Subramanya Sarma Vadlamani

List of Publications by Citations

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	Tensile and wear behaviour of in situ Al–Si/TiB2 particulate composites. *Wear*, **2008**, 265, 134-142	3.5	237
110	Development of ultrafine grained high strength Al–Cu alloy by cryorolling. *Scripta Materialia*, **2006**, 54, 2013-2017	5.6	177
109	A Study on Microstructural Evolution and Dynamic Recrystallization During Isothermal Deformation of a Ti-Modified Austenitic Stainless Steel. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2011**, 42, 1062-1072	2.3	161
108	On the Hall–Petch relationship in a nanostructured Al–Cu alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2010**, 527, 7821-7825	5.3	128
107	Role of stacking fault energy in strengthening due to cryo-deformation of FCC metals. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2010**, 527, 7624-7630	5.3	123
106	Role of Twinning on Dynamic Recrystallization and Microstructure During Moderate to High Strain Rate Hot Deformation of a Ti-Modified Austenitic Stainless Steel. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2012**, 43, 2056-2068	2.3	96
105	Effect of Strain Rate on the Dynamic Recrystallization Behavior in a Nitrogen-Enhanced 316L(N). *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2014**, 45, 5645-5656	2.3	92
104	Recrystallisation texture and magnetisation behaviour of some FCC Ni–W alloys. *Scripta Materialia*, **2004**, 50, 953-957	5.6	90
103	High strength and ductile ultrafine-grained Cu–Ag alloy through bimodal grain size, dislocation density and solute distribution. *Acta Materialia*, **2013**, 61, 228-238	8.4	87
102	Microstructure and mechanical properties of ultra fine grained Cu–Zn and Cu–Al alloys produced by cryorolling and annealing. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2008**, 489, 253-258	5.3	87
101	Hot deformation characteristics and processing map of a phosphorous modified super austenitic stainless steel. *Materials and Design*, **2017**, 115, 262-275	8.1	86
100	Development of high strength Al–Mg–Si AA6061 alloy through cold rolling and ageing. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2009**, 515, 169-174	5.3	78
99	A critical evaluation on efficacy of recrystallization vs. strain induced boundary migration in achieving grain boundary engineered microstructure in a Ni-base superalloy. *Acta Materialia*, **2018**, 146, 187-201	8.4	74
98	Influence of processing parameters on dynamic recrystallization and the associated annealing twin boundary evolution in a nickel base superalloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 700, 49-58	5.3	68
97	New insights into the relationship between dynamic softening phenomena and efficiency of hot working domains of a nitrogen enhanced 316L(N) stainless steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2014**, 598, 368-375	5.3	63
96	Influence of in situ formed TiB2 particles on the abrasive wear behaviour of Al–4Cu alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 465, 160-164	5.3	61
95	Low cycle fatigue behavior of a multiphase microalloyed medium carbon steel: comparison between ferrite–pearlite and quenched and tempered microstructures. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2003**, 345, 328-335	5.3	59

94	Characterization of hot deformation behavior of alloy 617 through kinetic analysis, dynamic material modeling and microstructural studies. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2016**, 664, 177-187	5.3	58
93	On the Estimation of True Hall–Petch Constants and Their Role on the Superposition Law Exponent in Al Alloys. *Advanced Engineering Materials*, **2012**, 14, 892-897	3.5	55
92	High temperature wear behavior of Al–4Cu–TiB2 in situ composites. *Wear*, **2010**, 268, 1266-1274	3.5	54
91	Development of high strength and strongly cube textured Ni-4.5% W/Ni-15% Cr composite substrate for coated conductor application. *Acta Materialia*, **2003**, 51, 4919-4927	8.4	51
