

Nikhilesh Chawla

List of Publications by Year in descending order

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306
papers

11,923
citations

26630

56
h-index

42399

92
g-index

318
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318
docs citations

318
times ranked

7554
citing authors

#	ARTICLE	IF	CITATIONS
1	Tensile and fracture behavior of silica fibers from the Venus flower basket (<i>Euplectella aspergillum</i>). <i>International Journal of Solids and Structures</i> , 2022, 253, 111622.	2.7	11
2	Predicting the Cu ₆ Sn ₅ 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
3	Parametric optimization of corner radius in hexagonal honeycombs under in-plane compression. <i>Journal of Manufacturing Processes</i> , 2022, 79, 35-46.	5.9	11
4	Continuous Nanoparticle Patterning Strategy in Layer-Structured Nanocomposite Fibers. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	5
5	The Comparative Approach to Bio-Inspired Design: Integrating Biodiversity and Biologists into the Design Process. <i>Integrative and Comparative Biology</i> , 2022, 62, 1153-1163.	2.0	11
6	Effect of Trace Addition of In on Sn-Cu Solder Joint Microstructure Under Electromigration. <i>Journal of Electronic Materials</i> , 2021, 50, 893-902.	2.2	6
7	In situ X-ray microtomography of the compression behaviour of eTPU bead foams with a unique graded structure. <i>Journal of Materials Science</i> , 2021, 56, 5082-5099.	3.7	7
8	Chromophore-Free Sealing and Repair of Soft Tissues Using Mid-Infrared Light-Activated Biosealants. <i>Advanced Functional Materials</i> , 2021, 31, 2007811.	14.9	9
9	Poisson's ratio of eTPU molded bead foams in compression via in situ synchrotron X-ray microtomography. <i>Journal of Materials Science</i> , 2021, 56, 12920-12935.	3.7	5
10	Reducing the risk of rostral bending failure in <i>Curculio</i> Linnaeus, 1758. <i>Acta Biomaterialia</i> , 2021, 126, 350-371.	8.3	3
11	Machine-Learning-based Algorithms for Automated Image Segmentation Techniques of Transmission X-ray Microscopy (TXM). <i>Jom</i> , 2021, 73, 2173-2184.	1.9	14
12	Rheology scaling of spherical metal powders dispersed in thermoplastics and its correlation to the extrudability of filaments for 3D printing. <i>Additive Manufacturing</i> , 2021, 41, 101967.	3.0	14
13	Multiscale investigation of corrosion damage initiation and propagation in AA7075-T651 alloy using correlative microscopy. <i>Corrosion Science</i> , 2021, 185, 109429.	6.6	29
14	X-ray computer tomography (XCT) of fatigue damage in laser-machined versus milled carbon fiber reinforced polymer matrix composites. <i>Engineering Fracture Mechanics</i> , 2021, 252, 107820.	4.3	6
15	Computational Imaging in 3D X-Ray Microscopy: Reconstruction, Image Segmentation and Time-Evolved Experiments. , 2021, , .		4
16	4D microstructural characterization of corrosion and corrosion-fatigue in a Ti-6Al-4V / AA 7075-T651 joint in saltwater environment. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 825, 141886.	5.6	5
17	Microstructural Coarsening and Mechanical Properties of Eutectic Sn-58Bi Solder Joint During Aging. <i>Journal of Electronic Materials</i> , 2021, 50, 6607-6614.	2.2	9
18	Effect of Component Flexibility During Thermal Cycling of Sintered Nano-Silver Joints by X-ray Microtomography. <i>Journal of Electronic Materials</i> , 2020, 49, 241-244.	2.2	4

