C Surynarayana

List of Publications by Citations

76 papers	10,380 citations	28 h-index	78 g-index
78 ext. papers	11,137 ext. citations	5.5 avg, IF	7.08 L-index

#	Paper	IF	Citations
76	Mechanical alloying and milling. *Progress in Materials Science*, **2001**, 46, 1-184	42.2	6146
75	Nanocrystalline materials. *International Materials Reviews*, **1995**, 40, 41-64	16.1	737
74	X-Ray Diffraction **1998**,		638
73	Mechanically alloyed nanocomposites. *Progress in Materials Science*, **2013**, 58, 383-502	42.2	519
72	Iron-based bulk metallic glasses. *International Materials Reviews*, **2013**, 58, 131-166	16.1	372
71	Synthesis and characterization of high volume fraction Al□Al2O3 nanocomposite powders by high-energy milling. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2006**, 425, 192-200	5.3	217
70	Review: A decade of quenching from the melt. *Journal of Materials Science*, **1971**, 6, 1111-1135	4.3	158
69	Nanocrystalline titanium-magnesium alloys through mechanical alloying. *Journal of Materials Research*, **1990**, 5, 1880-1886	2.5	116
68	A critical analysis of the glass-forming ability of alloys. *Journal of Non-Crystalline Solids*, **2009**, 355, 355-360	3.9	89
67	Fabrication of nano-grained Ti□Nb□r biomaterials using spark plasma sintering. *Materials and Design*, **2015**, 87, 693-700	8.1	86
66	Structural evolution of mechanically alloyed Ti?Al alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1992**, 158, 93-101	5.3	66
65	Phase Transformation in Nanometer-Sized □Alumina by Mechanical Milling. *Journal of the American Ceramic Society*, **2005**, 88, 780-783	3.8	65
64	Recent Developments in Nanostructured Materials. *Advanced Engineering Materials*, **2005**, 7, 983-992	3.5	61
63	Microstructure and mechanical properties of Al□r nanocomposite materials. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2009**, 518, 100-107	5.3	56
62	The structure and properties of nanocrystalline materials: Issues and concerns. *Jom*, **2002**, 54, 24-27	2.1	54
61	Does a disordered □TiAl phase exist in mechanically alloyed TiAl powders?. *Intermetallics*, **1995**, 3, 153-160	3.5	53
60	Synthesis of nanocomposites and amorphous alloys by mechanical alloying. *Journal of Materials Science*, **2011**, 46, 6301-6315	4.3	49

