> , 2015, 92, 022209.	0.8	26
14	Shear flow of angular grains: Acoustic effects and nonmonotonic rate dependence of volume. <i>Physical Review E</i> , 2014, 90, 032204.	0.8	14
15	Theories of glass formation and the glass transition. <i>Reports on Progress in Physics</i> , 2014, 77, 042501.	8.1	85
16	Nonequilibrium thermodynamics and glassy rheology. <i>Soft Matter</i> , 2013, 9, 8786.	1.2	10
17	Ising model of a glass transition. <i>Physical Review E</i> , 2013, 88, 012122.	0.8	22
18	Glass dynamics at high strain rates. <i>Physical Review E</i> , 2012, 86, 011502.	0.8	17

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19	Shear-transformation-zone theory of viscosity, diffusion, and stretched exponential relaxation in amorphous solids. <i>Physical Review E</i> , 2012, 85, 051507.	0.8	20
20	Nonequilibrium thermodynamics of the Kovacs effect. <i>Soft Matter</i> , 2010, 6, 3065.	1.2	27
21	Anomalous diffusion and stretched exponentials in heterogeneous glass-forming liquids: Low-temperature behavior. <i>Physical Review E</i> , 2008, 77, 061505.	0.8	23
22	Anomalous diffusion in heterogeneous glass-forming liquids: Temperature-dependent behavior. <i>Physical Review E</i> , 2008, 78, 051115.	0.8	9
23	Shear-transformation-zone theory of plastic deformation near the glass transition. <i>Physical Review E</i> , 2008, 77, 021502.	0.8	159
24	Steady-state, effective-temperature dynamics in a glassy material. <i>Physical Review E</i> , 2007, 76, 056107.	0.8	61
25	Dynamics and thermodynamics of the glass transition. <i>Physical Review E</i> , 2006, 73, 041504.	0.8	29
26	Excitation Chains at the Glass Transition. <i>Physical Review Letters</i> , 2006, 97, 115704.	2.9	42
27	Dynamic Model of Super-Arrhenius Relaxation Rates in Glassy Materials. <i>Physical Review Letters</i> , 2005, 94, 175701.	2.9	18
28	Dynamics of shear-transformation zones in amorphous plasticity: Formulation in terms of an effective disorder temperature. <i>Physical Review E</i> , 2004, 70, 041502.	0.8	142
29	Dynamics of shear-transformation zones in amorphous plasticity: Energetic constraints in a minimal theory. <i>Physical Review E</i> , 2003, 68, 061507.	0.8	73
30	Microstructural shear localization in plastic deformation of amorphous solids. <i>Physical Review E</i> , 2001, 64, 011504.	0.8	81
31	Rate-and-state theory of plastic deformation near a circular hole. <i>Physical Review E</i> , 1999, 60, 6978-6983.	0.8	14
32	Dynamic ductile to brittle transition in a one-dimensional model of viscoplasticity. <i>Physical Review E</i> , 1998, 58, 1568-1576.	0.8	17
33	Slip complexity in dynamic models of earthquake faults.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1996, 93, 3825-3829.	3.3	62
34	MODELS OF PATTERN FORMATION IN FIRST-ORDER PHASE TRANSITIONS. <i>Series on Directions in Condensed Matter Physics</i> , 1986, , 165-186.	0.1	204