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19	3D Time-Resolved Observations of Fatigue Crack Initiation and Growth from Corrosion Pits in Al 7XXX Alloys Using In Situ Synchrotron X-ray Tomography. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 28-41.	2.2	22
20	Electromigration in Bi-crystal pure Sn solder joints: Elucidating the role of grain orientation. Journal of Alloys and Compounds, 2020, 818, 152918.	5.5	13
21	Mechanisms of thermal cycling damage in polycrystalline Sn-rich solder joints. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 771, 138614.	5.6	11
22	Micromechanical properties and deformation behavior of Al3BC/6061 Al composites via micropillar compression. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 773, 138852.	5.6	12
23	Nanomechanical characterization of the fracture toughness of Al/SiC nanolaminates. Extreme Mechanics Letters, 2020, 40, 100945.	4.1	9
24	Bioinspired Honeycomb Core Design: An Experimental Study of the Role of Corner Radius, Coping and Interface. Biomimetics, 2020, 5, 59.	3.3	12
25	3D grain structure of an extruded 6061 Al alloy by lab-scale X-ray diffraction contrast tomography (DCT). Materials Characterization, 2020, 170, 110716.	4.4	6
26	Activation Energy for End-of-Life Solder Bond Degradation: Thermal Cycling of Field-Aged PV Modules. IEEE Journal of Photovoltaics, 2020, 10, 1762-1771.	2.5	8
27	Synchrotron CT imaging of lattice structures with engineered defects. Journal of Materials Science, 2020, 55, 11353-11366.	3.7	11
28	Fracture Analysis of Particulate Metal Matrix Composite Using X-ray Tomography and Extended Finite Element Method (XFEM). Journal of Composites Science, 2020, 4, 62.	3.0	0
29	Four dimensional (4D) microstructural evolution of Cu6Sn5 intermetallic and voids under electromigration in bi-crystal pure Sn solder joints. Acta Materialia, 2020, 189, 118-128.	7.9	37
30	Influence of Substrate Surface Finish Metallurgy on Lead-Free Solder Joint Microstructure with Implications for Board-Level Reliability. Journal of Electronic Materials, 2020, 49, 3251-3258.	2.2	12
31	Ligand Crosslinking Boosts Thermal Transport in Colloidal Nanocrystal Solids. Angewandte Chemie - International Edition, 2020, 59, 9556-9563.	13.8	11
32	Powder bed packing and API content homogeneity of granules in single drop granule formation. Powder Technology, 2020, 366, 12-21.	4.2	5
33	Unveiling the deformation behavior and strengthening mechanisms of Al3BC/Al composites via in-situ micropillar compression. Journal of Alloys and Compounds, 2020, 823, 153842.	5.5	2
34	Direct observations of microstructure-resolved corrosion initiation in AA7075-T651 at the nanoscale using vertical scanning interferometry (VSI). Materials Characterization, 2020, 161, 110166.	4.4	21
35	Mechanical properties of Al3BC by nanoindentation and micropillar compression. Materials Letters, 2020, 264, 127361.	2.6	3
36	Ligand Crosslinking Boosts Thermal Transport in Colloidal Nanocrystal Solids. Angewandte Chemie, 2020, 132, 9643-9650.	2.0	2