90	Effect of post weld heat treatment on the microstructure and tensile properties of dissimilar friction stir welded AA 2219 and AA 6061 alloys. *Transactions of the Indian Institute of Metals*, **2009**, 62, 11-19	1.2	49
89	Studies on twinning and grain boundary character distribution during anomalous grain growth in a Ti-modified austenitic stainless steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2009**, 515, 134-140	5.3	46
88	High cycle fatigue behaviour of a multiphase microalloyed medium carbon steel: a comparison between ferrite–pearlite and tempered martensite microstructures. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2003**, 362, 249-256	5.3	46
87	Effect of Temperature on the Wear Behavior of Al-7Si-TiB2 In-Situ Composites. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2009**, 40, 223-231	2.3	45
86	Implication of grain boundary engineering on high temperature hot corrosion of alloy 617. *Corrosion Science*, **2016**, 106, 293-297	6.8	43
85	A statistical analysis on erosion wear behaviour of A356 alloy reinforced with in situ formed TiB2 particles. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2008**, 476, 333-340	5.3	42
84	Development of high strength and ductile ultra fine grained dual phase steel with nano sized carbide precipitates in a V–Nb microalloyed steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2013**, 568, 171-175	5.3	40
83	On the cold rolling textures in some fcc Ni–W alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2004**, 380, 30-33	5.3	38
82	Microstructure and mechanical properties of nanocrystalline high strength Al–Mg–Si (AA6061) alloy by high energy ball milling and spark plasma sintering. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2009**, 527, 292-296	5.3	37
81	Microstructure and Mechanical Properties of Nanostructured Al-4Cu Alloy Produced by Mechanical Alloying and Vacuum Hot Pressing. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2009**, 40, 2798-2801	2.3	36
80	Severe deformation twinning in pure copper by cryogenic wire drawing. *Acta Materialia*, **2011**, 59, 7816-7823	8.4	34
79	Functionally Graded Al Alloy Matrix In-Situ Composites. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2010**, 41, 242-254	2.3	34
78	Influence of State of Stress on Dynamic Recrystallization in a Titanium-Modified Austenitic Stainless Steel. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2012**, 43, 410-414	2.3	33
77	Studies on recrystallization of single-phase copper alloys by resistance measurements. *Acta Materialia*, **2010**, 58, 2324-2329	8.4	32

76	Preparation of coated conductor architectures on Ni composite tapes. *Superconductor Science and Technology*, **2007**, 20, 709-714	3.1	32
75	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. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2014**, 45, 5313-5317	2.3	30
74	Effect of yttria particle size on the microstructure and compression creep properties of nanostructured oxide dispersion strengthened ferritic (Fe–12Cr–2W–0.5Y2O3) alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2011**, 528, 4579-4584	5.3	30
73	Grain Boundary Microstructural Control through Thermomechanical Processing in a Titanium-Modified Austenitic Stainless Steel. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2008**, 39, 3298-3307	2.3	30
72	Synthesis and characterization of Fe-15 wt.% ZrO2 nanocomposite powders by mechanical milling. *Powder Technology*, **2016**, 287, 190-200	5.2	29
71	One-step and iterative thermo-mechanical treatments to enhance Σ3n boundaries in a Ti-modified austenitic stainless steel. *Journal of Materials Science*, **2011**, 46, 275-284	4.3	28
70	Role of grain boundary engineered microstructure on high temperature steam oxidation behaviour of Ni based superalloy alloy 617. *Journal of Alloys and Compounds*, **2019**, 778, 224-233	5.7	28
69	Microstructural studies on nanocrystalline oxide dispersion strengthened austenitic (Fe–18Cr–8Ni–2W–0.25Y2O3) alloy synthesized by high energy ball milling and vacuum hot pressing. *Journal of Materials Science*, **2010**, 45, 4858-4865	4.3	27