59	Extended homogeneity range of intermetallic phases in mechanically alloyed MgAl alloys. *Intermetallics*, **2003**, 11, 373-376	3.5	48
58	Criterion for predicting the glass-forming ability of alloys. *Applied Physics Letters*, **2007**, 90, 111915	3.4	45
57	An unusual phase transformation during mechanical alloying of an Fe-based bulk metallic glass composition. *Journal of Alloys and Compounds*, **2005**, 389, 121-126	5.7	41
56	Recent advances in the synthesis of alloy phases by mechanical alloying/milling. *Metals and Materials International*, **1996**, 2, 195-209		38
55	Structure and properties of ultrafine-grained MoSi2+Si3N4 composites synthesized by mechanical alloying. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2008**, 479, 23-30	5.3	37
54	Compaction and characterization of mechanically alloyed nanocrystalline titanium aluminides. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1997**, 28, 293-302	2.3	36
53	High-pressure synthesis of A15 Nb3Si phase from amorphous Nb?Si alloys. *Solid State Communications*, **1980**, 34, 861-863	1.6	36
52	Mechanical crystallization of Fe-based amorphous alloys. *Journal of Applied Physics*, **2007**, 102, 083544	2.5	34
51	A novel high-strength Al-based nanocomposite reinforced with Ti-based metallic glass nanoparticles produced by powder metallurgy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 734, 34-41	5.3	33
50	Effect of sintering parameters on microstructure, mechanical properties and electrochemical behavior of NbZr alloy for biomedical applications. *Materials and Design*, **2015**, 83, 344-351	8.1	30
49	Synthesis of MgAl2O3 nanocomposites by mechanical alloying. *Journal of Alloys and Compounds*, **2013**, 563, 165-170	5.7	30
48	Combustion Characteristics of Mechanically Alloyed Ultrafine-Grained Al-Mg Powders. *Advanced Engineering Materials*, **2006**, 8, 563-567	3.5	28
47	Synthesis of bulk nanocrystalline samarium hexaboride. *Journal of the European Ceramic Society*, **2015**, 35, 4121-4136	6	27
46	Crystallization of amorphous Zr-Ni alloys in the presence of H2, CO, O2, N2 and argon gases. *Journal of Materials Science*, **1986**, 21, 793-798	4.3	26
45	Metastable Zr-Nb alloys for spinal fixation rods with tunable Young's modulus and low magnetic resonance susceptibility. *Acta Biomaterialia*, **2017**, 62, 372-384	10.8	24
44	Mechanical properties and fracture behavior of an ultrafine-grained Al-20 wt pct Si alloy. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2005**, 36, 715-723	2.3	24
43	Synthesis, characterisation and mechanical properties of SiC reinforced Al based nanocomposites processed by MA and SPS. *Powder Metallurgy*, **2013**, 56, 149-157	1.9	22
42	Low-temperature superplasticity in ultrafine-grained Ti5Si3TiAl composites. *Scripta Materialia*, **2008**, 59, 455-458	5.6	21

41	Synthesis of metastable NiGe2 by mechanical alloying. *Materials and Design*, **2015**, 87, 520-526	8.1	20
40	A Structural Study of Vapour-Deposited Al□d Alloys. *Physica Status Solidi A*, **1982**, 73, 267-278		19
39	Effect of carbon addition on the glass-forming ability of mechanically alloyed Fe-based alloys. *Journal of Applied Physics*, **2008**, 103, 013504	2.5	18
38	Formation of an amorphous phase and its crystallization in the immiscible Nb□r system by mechanical alloying. *Journal of Applied Physics*, **2013**, 114, 153512	2.5	17
37	Metallic glasses. *Bulletin of Materials Science*, **1984**, 6, 579-594	1.7	16
36	Synthesis and thermal stability of homogeneous nanostructured Fe3C (cementite). *Journal of Materials Science*, **2018**, 53, 7877-7890	4.3	14
35	Synthesis and stability of the austenite phase in mechanically alloyed Fe□r□i alloys. *Materials Letters*, **2017**, 187, 140-143	3.3	13
34	Synthesis of austenitic stainless steel powder alloys by mechanical alloying. *Journal of Materials Science*, **2017**, 52, 11919-11932	4.3	13
33	Mechanochemical synthesis of nanocrystalline metal powders **2013**, 42-68		13
32	Phase formation under non-equilibrium processing conditions: rapid solidification processing and mechanical alloying. *Journal of Materials Science*, **2018**, 53, 13364-13379	4.3	12
31	Synthesis of stable and metastable phases in the Ni Si system by mechanical alloying. *Powder Technology*, **2016**, 302, 8-14	5.2	12
30	The Al?Co decagonal phase. *Physica Status Solidi A*, **1988**, 107, 693-708		12
29	Grain size softening effect in Al62.5Cu25Fe12.5 nanoquasicrystals. *Applied Physics Letters*, **2013**, 103, 201914	3.4	11
28	Consolidation of mechanically alloyed Cu-In-Ga-Se powders. *Journal of Materials Science Letters*, **2001**, 20, 2179-2181		10
27	GLASS FORMATION IN MECHANICALLY ALLOYED Fe-BASED SYSTEMS. *Functional Materials Letters*, **2009**, 02, 147-155	1.2	9
26	Quasicrystalline-to-crystalline transformation in rapidly solidified Mg32(Al, Zn)49. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **1988**, 58, 185-202		9
25	A comment on □ decade of quenching from the melt□by T. R. Anantharaman and C. Suryanarayana (J. Mater. Sci 6 (1971) 1111□1135). *Journal of Materials Science*, **1972**, 7, 349-354	4.3	9
24	Magnesium nanocomposites reinforced with a high volume fraction of SiC particulates. *International Journal of Materials Research*, **2017**, 108, 848-856	0.5	8