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37	A Forward Modeling Approach to High-Reliability Grain Mapping by Laboratory Diffraction Contrast Tomography (LabDCT). <i>Jom</i> , 2019, 71, 2695-2704.	1.9	22
38	Probing Material Morphology and Deformation as a Response to in situ Loading using X-ray Tomography. <i>Microscopy and Microanalysis</i> , 2019, 25, 374-375.	0.4	0
39	Exploring novel deformation mechanisms in aluminum-copper alloys using in situ 4D nanomechanical testing. <i>Acta Materialia</i> , 2019, 176, 242-249.	7.9	21
40	3D/4D X-Ray Microtomography: Probing the Mechanical Behavior of Materials. , 2019, , 2013-2033.		0
41	Three-Dimensional (3D) Microstructure-Based Modeling of a Thermally-Aged Cast Duplex Stainless Steel Based on X-ray Microtomography, Nanoindentation and Micropillar Compression. <i>Metals</i> , 2019, 9, 688.	2.3	2
42	Hierarchical n-point polytope functions for quantitative representation of complex heterogeneous materials and microstructural evolution. <i>Acta Materialia</i> , 2019, 179, 317-327.	7.9	20
43	Avoidance of Catastrophic Structural Failure as an Evolutionary Constraint: Biomechanics of the Acorn Weevil Rostrum. <i>Advanced Materials</i> , 2019, 31, 1903526.	21.0	7
44	Microstructural characterization and mechanical property prediction of a polymer matrix composite by X-ray synchrotron tomography and spatial correlation functions. <i>SN Applied Sciences</i> , 2019, 1, 1.	2.9	3
45	X-ray Microtomography of Thermal Cycling Damage in Sintered Nano-Silver Solder Joints. <i>Advanced Engineering Materials</i> , 2019, 21, 1801029.	3.5	22
46	In situ micropillar compression of Al/SiC nanolaminates using laboratory-based nanoscale X-ray microscopy: Effect of nanopores on mechanical behavior. <i>Materials Characterization</i> , 2019, 150, 207-212.	4.4	9
47	Microstructure and mechanical properties of co-sputtered Al-SiC composites. <i>Materials and Design</i> , 2019, 168, 107670.	7.0	13
48	<i>In situ</i> Four Dimensional (4D) X-ray Microtomography of the Compressive Behavior of eTPU Foam for High Performance Footwear. <i>Microscopy and Microanalysis</i> , 2019, 25, 364-365.	0.4	3
49	Microstructure and micropore formation in a centrifugally-cast duplex stainless steel via X-ray microtomography. <i>Materials Characterization</i> , 2019, 148, 52-62.	4.4	12
50	Mechanical properties of a thermally-aged cast duplex stainless steel by nanoindentation and micropillar compression. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 743, 520-528.	5.6	29
51	Nucleation and Growth of Tin Hillocks by In Situ Nanoindentation. <i>Journal of Electronic Materials</i> , 2019, 48, 58-71.	2.2	9
52	3D time-resolved observations of corrosion and corrosion-fatigue crack initiation and growth in peak-aged Al 7075 using synchrotron X-ray tomography. <i>Corrosion Science</i> , 2018, 138, 340-352.	6.6	43
53	Direct extraction of spatial correlation functions from limited x-ray tomography data for microstructural quantification. <i>Materials Characterization</i> , 2018, 140, 265-274.	4.4	27
54	Mechanical properties of metal-ceramic nanolaminates: Effect of constraint and temperature. <i>Acta Materialia</i> , 2018, 142, 37-48.	7.9	39

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55	Microstructural evolution and deformation behavior of Al-Cu alloys: A Transmission X-ray Microscopy (TXM) and micropillar compression study. <i>Acta Materialia</i> , 2018, 144, 419-431.	7.9	47
56	Data Challenges of In Situ X-Ray Tomography for Materials Discovery and Characterization. <i>Springer Series in Materials Science</i> , 2018, , 129-165.	0.6	6
57	Granule formation and structure from single drop impact on heterogeneous powder beds. <i>International Journal of Pharmaceutics</i> , 2018, 552, 56-66.	5.2	17
58	1.1 Fibrous Reinforcements for Composites. , 2018, , 1-12.		2
59	3D X-ray microtomography and mechanical characterization of corrosion-induced damage in 7075 aluminium (Al) alloys. <i>Corrosion Science</i> , 2018, 139, 97-113.	6.6	28
60	Automated correlative segmentation of large Transmission X-ray Microscopy (TXM) tomograms using deep learning. <i>Materials Characterization</i> , 2018, 142, 203-210.	4.4	34
61	Spall strength dependence on grain size and strain rate in tantalum. <i>Acta Materialia</i> , 2018, 158, 313-329.	7.9	100
62	In situ Imaging of Materials using X-ray Tomography. <i>Microscopy and Microanalysis</i> , 2018, 24, 1002-1003.	0.4	2
63	3D/4D X-Ray Microtomography: Probing the Mechanical Behavior of Materials. , 2018, , 1-21.		0
64	Effect of gallium addition on the microstructure and micromechanical properties of constituents in Nb Si based alloys. <i>Journal of Alloys and Compounds</i> , 2017, 704, 89-100.	5.5	40
65	Crack bridging modelling in Bioglass Å® based scaffolds reinforced by poly-vinyl alcohol/microfibrillated cellulose composite coating. <i>Mechanics of Materials</i> , 2017, 110, 16-28.	3.2	5
66	In Situ X-ray Microtomography of Stress Corrosion Cracking and Corrosion Fatigue in Aluminum Alloys. <i>Jom</i> , 2017, 69, 1404-1414.	1.9	26
67	Effective Constitutive Response of Sustainable Next Generation Infrastructure Materials through High-Fidelity Experiments and Numerical Simulation. <i>Procedia Engineering</i> , 2017, 173, 1258-1265.	1.2	0
68	Understanding Nanoscale 4D Microstructural Evolution in Aluminum Alloys using Transmission X-Ray Microscopy (TXM). <i>Microscopy and Microanalysis</i> , 2017, 23, 2220-2221.	0.4	1
69	Probing Novel Microstructural Evolution Mechanisms in Aluminum Alloys Using 4D Nanoscale Characterization. <i>Advanced Materials</i> , 2017, 29, 1703482.	21.0	20
70	In situ tensile testing of tin (Sn) whiskers in a focused ion beam (FIB)/scanning electron microscope (SEM). <i>Microelectronics Reliability</i> , 2017, 79, 314-320.	1.7	10
71	Analysis of thermal history effects on mechanical anisotropy of 3D-printed polymer matrix composites via in situ X-ray tomography. <i>Journal of Materials Science</i> , 2017, 52, 12185-12206.	3.7	18
72	Quantifying Electrochemical Reactions and Properties of Amorphous Silicon in a Conventional Lithium-Ion Battery Configuration. <i>Chemistry of Materials</i> , 2017, 29, 5831-5840.	6.7	26

