

# Kumar Ankit

## List of Publications by Year in descending order

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32  
papers

486  
citations

759233

12  
h-index

713466

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32  
all docs

32  
docs citations

32  
times ranked

351  
citing authors

#	ARTICLE	IF	CITATIONS
1	Microstructural evolution in bitaxial crack-seal veins: A phase-field study. <i>Journal of Geophysical Research: Solid Earth</i> , 2015, 120, 3096-3118.	3.4	46
2	Growth direction selection of tilted dendritic arrays in directional solidification over a wide range of pulling velocity: A phase-field study. <i>International Journal of Heat and Mass Transfer</i> , 2018, 117, 1107-1114.	4.8	43
3	Theoretical and numerical study of lamellar eutectoid growth influenced by volume diffusion. <i>Acta Materialia</i> , 2013, 61, 4245-4253.	7.9	39
4	Phase-field study of grain boundary tracking behavior in crack-seal microstructures. <i>Contributions To Mineralogy and Petrology</i> , 2013, 166, 1709-1723.	3.1	38
5	Mechanisms of pearlite spheroidization: Insights from 3D phase-field simulations. <i>Acta Materialia</i> , 2018, 161, 400-411.	7.9	32
6	Phase-Field Modeling of Grain-Boundary Grooving Under Electromigration. <i>Journal of Electronic Materials</i> , 2016, 45, 6233-6246.	2.2	29
7	Deviations from cooperative growth mode during eutectoid transformation: Insights from a phase-field approach. <i>Acta Materialia</i> , 2014, 81, 204-210.	7.9	26
8	Deviations from cooperative growth mode during eutectoid transformation: Mechanisms of polycrystalline eutectoid evolution in Fe-C steels. <i>Acta Materialia</i> , 2015, 97, 316-324.	7.9	21
9	3-D phase-field simulations of self-organized composite morphologies in physical vapor deposited phase-separating binary alloys. <i>Journal of Applied Physics</i> , 2019, 126, 075306.	2.5	21
10	Electromigration-Induced Surface Drift and Slit Propagation in Polycrystalline Interconnects: Insights from Phase-Field Simulations. <i>Physical Review Applied</i> , 2018, 9, .	3.8	18
11	Three-Dimensional Phase-Field Investigation of Pore Space Cementation and Permeability in Quartz Sandstone. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 6378-6396.	3.4	17
12	Phase-field Modeling of Fracture Cementation Processes in 3-D. <i>Journal of Petroleum Science Research</i> , 2015, 4, 79-96.	0.7	17
13	Phase-field simulations of curvature-induced cascading of Widmanstatten-ferrite plates. <i>Acta Materialia</i> , 2017, 123, 317-328.	7.9	12
14	Electric-field-induced lamellar to hexagonally perforated lamellar transition in diblock copolymer thin films: kinetic pathways. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 25609-25620.	2.8	11
15	Phase-field simulations of electromigration-induced defects in interconnects with non-columnar grain microstructure. <i>Journal of Applied Physics</i> , 2020, 127, .	2.5	11
16	Simulation of creep cavity growth in Inconel 718 alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 4209-4216.	5.6	10
17	Evolution of mixed cementite morphologies during non-cooperative eutectoid transformation in Fe-C steels. <i>Computational Materials Science</i> , 2015, 108, 342-347.	3.0	10
18	Influence of substrate interaction and confinement on electric-field-induced transition in symmetric block-copolymer thin films. <i>Physical Review E</i> , 2016, 93, 032504.	2.1	9

#	ARTICLE	IF	CITATIONS
19	Surface rippling during solidification of binary polycrystalline alloy: Insights from 3-D phase-field simulations. <i>Journal of Crystal Growth</i> , 2017, 457, 52-59.	1.5	9
20	Detection of Capillary-Mediated Energy Fields on a Grain Boundary Groove: Solid-Liquid Interface Perturbations. <i>Metals</i> , 2017, 7, 547.	2.3	9
21	Nanostructural evolution in vapor deposited phase-separating binary alloy films of non-equimolar compositions: Insights from a 3D phase-field approach. <i>Journal of Applied Physics</i> , 2020, 128, 175303.	2.5	9
22	Quantifying microstructural evolution via time-dependent reduced-dimension metrics based on hierarchical $n$ -point polytope functions. <i>Physical Review E</i> , 2022, 105, 025306.	2.1	9
23	Measuring solid-liquid interfacial energy fields: diffusion-limited patterns. <i>Journal of Materials Science</i> , 2018, 53, 10955-10978.	3.7	8
24	Remaining Creep Life Assessment Techniques Based on Creep Cavitation Modeling. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2009, 40, 1013-1018.	2.2	5
25	Influence of melt convection on the morphological evolution of seaweed structures: Insights from phase-field simulations. <i>Computational Materials Science</i> , 2019, 170, 109196.	3.0	5
26	Growth competition during columnar solidification of seaweed microstructures. <i>European Physical Journal E</i> , 2020, 43, 14.	1.6	5
27	Multiphysics approaches for modeling nanostructural evolution during physical vapor deposition of phase-separating alloy films. <i>Computational Materials Science</i> , 2021, 199, 110724.	3.0	5
28	Phase-field modeling and $n$ -point polytope characterization of nanostructured protuberances formed during vapor-deposition of phase-separating alloy films. <i>Journal of Applied Physics</i> , 2021, 129, 245301.	2.5	4
29	Predicting the Cu <sub>6</sub> Sn <sub>5</sub> Growth Kinetics During Thermal Aging of Cu-Sn Solder Joints Using Simplistic Kinetic Modeling. <i>Journal of Electronic Materials</i> , 2022, 51, 4063-4072.	2.2	3
30	Analyzing the cooperative growth of intermetallic phases with a curved solidification front. <i>Acta Materialia</i> , 2018, 159, 135-149.	7.9	2
31	Thermodynamic behaviour of solid-liquid grain boundary grooves. <i>Philosophical Magazine</i> , 2020, 100, 1789-1817.	1.6	2
32	Surface Laplacian of interfacial thermochemical potential: its role in solid-liquid pattern formation. <i>Npj Microgravity</i> , 2021, 7, 41.	3.7	1