23	Mechanical characterization of mechanically alloyed ultrafine-grained Ti5Si3+40vol% TiAl composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2013**, 579, 18-25	5.3	8
22	In situ transformation behavior of icosahedral and decagonal quasicrystalline phases. *Journal of Materials Research*, **1988**, 3, 34-39	2.5	8
21	Effect of initial composition on phase selection in NiSi powder blends processed by mechanical alloying. *Materials and Manufacturing Processes*, **2018**, 33, 840-848	4.1	7
20	Texture Evolution in a Hot Rolled Austenitic Stainless Steel. *Textures and Microstructures*, **1991**, 13, 227-241		6
19	Abnormal hot deformation behavior in a metallic-glass-reinforced Al-7075 composite. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2020**, 785, 139212	5.3	5
18	Reversible transformation of NiGe in mechanically alloyed NiGe powders. *Journal of Materials Research*, **2015**, 30, 2124-2132	2.5	5
17	Mechanical properties and fracture behavior of an ultrafine-grained Al-20 wt pct Si alloy. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2005**, 36, 715-723	2.3	5
16	Microstructural Evolution during Mechanical Milling of Rapidly Solidified Al14Ni14Mm1 Alloy Powders. *Journal of Materials Synthesis and Processing*, **2001**, 9, 39-47		5
15	Effect of Multiple Alloying Elements on the Glass-Forming Ability, Thermal Stability, and Crystallization Behavior of Zr-Based Alloys. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2018**, 49, 644-651	2.3	4
14	Solute-vacancy binding energies in magnesium alloys. *Physica Status Solidi A*, **1978**, 45, K131-K133		4
13	Lattice parameters of liquisol-quenched aluminium. *Physica Status Solidi A*, **1973**, 18, K135-K137		4
12	Nanostructured Materials and Nanocomposites by Mechanical Alloying: An Overview. *Metals and Materials International*,1	2.4	4
11	Mechanical alloying: a critical review. *Materials Research Letters*, **2022**, 10, 619-647	7.4	4
10	Structural Characterization of Sputter-Deposited 304 Stainless Steel+10 wt pct Al Coatings. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2012**, 43, 2945-2954	2.3	3
9	Metallography of Sputter-Deposited SS304+Al Coatings. *Metallography, Microstructure, and Analysis*, **2013**, 2, 287-298	1.1	3
8	On the Nature of the Quasicrystalline Phase in Rapidly Solidified Al–Co–Si Alloys. *Materials Transactions, JIM*, **1989**, 30, 878-885		3
7	Alloyed Steels: Mechanically **2016**, 159-177		2
6	Inverse Hall-Petch Like Mechanical Behaviour in Nanophase Al-Cu-Fe Quasicrystals: A New Phenomenon. *Acta Physica Polonica A*, **2014**, 126, 543-548	0.6	2

5	Six decades of metallurgical education and research: A magnificent obsession a tribute to professor T.R. Anantharaman. *Transactions of the Indian Institute of Metals*, **2008**, 61, 63-72	1.2
4	Nanostructured Intermetallics **2002**, 749-764	
3	Electron Microscopic Studies of Phase Transformations in NiSe Thin Films. *Physica Status Solidi A*, **1979**, 54, K103-K105	
2	Developing a MoSi2+SiC Oxidation Resistant Coating for Mo, A Prototype Refractory Metal207-216	
1	Crystallization Behavior of a Melt-Spun Al86Ni9Mm5 Alloy171-182	