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73	Multimodal 3D Time-Lapse Studies of Corrosion Pitting and Corrosion-Fatigue Behavior in 7475 Aluminum Alloys. <i>Microscopy and Microanalysis</i> , 2017, 23, 324-325.	0.4	1
74	Mechanical properties of microconstituents in Nb-Si-Ti alloy by micropillar compression and nanoindentation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 687, 99-106.	5.6	24
75	Applying Pattern Recognition to the Analysis of X-ray Computed Tomography Data of Polymer Foams. <i>Microscopy and Microanalysis</i> , 2016, 22, 104-105.	0.4	1
76	Nanoscale Three-Dimensional Microstructural Characterization of an Sn-Rich Solder Alloy Using High-Resolution Transmission X-Ray Microscopy (TXM). <i>Microscopy and Microanalysis</i> , 2016, 22, 808-813.	0.4	10
77	Three dimensional microstructural characterization of nanoscale precipitates in AA7075-T651 by focused ion beam (FIB) tomography. <i>Materials Characterization</i> , 2016, 118, 102-111.	4.4	34
78	A multilayer micromechanical model of the cuticle of <i>Curculio longinasus</i> Chittenden, 1927 (Coleoptera: Curculionidae). <i>Journal of Structural Biology</i> , 2016, 195, 139-158.	2.8	14
79	A microstructure-guided constitutive modeling approach for random heterogeneous materials: Application to structural binders. <i>Computational Materials Science</i> , 2016, 119, 52-64.	3.0	31
80	Stochastic Multi-Scale Reconstruction of 3D Microstructure Consisting of Polycrystalline Grains and Second-Phase Particles from 2D Micrographs. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2016, 47, 1440-1450.	2.2	30
81	Three dimensional (3D) microstructure-based finite element modeling of Al-SiC nanolaminates using focused ion beam (FIB) tomography. <i>Materials Characterization</i> , 2016, 120, 369-376.	4.4	16
82	Three Dimensional Characterization of Tin Crystallography and Cu ₆ Sn ₅ Intermetallics in Solder Joints by Multiscale Tomography. <i>Jom</i> , 2016, 68, 2879-2887.	1.9	6
83	The influence of microencapsulated phase change material (PCM) characteristics on the microstructure and strength of cementitious composites: Experiments and finite element simulations. <i>Cement and Concrete Composites</i> , 2016, 73, 29-41.	10.7	128
84	Microstructural Quantification and Property Prediction Using Limited X-ray Tomography Data. <i>Jom</i> , 2016, 68, 2288-2295.	1.9	6
85	Microscale deformation behavior of bicrystal boundaries in pure tin (Sn) using micropillar compression. <i>Acta Materialia</i> , 2016, 120, 56-67.	7.9	42
86	Geometry segmentation of voxelized representations of heterogeneous microstructures using betweenness centrality. <i>Materials Characterization</i> , 2016, 118, 553-559.	4.4	2
87	Deformation mechanisms of ultra-thin Al layers in Al/SiC nanolaminates as a function of thickness and temperature. <i>Philosophical Magazine</i> , 2016, 96, 3336-3355.	1.6	26
88	Accurate stochastic reconstruction of heterogeneous microstructures by limited x-ray tomographic projections. <i>Journal of Microscopy</i> , 2016, 264, 339-350.	1.8	17
89	Hydrogen permeability and mechanical properties of NiNb-M (M=Sn, Ti and Zr) amorphous metallic membranes. <i>Journal of Alloys and Compounds</i> , 2016, 684, 359-365.	5.5	5
90	Anisotropy, size, and aspect ratio effects on micropillar compression of Al SiC nanolaminate composites. <i>Acta Materialia</i> , 2016, 114, 25-32.	7.9	75

