Loic Vanel

List of Publications by Year
in descending order

62 papers	2,006 citations	304743 22 h-index	243625 44 g-index
63 all docs	63 docs citations	63 times ranked	1549 citing authors

#	Article	IF	Citations
1	Memories in sand: Experimental tests of construction history on stress distributions under sandpiles. Physical Review E, 1999, 60, R5040-R5043.	2.1	237
2	Footprints in Sand: The Response of a Granular Material to Local Perturbations. Physical Review Letters, 2001, 87, 035506.	7.8	211
3	Stresses in Silos: Comparison Between Theoretical Models and New Experiments. Physical Review Letters, 2000, 84, 1439-1442.	7.8	119
4	Pattern formation in a vibrated two-dimensional granular layer. Physical Review E, 1996, 53, 2972-2975.	2.1	117
5	Pressure screening and fluctuations at the bottom of a granular column. European Physical Journal B, 1999, 11, 525-533.	1.5	90
6	Statistics of fracture surfaces. Physical Review E, 2007, 75, 016104.	2.1	87
7	Rise-Time Regimes of a Large Sphere in Vibrated Bulk Solids. Physical Review Letters, 1997, 78, 1255-1258.	7.8	79
8	Subcritical Statistics in Rupture of Fibrous Materials: Experiments and Model. Physical Review Letters, 2004, 93, 095505.	7.8	75
9	Rate-dependent elastic hysteresis during the peeling of pressure sensitive adhesives. Soft Matter, 2015, 11, 3480-3491.	2.7	73
10	Reinforcement in Natural Rubber Elastomer Nanocomposites: Breakdown of Entropic Elasticity. Macromolecules, 2013, 46, 8964-8972.	4.8	53
11	Fracture Surfaces as Multiscaling Graphs. Physical Review Letters, 2006, 96, 055509.	7.8	48
12	Continuously Sheared Granular Matter Reproduces in Detail Seismicity Laws. Physical Review Letters, 2019, 122, 218501.	7.8	44
13	Evaluation of the strain-induced martensitic transformation by acoustic emission monitoring in 304L austenitic stainless steel: Identification of the AE signature of the martensitic transformation and power-law statistics. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 492, 392-399.	5.6	43
14	Time-dependent rupture and slow crack growth: elastic and viscoplastic dynamics. Journal Physics D: Applied Physics, 2009, 42, 214007.	2.8	43
15	High Frequency Monitoring Reveals Aftershocks in Subcritical Crack Growth. Physical Review Letters, 2014, 112, 115502.	7.8	43
16	Statistical properties of microcracking in polyurethane foams under tensile test, influence of temperature and density. International Journal of Fracture, 2006, 140, 87-98.	2.2	36
17	Thermal activation of rupture and slow crack growth in a model of homogeneous brittle materials. Europhysics Letters, 2003, 62, 320-326.	2.0	33
18	Revealing the Structure of a Granular Medium through Ballistic Sound Propagation. Physical Review Letters, 2014, 113, 098001.	7.8	23

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19	Physical Mechanisms of Fatigue in Neat Polyamide 6,6. Macromolecules, 2014, 47, 3880-3894.	4.8	23
20	Subcritical crack growth in fibrous materials. Europhysics Letters, 2006, 74, 595-601.	2.0	22
21	Sound and Light from Fractures in Scintillators. Physical Review Letters, 2013, 111, 154301.	7.8	22
22	Experimental Study of the Effect of Disorder on Subcritical Crack Growth Dynamics. Physical Review Letters, 2013, 110, 165506.	7.8	22
23	Strong dynamical effects during stick-slip adhesive peeling. Soft Matter, 2014, 10, 132-138.	2.7	22
24	Interacting Cracks Obey a Multiscale Attractive to Repulsive Transition. Physical Review Letters, 2018, 120, 255501.	7.8	22
25	Discrepancy between Subcritical and Fast Rupture Roughness: A Cumulant Analysis. Physical Review Letters, 2007, 98, 255502.	7.8	21
26	Experimental study of crackling noise: conditions on power law scaling correlated with fracture precursors. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P01018.	2.3	21
27	Effect of Tear Rotation on Ultimate Strength in Reinforced Natural Rubber. Macromolecules, 2011, 44, 7006-7015.	4.8	21
28	A new rotary tribometer to study the wear of reinforced rubber materials. Wear, 2013, 306, 149-160.	3.1	21
29	Static friction and arch formation in granular materials. Physical Review E, 1998, 58, 805-812.	2.1	20
30	The cooperative effect of load and disorder in thermally activated rupture of a two-dimensional random fuse network. Journal of Statistical Mechanics: Theory and Experiment, 2006, 2006, P06020-P06020.	2.3	20
31	Imaging the stickâ€“slip peeling of an adhesive tape under a constant load. Journal of Statistical Mechanics: Theory and Experiment, 2007, 2007, P03005-P03005.	2.3	20
32	Mechanical response and fracture dynamics of polymeric foams. Journal Physics D: Applied Physics, 2009, 42, 214001.	2.8	20
33	Intermittent stick-slip dynamics during the peeling of an adhesive tape from a roller. Physical Review E, 2013, 87, 022601.	2.1	20
34	Dielectric Spectroscopy of a Stretched Polymer Glass: Heterogeneous Dynamics and Plasticity. Macromolecules, 2016, 49, 3889-3898.	4.8	20
35	Slow crack growth: Models and experiments. European Physical Journal: Special Topics, 2007, 146, 341-356.	2.6	18
36	Peeling-angle dependence of the stick-slip instability during adhesive tape peeling. Soft Matter, 2014, 10, 9637-9643.	2.7	17

