

# Curt A Bronkhorst

## List of Publications by Year in descending order

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53  
papers

2,704  
citations

236612

25  
h-index

174990

52  
g-index

55  
all docs

55  
docs citations

55  
times ranked

1746  
citing authors

#	ARTICLE	IF	CITATIONS
1	Crystal plasticity model for single crystal Ni-based superalloys: Capturing orientation and temperature dependence of flow stress. <i>International Journal of Plasticity</i> , 2021, 137, 102896.	4.1	40
2	Thermomechanical conversion in metals: dislocation plasticity model evaluation of the Taylor-Quinney coefficient. <i>Acta Materialia</i> , 2021, 202, 170-180.	3.8	17
3	Anisotropic thermal-conductivity degradation in the phase-field method accounting for crack directionality. <i>Engineering Fracture Mechanics</i> , 2021, 245, 107554.	2.0	15
4	Modeling material stress using integrated Gaussian Markov random fields. <i>Journal of Applied Statistics</i> , 2020, 47, 1616-1636.	0.6	1
5	Thermodynamic theory of crystal plasticity: Formulation and application to polycrystal fcc copper. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 138, 103905.	2.3	16
6	A single crystal plasticity finite element formulation with embedded deformation twins. <i>Journal of the Mechanics and Physics of Solids</i> , 2019, 133, 103723.	2.3	10
7	Three-dimensional explicit finite element formulation for shear localization with global tracking of embedded weak discontinuities. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 353, 416-447.	3.4	9
8	Strain localization and dynamic recrystallization in polycrystalline metals: Thermodynamic theory and simulation framework. <i>International Journal of Plasticity</i> , 2019, 119, 171-187.	4.1	42
9	A comparative study of shear band tracking strategies in three-dimensional finite elements with embedded weak discontinuities. <i>Finite Elements in Analysis and Design</i> , 2019, 155, 11-31.	1.7	8
10	Anomalous plasticity of body-centered-cubic crystals with non-Schmid effect. <i>International Journal of Solids and Structures</i> , 2018, 139-140, 138-149.	1.3	33
11	First-principles study of the $\beta$ - $\beta'$ phase transformation in Ti and Zr coupled to slip modes. <i>Journal of Applied Physics</i> , 2018, 123, 045903.	1.1	6
12	Finite element formulation with embedded weak discontinuities for strain localization under dynamic conditions. <i>Computational Mechanics</i> , 2018, 61, 3-18.	2.2	10
13	Dynamic recrystallization in adiabatic shear banding: Effective-temperature model and comparison to experiments in ultrafine-grained titanium. <i>International Journal of Plasticity</i> , 2018, 111, 107-121.	4.1	56
14	Data driven modeling of plastic deformation. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017, 318, 981-1004.	3.4	65
15	Integrated Computational Structure-Material Modeling of Deformation and Failure under Extreme Conditions. <i>International Journal of Fracture</i> , 2017, 208, 1-3.	1.1	1
16	Microstructural effects on damage evolution in shocked copper polycrystals. <i>Acta Materialia</i> , 2016, 116, 270-280.	3.8	43
17	Distribution-enhanced homogenization framework and model for heterogeneous elasto-plastic problems. <i>Journal of the Mechanics and Physics of Solids</i> , 2015, 85, 176-202.	2.3	16
18	Incorporating interface affected zones into crystal plasticity. <i>International Journal of Plasticity</i> , 2015, 65, 206-225.	4.1	60

