

Subramanya Sarma Vadlamani

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

111 papers	3,445 citations	33 h-index	55 g-index
112 ext. papers	3,887 ext. citations	3.9 avg, IF	5.44 L-index

#	Paper	IF	Citations
111	A novel approach combining grain boundary engineering and grain boundary serration to enhance high-temperature hot corrosion resistance in Alloy 617. <i>Materialia</i> , 2022 , 101451	3.2	0
110	A physically based model of the effect of recovery and clustering on recrystallization kinetics. <i>Journal of Materials Science</i> , 2021 , 56, 7082-7093	4.3	
109	Grain boundary engineering and its implications on corrosion behavior of equiatomic CoCrFeMnNi high entropy alloy. <i>Journal of Alloys and Compounds</i> , 2021 , 888, 161500	5.7	6
108	Phase field modelling of annealing twin formation, evolution and interactions during grain growth. <i>Computational Materials Science</i> , 2020 , 182, 109787	3.2	6
107	Dynamic microstructural evolution and recrystallization mechanism during hot deformation of intermetallic-hardened duplex lightweight steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 788, 139613	5.3	15
106	On the significance of misorientation axes of CSL boundaries in triple junctions in cubic materials. <i>Materials Characterization</i> , 2019 , 152, 276-281	3.9	6
105	Role of stress state on dynamic recrystallization behaviour of Ni during hot deformation: Analysis of uniaxial compression and plane strain compression. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019 , 763, 138153	5.3	6
104	Role of grain boundary engineered microstructure on high temperature steam oxidation behaviour of Ni based superalloy alloy 617. <i>Journal of Alloys and Compounds</i> , 2019 , 778, 224-233	5.7	28
103	A critical evaluation on efficacy of recrystallization vs. strain induced boundary migration in achieving grain boundary engineered microstructure in a Ni-base superalloy. <i>Acta Materialia</i> , 2018 , 146, 187-201	8.4	74
102	Hot-workability of super-304H exhibiting continuous to discontinuous dynamic recrystallization transition. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 734, 269-280	5.3	26
101	Microstructural Evolution of Nanocrystalline ZrO ₂ in a Fe Matrix During High-Temperature Exposure. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018 , 49, 3565-3574	2.3	
100	Reaction Kinetics at the Fiber/Matrix Interface of SiCf/Ti-15-3 Composites. <i>Transactions of the Indian Institute of Metals</i> , 2018 , 71, 941-949	1.2	1
99	Effect of grain boundary character distribution on weld heat-affected zone liquation cracking behavior of AISI 316Ti austenitic stainless steel. <i>Materials Characterization</i> , 2018 , 142, 115-123	3.9	8
98	Annealing-Induced Hardening in Ultrafine-Grained Ni-Mo Alloys. <i>Advanced Engineering Materials</i> , 2018 , 20, 1800184	3.5	12
97	Effect of Mo addition on the microstructure and hardness of ultrafine-grained Ni alloys processed by a combination of cryorolling and high-pressure torsion. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 688, 92-100	5.3	21
96	Microstructure and Mechanical Properties of V-Nb Microalloyed Ultrafine-Grained Dual-Phase Steels Processed Through Severe Cold Rolling and Intercritical Annealing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2017 , 48, 1176-1188	2.3	9
95	Evolution of the microstructure during annealing of ultrafine-grained Ni with different Mo contents. <i>Materials Characterization</i> , 2017 , 130, 56-63	3.9	10