68	Hot-workability of super-304H exhibiting continuous to discontinuous dynamic recrystallization transition. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 734, 269-280	5.3	26
67	Mechanical properties and corrosion behaviour of nanocrystalline Ti–5Ta–1.8Nb alloy produced by cryo-rolling. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2014**, 616, 71-77	5.3	26
66	Role of Carbide Precipitates and Process Parameters on Achieving Grain Boundary Engineered Microstructure in a Ni-Based Superalloy. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2015**, 46, 4740-4754	2.3	25
65	The influence of room temperature and cryogenic temperature rolling on the aging and wear behaviour of Al–4Cu–5TiB2 in situ composites. *Journal of Alloys and Compounds*, **2009**, 479, 268-273	5.7	24
64	Rolling and recrystallisation textures in Cu–Al, Cu–Mn and Cu–Ni alloys. *Journal of Materials Science*, **2007**, 42, 7586-7591	4.3	23
63	Optimisation of single La2Zr2O7 buffer layers for YBCO coated conductors prepared by chemical solution deposition. *Journal of Crystal Growth*, **2008**, 310, 4295-4300	1.6	23
62	Thermomechanical processing and characterisation of multi-phase microstructures in a V-bearing medium carbon micro-alloyed steel. *Journal of Materials Processing Technology*, **2003**, 139, 642-647	5.3	22
61	Effect of Mo addition on the microstructure and hardness of ultrafine-grained Ni alloys processed by a combination of cryorolling and high-pressure torsion. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 688, 92-100	5.3	21
60	Dynamic Recrystallization in a Ti Modified Austenitic Stainless Steel During High Strain Rate Deformation. *Materials and Manufacturing Processes*, **2010**, 25, 54-59	4.1	20
59	Low cycle fatigue behaviour of a medium carbon microalloyed steel. *International Journal of Fatigue* , **1997**, 19, 135-140	5	20

58	On the development of high strength and bi-axially textured Ni-3%W/Ni-10%Cr-1.5%Al composite substrate for coated conductor application. *Scripta Materialia*, **2003**, 48, 1167-1171	5.6	19
57	Solute redistribution during annealing of a cold rolled Cu-Ag alloy. *Journal of Alloys and Compounds*, **2015**, 623, 96-103	5.7	17
56	Properties of cryo-drawn copper with severely twinned microstructure. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2013**, 588, 132-141	5.3	17
55	Low cycle fatigue behaviour of a multiphase medium carbon microalloyed steel processed through rolling. *Scripta Materialia*, **2003**, 49, 503-508	5.6	17
54	Hot hardness behaviour of ultrafine grained ferritic oxide dispersion strengthened alloys prepared by mechanical alloying and spark plasma sintering. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2012**, 558, 492-496	5.3	15
53	Application of textured highly alloyed Ni-W tapes for preparing coated conductor architectures. *Superconductor Science and Technology*, **2010**, 23, 034015	3.1	15
52	Dynamic microstructural evolution and recrystallization mechanism during hot deformation of intermetallic-hardened duplex lightweight steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2020**, 788, 139613	5.3	15
51	Microstructure evolution and hardness variation during annealing of equal channel angular pressed ultra-fine grained nickel subjected to 12 passes. *Journal of Materials Science*, **2011**, 46, 2662-2671	4.3	14
50	Microstructure and Mechanical Properties of Gas-Tungsten-Arc-Welded Ti-15-3 Beta Titanium Alloy. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2009**, 40, 2685-2693	2.3	13
49	Effect of rolling temperature on the evolution of defects and properties of an Al-Cu alloy. *Journal of Materials Science*, **2010**, 45, 4846-4850	4.3	13
48	Effect of γ′ size on room temperature low cycle fatigue behaviour of a nickel base superalloy. *Materials Science and Technology*, **1998**, 14, 669-675	1.5	13
47	Efficiency of the refinement by deformation twinning in wire drawn single phase copper alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2015**, 624, 71-78	5.3	12
