Daniel Weygand

List of Publications by Year
in descending order

27 papers	1,629 citations	430874 18 h-index	552781 26 g-index
27 all docs	27 docs citations	27 times ranked	1102 citing authors

#	Article	IF	Citations
1	DAMASK â€“ The DÃ¼sseldorf Advanced Material Simulation Kit for modeling multi-physics crystal plasticity, thermal, and damage phenomena from the single crystal up to the component scale. Computational Materials Science, 2019, 158, 420-478.	3.0	440
2	Aspects of boundary-value problem solutions with three-dimensional dislocation dynamics. Modelling and Simulation in Materials Science and Engineering, 2002, 10, 437-468.	2.0	236
3	Initial dislocation structures in 3-D discrete dislocation dynamics and their influence on microscale plasticity. Acta Materialia, 2009, 57, 1744-1754.	7.9	150
4	Micro-bending tests: A comparison between three-dimensional discrete dislocation dynamics simulations and experiments. Acta Materialia, 2008, 56, 1942-1955.	7.9	131
5	Cyclic response of copper single crystal micro-beams. Scripta Materialia, 2010, 63, 500-503.	5.2	93
6	Discrete dislocation modeling in three-dimensional confined volumes. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 309-310, 420-424.	5.6	64
7	Dislocation motion in tungsten: Atomistic input to discrete dislocation simulations. International Journal of Plasticity, 2013, 47, 126-142.	8.8	63
8	Dislocation multiplication mechanisms â€“ Glissile junctions and their role on the plastic deformation at the microscale. Acta Materialia, 2015, 99, 130-139.	7.9	52
9	Study of dislocation reactions and rearrangements under different loading conditions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 400-401, 158-161.	5.6	49
10	Origin of Anomalous Slip in Tungsten. Physical Review Letters, 2014, 113, 025501.	7.8	45
11	Dislocation multiplication by cross-slip and glissile reaction in a dislocation based continuum formulation of crystal plasticity. Journal of the Mechanics and Physics of Solids, 2019, 132, 103695.	4.8	43
12	Formation of extended prismatic dislocation structures under indentation. Acta Materialia, 2016, 111, 399-406.	7.9	38
13	Dislocation microstructure evolution in cyclically twisted microsamples: a discrete dislocation dynamics simulation. Modelling and Simulation in Materials Science and Engineering, 2011, 19, 074004.	2.0	34
14	Dislocation multiplication in stage II deformation of fcc multi-slip single crystals. Journal of the Mechanics and Physics of Solids, 2018, 119, 319-333.	4.8	34
15	The brittle-to-ductile transition in cold rolled tungsten plates: Impact of crystallographic texture, grain size and dislocation density on the transition temperature. International Journal of Refractory Metals and Hard Materials, 2019, 78, 146-163.	3.8	34
16	Repulsion leads to coupled dislocation motion and extended work hardening in bcc metals. Nature Communications, 2020, 11, 5098.	12.8	26
17	Discrete Dislocation Dynamics simulations of dislocation transport during sliding. Acta Materialia, 2018, 156, 215-227.	7.9	20
18	Multiscale Simulation of Plasticity in bcc Metals. Annual Review of Materials Research, 2015, 45, 369-390.	9.3	18

#	Article	IF	Citations
19	Irreversibility of dislocation motion under cyclic loading due to strainÂgradients. Scripta Materialia, 2017, 129, 69-73.	5.2	14
20	Atomistic simulation of dislocationâ€“void interactions under cyclic loading. Modelling and Simulation in Materials Science and Engineering, 2010, 18, 025006.	2.0	13
21	Recrystallisation towards a single texture component in heavily cold rolled tungsten (W) sheets and its impact on micromechanics. International Journal of Refractory Metals and Hard Materials, 2020, 86, 105084.	3.8	10
22	Data-driven exploration and continuum modeling of dislocation networks. Modelling and Simulation in Materials Science and Engineering, 2020, 28, 065001.	2.0	10
23	Analysis of dislocation microstructure characteristics of surface grains under cyclic loading by discrete dislocation dynamics. Modelling and Simulation in Materials Science and Engineering, 2019, 27, 055004.	2.0	6
24	Aspects on numerical integration of dislocation surface traction fields for discrete dislocation dynamics FEM coupling: the case of emerging dislocations. Modelling and Simulation in Materials Science and Engineering, 2020, 28, 085010.	2.0	3
25	Validation of the applicability of a creep model for directionally solidified eutectics with a lamellar microstructure. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 297-298.	0.2	1
26	Discrete dislocation dynamics study of dislocation microstructure during cyclic loading. , 2018, , 395-416.		1
27	Dislocation structure analysis in the strain gradient of torsion loading: a comparison between modelling and experiment. Modelling and Simulation in Materials Science and Engineering, 2022, 30, 035007.	2.0	1