94	Influence of processing parameters on dynamic recrystallization and the associated annealing twin boundary evolution in a nickel base superalloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 700, 49-58	5.3	68
93	Influence of the mode of deformation on recrystallisation kinetics in Nickel through experiments, theory and phase field model. <i>Philosophical Magazine</i> , 2017 , 97, 3211-3228	1.6	8
92	Influence of mode of plastic straining on the microstructure of Ni and Ti deformed through rolling and torsion. <i>Materials Characterization</i> , 2017 , 132, 205-214	3.9	10
91	Spark plasma consolidation of continuous fiber reinforced titanium matrix composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 703, 461-469	5.3	12
90	Influence of Mo alloying on the thermal stability and hardness of ultrafine-grained Ni processed by high-pressure torsion. <i>Journal of Materials Research and Technology</i> , 2017 , 6, 361-368	5.5	5
89	Hot deformation characteristics and processing map of a phosphorous modified super austenitic stainless steel. <i>Materials and Design</i> , 2017 , 115, 262-275	8.1	86
88	Synthesis and characterization of Fe-15 wt.% ZrO ₂ nanocomposite powders by mechanical milling. <i>Powder Technology</i> , 2016 , 287, 190-200	5.2	29
87	Experimental verification of grain boundary-sliding controlled steady state superplastic flow in both continually and statically recrystallizing Al alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 657, 185-196	5.3	10
86	Implication of grain boundary engineering on high temperature hot corrosion of alloy 617. <i>Corrosion Science</i> , 2016 , 106, 293-297	6.8	43
85	Characterization of hot deformation behavior of alloy 617 through kinetic analysis, dynamic material modeling and microstructural studies. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 664, 177-187	5.3	58
84	Influence of mode of deformation on microstructural heterogeneities in Ni subjected to large strain deformation. <i>Philosophical Magazine Letters</i> , 2015 , 95, 441-449	1	10
83	Efficiency of the refinement by deformation twinning in wire drawn single phase copper alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015 , 624, 71-78	5.3	12
82	Solute redistribution during annealing of a cold rolled Cu ₃ Ag alloy. <i>Journal of Alloys and Compounds</i> , 2015 , 623, 96-103	5.7	17
81	The Effect of Thermomechanical Treatment on the Microstructure and the Mechanical Behavior of a Supersaturated Cu-Ag Alloy. <i>Materials Science Forum</i> , 2015 , 812, 53-58	0.4	4
80	Role of Carbide Precipitates and Process Parameters on Achieving Grain Boundary Engineered Microstructure in a Ni-Based Superalloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015 , 46, 4740-4754	2.3	25
79	Isothermal Grain Growth Studies on Nanostructured 9Cr-1Mo and 9Cr-1W Ferritic Steels Containing Nano-sized Oxide Dispersoids. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014 , 45, 1684-1688	2.3	1
78	Effect of Strain Rate on the Dynamic Recrystallization Behavior in a Nitrogen-Enhanced 316L(N). <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014 , 45, 5645-5656	2.3	92
77	Mechanical properties and corrosion behaviour of nanocrystalline Ti ₅ Ta _{1.8} Nb alloy produced by cryo-rolling. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 616, 71-77	5.3	26