46	Spark plasma consolidation of continuous fiber reinforced titanium matrix composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 703, 461-469	5.3	12
45	Transmission electron microscopy of a cyclically deformed medium carbon microalloyed steel. *Journal of Materials Science Letters*, **1997**, 16, 1495-1498		12
44	Simulation of the critical current density and its dependence on geometrical factors in RABiTS based coated conductors. *Superconductor Science and Technology*, **2004**, 17, 1003-1008	3.1	12
43	On the comparision of crack closure evaluation using dynamic and static compliance measurements. *International Journal of Fatigue*, **2001**, 23, 741-745	5	12
42	Annealing-Induced Hardening in Ultrafine-Grained Ni-Mo Alloys. *Advanced Engineering Materials*, **2018**, 20, 1800184	3.5	12
41	Two strain-hardening mechanisms in nanocrystalline austenitic steel: An in situ synchrotron X-ray diffraction study. *Scripta Materialia*, **2012**, 66, 690-693	5.6	11

40	Effect of sulphur on cube texture formation in microalloyed nickel substrate tapes. *Physica C: Superconductivity and Its Applications*, **2005**, 418, 9-15	1.3	11
39	Evolution of the microstructure during annealing of ultrafine-grained Ni with different Mo contents. *Materials Characterization*, **2017**, 130, 56-63	3.9	10
38	Influence of mode of deformation on microstructural heterogeneities in Ni subjected to large strain deformation. *Philosophical Magazine Letters*, **2015**, 95, 441-449	1	10
37	Experimental verification of grain boundary-sliding controlled steady state superplastic flow in both continually and statically recrystallizing Al alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2016**, 657, 185-196	5.3	10
36	Influence of mode of plastic straining on the microstructure of Ni and Ti deformed through rolling and torsion. *Materials Characterization*, **2017**, 132, 205-214	3.9	10
35	Microstructure and Mechanical Properties of V-Nb Microalloyed Ultrafine-Grained Dual-Phase Steels Processed Through Severe Cold Rolling and Intercritical Annealing. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2017**, 48, 1176-1188	2.3	9
34	Influence of the mode of deformation on recrystallisation kinetics in Nickel through experiments, theory and phase field model. *Philosophical Magazine*, **2017**, 97, 3211-3228	1.6	8
33	Studies on hot rolled galvanized steel sheets: Effect of reheating on galvanizing. *Surface and Coatings Technology*, **2009**, 203, 3465-3471	4.4	8
32	Studies on hot-rolled galvanized steel sheets: Segregation of alloying elements at the surface. *Scripta Materialia*, **2008**, 59, 522-525	5.6	8
31	Dispersion strengthened and highly cube textured Ni alloy tapes as possible substrates for coated conductors. *Acta Materialia*, **2003**, 51, 3769-3777	8.4	8
30	On the fatigue crack growth behaviour of two ferrite–pearlite microalloyed steels. *Materials Letters* , **2000**, 46, 185-188	3.3	8
29	Effect of grain boundary character distribution on weld heat-affected zone liquation cracking behavior of AISI 316Ti austenitic stainless steel. *Materials Characterization*, **2018**, 142, 115-123	3.9	8
28	Thermal Stability of Vacuum Hot Pressed Bulk Nanostructured Al-Cu Alloys. *Materials Science Forum*, **2011**, 690, 234-237	0.4	7
27	Nanoindentation studies on Ti40Zr25Ni bulk quasicrystalline intermetallics. *Philosophical Magazine*, **2007**, 87, 3109-3115	1.6	7
26	On the significance of misorientation axes of CSL boundaries in triple junctions in cubic materials. *Materials Characterization*, **2019**, 152, 276-281	3.9	6
25	Phase field modelling of annealing twin formation, evolution and interactions during grain growth. *Computational Materials Science*, **2020**, 182, 109787	3.2	6
24	Role of stress state on dynamic recrystallization behaviour of Ni during hot deformation: Analysis of uniaxial compression and plane strain compression. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2019**, 763, 138153	5.3	6