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91	Microstructure and nanoindentation of the rostrum of <i>Curculio longinasus</i> Chittenden, 1927 (Coleoptera: Curculionidae). <i>Materials Characterization</i> , 2016, 118, 206-211.	4.4	18
92	Measurement of localized corrosion rates at inclusion particles in AA7075 by in situ three dimensional (3D) X-ray synchrotron tomography. <i>Corrosion Science</i> , 2016, 104, 330-335.	6.6	50
93	Orientation dependence of indentation behavior in Al-SiC nanolaminate composites. <i>Materials Letters</i> , 2016, 168, 129-133.	2.6	14
94	In situ X-ray synchrotron tomographic imaging during the compression of hyper-elastic polymeric materials. <i>Journal of Materials Science</i> , 2016, 51, 171-187.	3.7	66
95	Electromigration mechanisms in Sn-0.7Cu/Cu couples by four dimensional (4D) X-ray microtomography and electron backscatter diffraction (EBSD). <i>Acta Materialia</i> , 2016, 102, 220-230.	7.9	28
96	Synchrotron-Based X-ray Computed Tomography During Compression Loading of Cellular Materials. <i>Microscopy Today</i> , 2015, 23, 12-19.	0.3	9
97	Micro-scale X-ray Computed Tomography of Additively Manufactured Cellular Materials under Uniaxial Compression. <i>Microscopy and Microanalysis</i> , 2015, 21, 129-130.	0.4	0
98	A method for zinger artifact reduction in high-energy x-ray computed tomography. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2015, 800, 82-92.	1.6	3
99	High-Temperature Micropillar Compression Creep Testing of Constituent Phases in Lead-Free Solder. <i>Advanced Engineering Materials</i> , 2015, 17, 1168-1174.	3.5	8
100	Automated Correlative Tomography of an Aluminum 7075 Alloy Spanning Length Scales and Modalities. <i>Microscopy and Microanalysis</i> , 2015, 21, 1345-1346.	0.4	0
101	Characterisation of thermal cycling induced cavitation in particle reinforced metal matrix composites by three-dimensional (3D) X-ray synchrotron tomography. <i>Materials Science and Technology</i> , 2015, 31, 573-578.	1.6	21
102	Rapid method for testing efficacy of nano-engineered coatings for mitigating tin whisker growth. <i>Microelectronics Reliability</i> , 2015, 55, 832-837.	1.7	10
103	Modeling and characterization of X-ray yield in a polychromatic, lab-scale, X-ray computed tomography system. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2015, 783, 110-116.	1.6	5
104	Mechanical properties of intermetallic inclusions in Al 7075 alloys by micropillar compression. <i>Intermetallics</i> , 2015, 62, 69-75.	3.9	54
105	Full elastic constants of Cu 6 Sn 5 intermetallic by Resonant Ultrasound Spectroscopy (RUS) and ab initio calculations. <i>Scripta Materialia</i> , 2015, 107, 26-29.	5.2	10
106	Multiscale 3D characterization of discontinuities in underwater wet welds. <i>Materials Characterization</i> , 2015, 107, 358-366.	4.4	22
107	In situ fixture for multi-modal characterization during electromigration and thermal testing of wire-like microscale specimens. <i>Microelectronics Reliability</i> , 2015, 55, 2345-2353.	1.7	3
108	Effective properties of a fly ash geopolymer: Synergistic application of X-ray synchrotron tomography, nanoindentation, and homogenization models. <i>Cement and Concrete Research</i> , 2015, 78, 252-262.	11.0	107