76	Processing of Bimodal Grain-Sized Ultrafine-Grained Dual Phase Microalloyed V-Nb Steel with 1370 MPa Strength and 16 pct Uniform Elongation Through Warm Rolling and Intercritical Annealing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014 , 45, 5313-5317	2.3	30
75	New insights into the relationship between dynamic softening phenomena and efficiency of hot working domains of a nitrogen enhanced 316L(N) stainless steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 598, 368-375	5.3	63
74	Microstructure evolution during annealing of an SPD- processed supersaturated Cu 13 at.% Ag alloy. <i>IOP Conference Series: Materials Science and Engineering</i> , 2014 , 63, 012091	0.4	5
73	Effect of Y ₂ O ₃ on Spark Plasma Sintering Kinetics of Nanocrystalline 9Cr-1Mo Ferritic Oxide Dispersion-Strengthened Steels. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2013 , 44, 4037-4041	2.3	4
72	Development of high strength and ductile ultra fine grained dual phase steel with nano sized carbide precipitates in a V-Nb microalloyed steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 568, 171-175	5.3	40
71	Properties of cryo-drawn copper with severely twinned microstructure. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 588, 132-141	5.3	17
70	High strength and ductile ultrafine-grained Cu-Ag alloy through bimodal grain size, dislocation density and solute distribution. <i>Acta Materialia</i> , 2013 , 61, 228-238	8.4	87
69	Two strain-hardening mechanisms in nanocrystalline austenitic steel: An in situ synchrotron X-ray diffraction study. <i>Scripta Materialia</i> , 2012 , 66, 690-693	5.6	11
68	Influence of State of Stress on Dynamic Recrystallization in a Titanium-Modified Austenitic Stainless Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012 , 43, 410-414	2.3	33
67	On the Estimation of True Hall-Petch Constants and Their Role on the Superposition Law Exponent in Al Alloys. <i>Advanced Engineering Materials</i> , 2012 , 14, 892-897	3.5	55
66	Hot hardness behaviour of ultrafine grained ferritic oxide dispersion strengthened alloys prepared by mechanical alloying and spark plasma sintering. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012 , 558, 492-496	5.3	15
65	Role of Twinning on Dynamic Recrystallization and Microstructure During Moderate to High Strain Rate Hot Deformation of a Ti-Modified Austenitic Stainless Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012 , 43, 2056-2068	2.3	96
64	Dynamic Recrystallisation during Isothermal Hot Deformation in a Titanium Modified Austenitic Stainless Steel. <i>Materials Science Forum</i> , 2012 , 715-716, 140-145	0.4	1
63	Severe deformation twinning in pure copper by cryogenic wire drawing. <i>Acta Materialia</i> , 2011 , 59, 7816-7823	8.4	34
62	One-step and iterative thermo-mechanical treatments to enhance Σ boundaries in a Ti-modified austenitic stainless steel. <i>Journal of Materials Science</i> , 2011 , 46, 275-284	4.3	28
61	Microstructure evolution and hardness variation during annealing of equal channel angular pressed ultra-fine grained nickel subjected to 12 passes. <i>Journal of Materials Science</i> , 2011 , 46, 2662-2671	4.3	14
60	Development of ultra-fine grained dual phase microalloyed steels through severe cold rolling and intercritical annealing. <i>Transactions of the Indian Institute of Metals</i> , 2011 , 64, 89-92	1.2	3
59	A Study on Microstructural Evolution and Dynamic Recrystallization During Isothermal Deformation of a Ti-Modified Austenitic Stainless Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2011 , 42, 1062-1072	2.3	161

58	Effect of yttria particle size on the microstructure and compression creep properties of nanostructured oxide dispersion strengthened ferritic (Fe-12Cr-2W-0.5Y ₂ O ₃) alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011 , 528, 4579-4584	5.3	30
57	Origin and Role of Σ Boundaries during Thermo-Mechanical Processing of a Ti-Modified Austenitic Stainless Steel. <i>Materials Science Forum</i> , 2011 , 702-703, 714-717	0.4	2
56	Thermal Stability of Vacuum Hot Pressed Bulk Nanostructured Al-Cu Alloys. <i>Materials Science Forum</i> , 2011 , 690, 234-237	0.4	7
55	Study of Texture in Ultra Fine Grained Dual Phase Steel Sheets. <i>Materials Science Forum</i> , 2011 , 702-703, 806-809	0.4	
54	Texture Analysis for Determining the Rate Controlling Process in the Transient and Steady State Regions of Superplastic Flow. <i>Materials Science Forum</i> , 2011 , 702-703, 360-365	0.4	1
53	Dynamic Recrystallization in a Ti Modified Austenitic Stainless Steel During High Strain Rate Deformation. <i>Materials and Manufacturing Processes</i> , 2010 , 25, 54-59	4.1	20
52	Compression creep studies of mechanically alloyed nanostructured Fe-12Cr-2W-0.25Y ₂ O ₃ ODS alloy. <i>Journal of Physics: Conference Series</i> , 2010 , 240, 012090	0.3	1
51	Application of textured highly alloyed Ni-W tapes for preparing coated conductor architectures. <i>Superconductor Science and Technology</i> , 2010 , 23, 034015	3.1	15
50	On the Hall-Petch relationship in a nanostructured Al-Cu alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010 , 527, 7821-7825	5.3	128
49	Functionally Graded Al Alloy Matrix In-Situ Composites. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2010 , 41, 242-254	2.3	34
48	Microstructural studies on nanocrystalline oxide dispersion strengthened austenitic (Fe-18Cr-8Ni-2W-0.25Y ₂ O ₃) alloy synthesized by high energy ball milling and vacuum hot pressing. <i>Journal of Materials Science</i> , 2010 , 45, 4858-4865	4.3	27
47	Effect of rolling temperature on the evolution of defects and properties of an Al-Cu alloy. <i>Journal of Materials Science</i> , 2010 , 45, 4846-4850	4.3	13
46	Role of stacking fault energy in strengthening due to cryo-deformation of FCC metals. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010 , 527, 7624-7630	5.3	123
45	Prediction of carbon segregation on the surface of continuously annealed hot-rolled LCAK steel. <i>Surface and Coatings Technology</i> , 2010 , 205, 2051-2054	4.4	1
44	High temperature wear behavior of Al-Cu-TiB ₂ in situ composites. <i>Wear</i> , 2010 , 268, 1266-1274	3.5	54
43	Studies on recrystallization of single-phase copper alloys by resistance measurements. <i>Acta Materialia</i> , 2010 , 58, 2324-2329	8.4	32
42	Effect of Temperature on the Wear Behavior of Al-7Si-TiB ₂ In-Situ Composites. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2009 , 40, 223-231	2.3	45
41	Microstructure and Mechanical Properties of Nanostructured Al-4Cu Alloy Produced by Mechanical Alloying and Vacuum Hot Pressing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2009 , 40, 2798-2801	2.3	36