23	Grain boundary engineering and its implications on corrosion behavior of equiatomic CoCrFeMnNi high entropy alloy. *Journal of Alloys and Compounds*, **2021**, 888, 161500	5.7	6

22	Microstructure evolution during annealing of an SPD- processed supersaturated Cu □3 at.% Ag alloy. *IOP Conference Series: Materials Science and Engineering*, **2014**, 63, 012091	0.4	5
21	Influence of Mo alloying on the thermal stability and hardness of ultrafine-grained Ni processed by high-pressure torsion. *Journal of Materials Research and Technology*, **2017**, 6, 361-368	5.5	5
20	Effect of Y2O3 on Spark Plasma Sintering Kinetics of Nanocrystalline 9Cr-1Mo Ferritic Oxide Dispersion-Strengthened Steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2013**, 44, 4037-4041	2.3	4
19	The Effect of Thermomechanical Treatment on the Microstructure and the Mechanical Behavior of a Supersaturated Cu-Ag Alloy. *Materials Science Forum*, **2015**, 812, 53-58	0.4	4
18	Strengthening of biaxially textured Ni-alloys as substrates for YBCO tape conductors. *Physica C: Superconductivity and Its Applications*, **2002**, 372-376, 798-801	1.3	4
17	Development of ultra-fine grained dual phase microalloyed steels through severe cold rolling and intercritical annealing. *Transactions of the Indian Institute of Metals*, **2011**, 64, 89-92	1.2	3
16	Nickel DABiTS-tapes as a promising alternative to RABiTS-tapes. *Physica C: Superconductivity and Its Applications*, **2004**, 408-410, 906-907	1.3	3
15	Transport measurements and J/sub c/ simulations for RABiTS based coated conductors-doping and grain architecture. *IEEE Transactions on Applied Superconductivity*, **2005**, 15, 2794-2797	1.8	3
14	Low cycle fatigue behaviour of low carbon microalloyed steel: microstructural evolution and life assessment. *Materials Science and Technology*, **1999**, 15, 260-264	1.5	3
13	Origin and Role of □ Boundaries during Thermo-Mechanical Processing of a Ti-Modified Austenitic Stainless Steel. *Materials Science Forum*, **2011**, 702-703, 714-717	0.4	2
12	Isothermal Grain Growth Studies on Nanostructured 9Cr-1Mo and 9Cr-1W Ferritic Steels Containing Nano-sized Oxide Dispersoids. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2014**, 45, 1684-1688	2.3	1
11	Compression creep studies of mechanically alloyed nanostructured Fe-12Cr-2W-0.25Y2O3ODS alloy. *Journal of Physics: Conference Series*, **2010**, 240, 012090	0.3	1
10	Texture Analysis for Determining the Rate Controlling Process in the Transient and Steady State Regions of Superplastic Flow. *Materials Science Forum*, **2011**, 702-703, 360-365	0.4	1
9	Dynamic Recrystallisation during Isothermal Hot Deformation in a Titanium Modified Austenitic Stainless Steel. *Materials Science Forum*, **2012**, 715-716, 140-145	0.4	1
8	Prediction of carbon segregation on the surface of continuously annealed hot-rolled LCAK steel. *Surface and Coatings Technology*, **2010**, 205, 2051-2054	4.4	1
7	Some studies on the warm solid- and hollow-extrusion of sintered powder metallurgical copper preforms. *Journal of Materials Processing Technology*, **1997**, 70, 163-169	5.3	1
6	Reaction Kinetics at the Fiber/Matrix Interface of SiCf/Ti□15□ Composites. *Transactions of the Indian Institute of Metals*, **2018**, 71, 941-949	1.2	1
5	Studies on Texture and Microstructure of Cryorolled and Annealed Cu-5%Al, Cu-5%Zn Alloys. *Ceramic Transactions*, **2009**, 529-536	0.1	1

4	A novel approach combining grain boundary engineering and grain boundary serration to enhance high-temperature hot corrosion resistance in Alloy 617. *Materialia*, **2022**, 101451	3.2	0
3	Microstructural Evolution of Nanocrystalline ZrO2 in a Fe Matrix During High-Temperature Exposure. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2018**, 49, 3565-3574	2.3	
2	Study of Texture in Ultra Fine Grained Dual Phase Steel Sheets. *Materials Science Forum*, **2011**, 702-703, 806-809	0.4	
1	A physically based model of the effect of recovery and clustering on recrystallization kinetics. *Journal of Materials Science*, **2021**, 56, 7082-7093	4.3	