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37	Multiscale Stick-Slip Dynamics of Adhesive Tape Peeling. Physical Review Letters, 2015, 115, 128301.	7.8	17
38	Repulsion and Attraction between a Pair of Cracks in a Plastic Sheet. Physical Review Letters, 2015, 114, 205501.	7.8	15
39	Attractive and repulsive cracks in a heterogeneous material. Journal of Statistical Mechanics: Theory and Experiment, 2008, 2008, P10022.	2.3	14
40	A new test method to simulate low-severity wear conditions experienced by rubber tire materials. Wear, 2018, 410-411, 72-82.	3.1	14
41	How heat controls fracture: the thermodynamics of creeping and avalanching cracks. Soft Matter, 2020, 16, 9590-9602.	2.7	14
42	Softening Induced Instability of a Stretched Cohesive Granular Layer. Physical Review Letters, 2010, 105, 208001.	7.8	12
43	Fatigue crack growth dynamics in filled natural rubber. Plastics, Rubber and Composites, 2012, 41, 273-276.	2.0	12
44	Slow crack growth in polycarbonate films. Europhysics Letters, 2005, 71, 242-248.	2.0	11
45	Super-Arrhenius dynamics for sub-critical crack growth in two-dimensional disordered brittle media. Europhysics Letters, 2006, 74, 602-608.	2.0	11
46	Bending to Kinetic Energy Transfer in Adhesive Peel Front Microinstability. Physical Review Letters, 2019, 122, 068005.	7.8	11
47	The motion of a freely falling chain tip: Force measurements. American Journal of Physics, 2008, 76, 541-545.	0.7	10
48	Dynamical Law for Slow Crack Growth in Polycarbonate Films. Physical Review Letters, 2007, 99, 205502.	7.8	9
49	Inertial and stick-slip regimes of unstable adhesive tape peeling. Soft Matter, 2016, 12, 4537-4548.	2.7	9
50	Diffusing-wave spectroscopy for arbitrary geometries: numerical analysis by a boundary-element method. Applied Optics, 2001, 40, 4179.	2.1	4
51	Surface oscillations and slow crack growth controlled by creep dynamics of necking instability in a glassy film. European Physical Journal E, 2008, 27, 185-95.	1.6	4
52	Fatigue Behavior in Filled Natural Rubber: Study of the Mechanical Damage Dynamics. Key Engineering Materials, 0, 488-489, 666-669.	0.4	3
53	Long-time damage under creep experiments in disordered materials: Transition from exponential to logarithmic fracture dynamics. European Physical Journal E, 2013, 36, 9847.	1.6	3
54	Science in the Sandbox: Fluctuations, Friction and Instabilities. Lecture Notes in Physics, 2001, , 351-391.	0.7	3

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55	The sound of avalanches: from a global to a local perspective.. EPJ Web of Conferences, 2017, 140, 03015.	0.3	1
56	Brittle-to-quasibrittle transition in creep rupture of 2D disordered elastic materials. Journal of Statistical Mechanics: Theory and Experiment, 2019, 2019, 053301.	2.3	1
57	Immersed cantilever apparatus for mechanics and microscopy. Measurement Science and Technology, 2021, 32, 125603.	2.6	1
58	Dilation as a precursor in a continuous granular fault. EPJ Web of Conferences, 2021, 249, 15006.	0.3	1
59	Mechanical response of a static granular piling. Materials Research Society Symposia Proceedings, 2000, 627, 1.	0.1	0
60	A multi-channel setup to study fractures in scintillators. Measurement Science and Technology, 2016, 27, 125601.	2.6	0
61	Characterization of heat sources due to deformation in unfilled natural rubber. , 2013, , 549-556.		0
62	From Dark Matter to Brittle Fracture. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 183-186.	0.5	0