40	Microstructure and Mechanical Properties of Gas-Tungsten-Arc Welded Ti-15-3 Beta Titanium Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2009 , 40, 2685-2693	2.3	13
39	Effect of post weld heat treatment on the microstructure and tensile properties of dissimilar friction stir welded AA 2219 and AA 6061 alloys. <i>Transactions of the Indian Institute of Metals</i> , 2009 , 62, 11-19	1.2	49
38	Studies on twinning and grain boundary character distribution during anomalous grain growth in a Ti-modified austenitic stainless steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009 , 515, 134-140	5.3	46
37	Microstructure and mechanical properties of nanocrystalline high strength AlMgBi (AA6061) alloy by high energy ball milling and spark plasma sintering. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009 , 527, 292-296	5.3	37
36	Studies on hot rolled galvanized steel sheets: Effect of reheating on galvanizing. <i>Surface and Coatings Technology</i> , 2009 , 203, 3465-3471	4.4	8
35	Development of high strength AlMgBi AA6061 alloy through cold rolling and ageing. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009 , 515, 169-174	5.3	78
34	The influence of room temperature and cryogenic temperature rolling on the aging and wear behaviour of AlCuTiB2 in situ composites. <i>Journal of Alloys and Compounds</i> , 2009 , 479, 268-273	5.7	24
33	Studies on Texture and Microstructure of Cryorolled and Annealed Cu-5%Al, Cu-5%Zn Alloys. <i>Ceramic Transactions</i> , 2009 , 529-536	0.1	1
32	Studies on hot-rolled galvanized steel sheets: Segregation of alloying elements at the surface. <i>Scripta Materialia</i> , 2008 , 59, 522-525	5.6	8
31	Grain Boundary Microstructural Control through Thermomechanical Processing in a Titanium-Modified Austenitic Stainless Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2008 , 39, 3298-3307	2.3	30
30	Optimisation of single La2Zr2O7 buffer layers for YBCO coated conductors prepared by chemical solution deposition. <i>Journal of Crystal Growth</i> , 2008 , 310, 4295-4300	1.6	23
29	A statistical analysis on erosion wear behaviour of A356 alloy reinforced with in situ formed TiB2 particles. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 476, 333-340	5.3	42
28	Tensile and wear behaviour of in situ AlSi/TiB2 particulate composites. <i>Wear</i> , 2008 , 265, 134-142	3.5	237
27	Microstructure and mechanical properties of ultra fine grained CuZn and CuAl alloys produced by cryorolling and annealing. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 489, 253-258	5.3	87
26	Influence of in situ formed TiB2 particles on the abrasive wear behaviour of AlCu alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007 , 465, 160-164	5.3	61
25	Rolling and recrystallisation textures in CuAl, CuMn and CuNi alloys. <i>Journal of Materials Science</i> , 2007 , 42, 7586-7591	4.3	23
24	Preparation of coated conductor architectures on Ni composite tapes. <i>Superconductor Science and Technology</i> , 2007 , 20, 709-714	3.1	32
23	Nanoindentation studies on TiZrNi bulk quasicrystalline intermetallics. <i>Philosophical Magazine</i> , 2007 , 87, 3109-3115	1.6	7