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109	Micromechanical and in situ shear testing of Al/SiC nanolaminate composites in a transmission electron microscope (TEM). <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 621, 229-235.	5.6	30
110	Microstructure-Based Modeling of Deformation in Steels Based on Constitutive Relationships from Micropillar Compression. <i>Steel Research International</i> , 2014, 85, 946-953.	1.8	11
111	<i>In Situ</i> Investigation of High Humidity Stress Corrosion Cracking of 7075 Aluminum Alloy by Three-Dimensional (3D) X-ray Synchrotron Tomography. <i>Materials Research Letters</i> , 2014, 2, 217-220.	8.7	45
112	A Study of Pb-Rich Dendrites in a Near-Eutectic 63Sn-37Pb Solder Microstructure via Laboratory-Scale Micro X-ray Computed Tomography (µXCT). <i>Journal of Electronic Materials</i> , 2014, 43, 4442-4456.	2.2	12
113	A study of EM failure in a micro-scale Pb-free solder joint using a custom lab-scale x-ray computed tomography system. , 2014, , .		2
114	Efficient methods for implicit geometrical representation of complex material microstructures. <i>International Journal for Numerical Methods in Engineering</i> , 2014, 98, 79-91.	2.8	5
115	Note: Design and construction of a multi-scale, high-resolution, tube-generated X-Ray computed-tomography system for three-dimensional (3D) imaging. <i>Review of Scientific Instruments</i> , 2014, 85, 016103.	1.3	12
116	Modeling and characterizing anisotropic inclusion orientation in heterogeneous material via directional cluster functions and stochastic microstructure reconstruction. <i>Journal of Applied Physics</i> , 2014, 115, .	2.5	64
117	Effect of layer thickness on the high temperature mechanical properties of Al/SiC nanolaminates. <i>Thin Solid Films</i> , 2014, 571, 260-267.	1.8	36
118	In situ experimental techniques to study the mechanical behavior of materials using X-ray synchrotron tomography. <i>Integrating Materials and Manufacturing Innovation</i> , 2014, 3, 109-122.	2.6	41
119	Fractography of a neck failure in a double-modular hip implant. <i>Case Studies in Engineering Failure Analysis</i> , 2014, 2, 45-50.	1.2	18
120	Accurate modeling and reconstruction of three-dimensional percolating filamentary microstructures from two-dimensional micrographs via dilation-erosion method. <i>Materials Characterization</i> , 2014, 89, 33-42.	4.4	63
121	Development of a lab-scale, high-resolution, tube-generated X-ray computed-tomography system for three-dimensional (3D) materials characterization. <i>Materials Characterization</i> , 2014, 92, 36-48.	4.4	36
122	Electromigration Damage Characterization in Sn-3.9Ag-0.7Cu and Sn-3.9Ag-0.7Cu-0.5Ce Solder Joints by Three-Dimensional X-ray Tomography and Scanning Electron Microscopy. <i>Journal of Electronic Materials</i> , 2014, 43, 33-42.	2.2	35
123	Tensile Behavior of Single-Crystal Tin Whiskers. <i>Journal of Electronic Materials</i> , 2014, 43, 978-982.	2.2	8
124	Dendritic Growth in Mg-Based Alloys: Phase-Field Simulations and Experimental Verification by X-ray Synchrotron Tomography. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014, 45, 2562-2574.	2.2	32
125	3D microstructural characterization and mechanical properties of constituent particles in Al 7075 alloys using X-ray synchrotron tomography and nanoindentation. <i>Journal of Alloys and Compounds</i> , 2014, 602, 163-174.	5.5	84
126	Mechanical characterization of microconstituents in a cast duplex stainless steel by micropillar compression. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 598, 98-105.	5.6	45