#	ARTICLE	IF	CITATIONS
19	Characterization of shocked beryllium. <i>Journal of Physics: Conference Series</i> , 2014, 500, 112013.	0.3	2
20	The Influence of Grain Interactions on the Plastic Stability of Heterophase Interfaces. <i>Materials</i> , 2014, 7, 302-322.	1.3	16
21	Evaluating the effects of loading parameters on single-crystal slip in tantalum using molecular mechanics. <i>Philosophical Magazine</i> , 2014, 94, 92-116.	0.7	20
22	Incrementally objective implicit integration of hypoelastic-viscoplastic constitutive equations based on the mechanical threshold strength model. <i>Computational Mechanics</i> , 2014, 53, 941-955.	2.2	12
23	Collective nature of plasticity in mediating phase transformation under shock compression. <i>Physical Review B</i> , 2014, 89, .	1.1	40
24	The influence of peak shock stress on the high pressure phase transformation in Zr. <i>Journal of Physics: Conference Series</i> , 2014, 500, 032003.	0.3	10
25	Influence of shock loading kinetics on the spall response of copper. <i>Journal of Physics: Conference Series</i> , 2014, 500, 112023.	0.3	7
26	A model for finite-deformation nonlinear thermomechanical response of single crystal copper under shock conditions. <i>Journal of the Mechanics and Physics of Solids</i> , 2013, 61, 1877-1894.	2.3	51
27	A crystal plasticity study of heterophase interface character stability of Cu/Nb bicrystals. <i>International Journal of Plasticity</i> , 2013, 48, 72-91.	4.1	51
28	Modeling void growth in polycrystalline materials. <i>Acta Materialia</i> , 2013, 61, 6918-6932.	3.8	81
29	Microstructural examination of quasi-static and dynamic shear in high-purity iron. <i>International Journal of Plasticity</i> , 2013, 40, 23-38.	4.1	34
30	The influence of phase and substructural evolution during dynamic loading on subsequent mechanical properties of zirconium. <i>Acta Materialia</i> , 2013, 61, 7712-7719.	3.8	38
31	Meso-Scale Modeling the Orientation and Interface Stability of Cu/Nb-Layered Composites by Rolling. <i>Jom</i> , 2013, 65, 431-442.	0.9	13
32	A dislocation-based multi-rate single crystal plasticity model. <i>International Journal of Plasticity</i> , 2013, 44, 129-146.	4.1	109
33	Modeling the texture evolution of Cu/Nb layered composites during rolling. <i>International Journal of Plasticity</i> , 2013, 49, 71-84.	4.1	72
34	Influence of boundary structure and near neighbor crystallographic orientation on the dynamic damage evolution during shock loading. <i>Philosophical Magazine</i> , 2013, 93, 833-846.	0.7	35
35	Controlled shock loading conditions for microstructural correlation of dynamic damage behavior. <i>AIP Conference Proceedings</i> , 2012, , .	0.3	4
36	A comparison of calculated damage from square waves and triangular waves. , 2012, , .		2

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37	Effects of grain boundary structure and distribution on the spall response of copper. AIP Conference Proceedings, 2012, , .	0.3	7
38	Effects of microstructure and shock loading conditions on the damage behavior of polycrystalline copper. EPJ Web of Conferences, 2012, 26, 02008.	0.1	5
39	The influence of peak shock stress on the high pressure phase transformation in zirconium. EPJ Web of Conferences, 2012, 26, 02013.	0.1	5
40	ESSENTIAL FEATURES OF FINE SCALE BOUNDARY CONDITIONS FOR SECOND GRADIENT MULTISCALE HOMOGENIZATION OF STATISTICAL VOLUME ELEMENTS. International Journal for Multiscale Computational Engineering, 2012, 10, 461-486.	0.8	19
41	Isolation of kinetic and spatial properties of uni-axial dynamic tensile loading of OFHC copper. EPJ Web of Conferences, 2012, 26, 01040.	0.1	1
42	Effects of grain size and boundary structure on the dynamic tensile response of copper. Journal of Applied Physics, 2011, 110, .	1.1	159
43	A second gradient theoretical framework for hierarchical multiscale modeling of materials. International Journal of Plasticity, 2010, 26, 1248-1275.	4.1	88
44	Mesoscale polycrystal calculations of damage in spallation in metals. EPJ Web of Conferences, 2010, 10, 00006.	0.1	1
45	Dislocation subgrain structures and modeling the plastic hardening of metallic single crystals. Modelling and Simulation in Materials Science and Engineering, 2010, 18, 055001.	0.8	30
46	Two stochastic mean-field polycrystal plasticity methods. Journal of the Mechanics and Physics of Solids, 2009, 57, 1230-1253.	2.3	9
47	Dynamic shear deformation in high purity iron. , 2009, , .		1
48	Modeling the microstructural evolution of metallic polycrystalline materials under localization conditions. Journal of the Mechanics and Physics of Solids, 2007, 55, 2351-2383.	2.3	84
49	An experimental and numerical study of the localization behavior of tantalum and stainless steel. International Journal of Plasticity, 2006, 22, 1304-1335.	4.1	110
50	Simultaneous heat and mass transport in paper sheets during moisture sorption from humid air. International Journal of Heat and Mass Transfer, 2003, 46, 2875-2886.	2.5	32
51	Modelling paper as a two-dimensional elasticâ€“plastic stochastic network. International Journal of Solids and Structures, 2003, 40, 5441-5454.	1.3	71
52	Crystallographic texture evolution in bulk deformation processing of FCC metals. Journal of the Mechanics and Physics of Solids, 1992, 40, 537-569.	2.3	1,006
53	An improved isotropicâ€“kinematic hardening model for moderate deformation metal plasticity. Mechanics of Materials, 1990, 10, 127-147.	1.7	30