22	Development of ultrafine grained high strength AlCu alloy by cryorolling. <i>Scripta Materialia</i> , 2006 , 54, 2013-2017	5.6	177
21	Effect of sulphur on cube texture formation in microalloyed nickel substrate tapes. <i>Physica C: Superconductivity and Its Applications</i> , 2005 , 418, 9-15	1.3	11
20	Transport measurements and J/sub c/ simulations for RABiTS based coated conductors-doping and grain architecture. <i>IEEE Transactions on Applied Superconductivity</i> , 2005 , 15, 2794-2797	1.8	3
19	Recrystallisation texture and magnetisation behaviour of some FCC NiW alloys. <i>Scripta Materialia</i> , 2004 , 50, 953-957	5.6	90
18	On the cold rolling textures in some fcc NiW alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 380, 30-33	5.3	38
17	Nickel DABiTS-tapes as a promising alternative to RABiTS-tapes. <i>Physica C: Superconductivity and Its Applications</i> , 2004 , 408-410, 906-907	1.3	3
16	Simulation of the critical current density and its dependence on geometrical factors in RABiTS based coated conductors. <i>Superconductor Science and Technology</i> , 2004 , 17, 1003-1008	3.1	12
15	On the development of high strength and bi-axially textured Ni4.5%W/Ni10%Cr1.5%Al composite substrate for coated conductor application. <i>Scripta Materialia</i> , 2003 , 48, 1167-1171	5.6	19
14	Low cycle fatigue behaviour of a multiphase medium carbon microalloyed steel processed through rolling. <i>Scripta Materialia</i> , 2003 , 49, 503-508	5.6	17
13	Low cycle fatigue behavior of a multiphase microalloyed medium carbon steel: comparison between ferritePearlite and quenched and tempered microstructures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 345, 328-335	5.3	59
12	High cycle fatigue behaviour of a multiphase microalloyed medium carbon steel: a comparison between ferritePearlite and tempered martensite microstructures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 362, 249-256	5.3	46
11	Thermomechanical processing and characterisation of multi-phase microstructures in a V-bearing medium carbon micro-alloyed steel. <i>Journal of Materials Processing Technology</i> , 2003 , 139, 642-647	5.3	22
10	Dispersion strengthened and highly cube textured Ni alloy tapes as possible substrates for coated conductors. <i>Acta Materialia</i> , 2003 , 51, 3769-3777	8.4	8
9	Development of high strength and strongly cube textured Ni-4.5% W/Ni-15% Cr composite substrate for coated conductor application. <i>Acta Materialia</i> , 2003 , 51, 4919-4927	8.4	51
8	Strengthening of biaxially textured Ni-alloys as substrates for YBCO tape conductors. <i>Physica C: Superconductivity and Its Applications</i> , 2002 , 372-376, 798-801	1.3	4
7	On the comparison of crack closure evaluation using dynamic and static compliance measurements. <i>International Journal of Fatigue</i> , 2001 , 23, 741-745	5	12
6	On the fatigue crack growth behaviour of two ferritePearlite microalloyed steels. <i>Materials Letters</i> , 2000 , 46, 185-188	3.3	8
5	Low cycle fatigue behaviour of low carbon microalloyed steel: microstructural evolution and life assessment. <i>Materials Science and Technology</i> , 1999 , 15, 260-264	1.5	3

4	Effect of σ size on room temperature low cycle fatigue behaviour of a nickel base superalloy. <i>Materials Science and Technology</i> , 1998 , 14, 669-675	1.5	13
3	Transmission electron microscopy of a cyclically deformed medium carbon microalloyed steel. <i>Journal of Materials Science Letters</i> , 1997 , 16, 1495-1498		12
2	Some studies on the warm solid- and hollow-extrusion of sintered powder metallurgical copper preforms. <i>Journal of Materials Processing Technology</i> , 1997 , 70, 163-169	5.3	1
1	Low cycle fatigue behaviour of a medium carbon microalloyed steel. <i>International Journal of Fatigue</i> , 1997 , 19, 135-140	5	20