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127	Reconstruction of heterogeneous materials via stochastic optimization of limited-angle X-ray tomographic projections. <i>Scripta Materialia</i> , 2014, 86, 48-51.	5.2	20
128	Fatigue crack growth in SiC particle reinforced Al alloy matrix composites at high and low R-ratios by in situ X-ray synchrotron tomography. <i>International Journal of Fatigue</i> , 2014, 68, 136-143.	5.7	46
129	Three dimensional modeling of complex heterogeneous materials via statistical microstructural descriptors. <i>Integrating Materials and Manufacturing Innovation</i> , 2014, 3, 25-43.	2.6	14
130	In-situ Compression Imaging of Polymer Foams using Synchrotron X-ray Computed Tomography. <i>Microscopy and Microanalysis</i> , 2014, 20, 672-673.	0.4	0
131	Effect of cerium addition on wetting, undercooling, and mechanical properties of Sn-3.9Ag-0.7Cu Pb-free solder alloys. <i>Journal of Materials Science: Materials in Electronics</i> , 2013, 24, 3456-3466.	2.2	10
132	Extracting Constitutive Stress-Strain Behavior of Microscopic Phases by Micropillar Compression. <i>Jom</i> , 2013, 65, 226-233.	1.9	15
133	Enhancing the Ductility of Sn-Ag-Cu Lead-Free Solder Joints by Addition of Compliant Intermetallics. <i>Journal of Electronic Materials</i> , 2013, 42, 527-536.	2.2	12
134	Characterization and Adhesion in Cu/Ru/SiO ₂ /Si Multilayer Nano-scale Structure for Cu Metallization. <i>Journal of Materials Engineering and Performance</i> , 2013, 22, 1085-1090.	2.5	2
135	Image analysis of cracks in the weld metal of a wet welded steel joint by three dimensional (3D) X-ray microtomography. <i>Materials Characterization</i> , 2013, 83, 139-144.	4.4	23
136	Temperature-dependent mechanical properties of an austenitic-ferritic stainless steel studied by in situ tensile loading in a scanning electron microscope (SEM). <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 580, 159-168.	5.6	44
137	Metal Matrix Composites. , 2013, , .		119
138	High temperature micropillar compression of Al/SiC nanolaminates. <i>Acta Materialia</i> , 2013, 61, 4439-4451.	7.9	81
139	Understanding fatigue crack growth in aluminum alloys by in situ X-ray synchrotron tomography. <i>International Journal of Fatigue</i> , 2013, 57, 79-85.	5.7	74
140	Mechanical shock behavior of Sn-3.9Ag-0.7Cu and Sn-3.9Ag-0.7Cu-0.5Ce solder joints. <i>Microelectronics Reliability</i> , 2013, 53, 733-740.	1.7	21
141	Mechanisms of Sn Hillock Growth in Vacuum by In-Situ Nanoindentation in a Scanning Electron Microscope (SEM). <i>Journal of Electronic Materials</i> , 2013, 42, 224-229.	2.2	14
142	Flocculated carbon nanotube composites for solvent resistant soft templated microfeatures. <i>Polymer</i> , 2013, 54, 1130-1135.	3.8	6
143	Modeling and predicting microstructure evolution in lead/tin alloy via correlation functions and stochastic material reconstruction. <i>Acta Materialia</i> , 2013, 61, 3370-3377.	7.9	51
144	Mechanical Characterization of Lead-Free Sn-Ag-Cu Solder Joints by High-Temperature Nanoindentation. <i>Journal of Electronic Materials</i> , 2013, 42, 1085-1091.	2.2	30

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145	Fatigue and fracture of powder metallurgy steels. , 2013, , 455-490.		3
146	Creep. , 2013, , 283-309.		1
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