

C Surynarayana

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.

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: a critical review. <i>Materials Research Letters</i> , 2022 , 10, 619-647	7.4	4
75	Abnormal hot deformation behavior in a metallic-glass-reinforced Al-7075 composite. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 785, 139212	5.3	5
74	Synthesis and thermal stability of homogeneous nanostructured Fe ₃ C (cementite). <i>Journal of Materials Science</i> , 2018 , 53, 7877-7890	4.3	14
73	Effect of Multiple Alloying Elements on the Glass-Forming Ability, Thermal Stability, and Crystallization Behavior of Zr-Based Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018 , 49, 644-651	2.3	4
72	Phase formation under non-equilibrium processing conditions: rapid solidification processing and mechanical alloying. <i>Journal of Materials Science</i> , 2018 , 53, 13364-13379	4.3	12
71	A novel high-strength Al-based nanocomposite reinforced with Ti-based metallic glass nanoparticles produced by powder metallurgy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 734, 34-41	5.3	33
70	Effect of initial composition on phase selection in Ni ₃ Si powder blends processed by mechanical alloying. <i>Materials and Manufacturing Processes</i> , 2018 , 33, 840-848	4.1	7
69	Synthesis and stability of the austenite phase in mechanically alloyed Fe-Cr-Ni alloys. <i>Materials Letters</i> , 2017 , 187, 140-143	3.3	13
68	Synthesis of austenitic stainless steel powder alloys by mechanical alloying. <i>Journal of Materials Science</i> , 2017 , 52, 11919-11932	4.3	13
67	Metastable Zr-Nb alloys for spinal fixation rods with tunable Young's modulus and low magnetic resonance susceptibility. <i>Acta Biomaterialia</i> , 2017 , 62, 372-384	10.8	24
66	Magnesium nanocomposites reinforced with a high volume fraction of SiC particulates. <i>International Journal of Materials Research</i> , 2017 , 108, 848-856	0.5	8
65	Synthesis of stable and metastable phases in the Ni-Si system by mechanical alloying. <i>Powder Technology</i> , 2016 , 302, 8-14	5.2	12
64	Alloyed Steels: Mechanically 2016 , 159-177		2
63	Effect of sintering parameters on microstructure, mechanical properties and electrochemical behavior of Nb-Zr alloy for biomedical applications. <i>Materials and Design</i> , 2015 , 83, 344-351	8.1	30
62	Fabrication of nano-grained Ti-Nb-Zr biomaterials using spark plasma sintering. <i>Materials and Design</i> , 2015 , 87, 693-700	8.1	86
61	Synthesis of metastable NiGe ₂ by mechanical alloying. <i>Materials and Design</i> , 2015 , 87, 520-526	8.1	20
60	Synthesis of bulk nanocrystalline samarium hexaboride. <i>Journal of the European Ceramic Society</i> , 2015 , 35, 4121-4136	6	27

59	Reversible transformation of NiGe in mechanically alloyed NiGe powders. <i>Journal of Materials Research</i> , 2015 , 30, 2124-2132	2.5	5
58	Inverse Hall-Petch Like Mechanical Behaviour in Nanophase Al-Cu-Fe Quasicrystals: A New Phenomenon. <i>Acta Physica Polonica A</i> , 2014 , 126, 543-548	0.6	2
57	Mechanochemical synthesis of nanocrystalline metal powders 2013 , 42-68		13
56	Mechanically alloyed nanocomposites. <i>Progress in Materials Science</i> , 2013 , 58, 383-502	42.2	519
55	Synthesis of MgAl ₂ O ₃ nanocomposites by mechanical alloying. <i>Journal of Alloys and Compounds</i> , 2013 , 563, 165-170	5.7	30
54	Mechanical characterization of mechanically alloyed ultrafine-grained Ti ₅ Si ₃ +40vol% TiAl composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 579, 18-25	5.3	8
53	Metallography of Sputter-Deposited SS304+Al Coatings. <i>Metallography, Microstructure, and Analysis</i> , 2013 , 2, 287-298	1.1	3
52	Iron-based bulk metallic glasses. <i>International Materials Reviews</i> , 2013 , 58, 131-166	16.1	372
51	Synthesis, characterisation and mechanical properties of SiC reinforced Al based nanocomposites processed by MA and SPS. <i>Powder Metallurgy</i> , 2013 , 56, 149-157	1.9	22
50	Grain size softening effect in Al _{62.5} Cu ₂₅ Fe _{12.5} nanoquasicrystals. <i>Applied Physics Letters</i> , 2013 , 103, 201914	3.4	11
49	Formation of an amorphous phase and its crystallization in the immiscible NbZr system by mechanical alloying. <i>Journal of Applied Physics</i> , 2013 , 114, 153512	2.5	17
48	Structural Characterization of Sputter-Deposited 304 Stainless Steel+10 wt pct Al Coatings. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012 , 43, 2945-2954 ²⁻³	2.3	3
47	Synthesis of nanocomposites and amorphous alloys by mechanical alloying. <i>Journal of Materials Science</i> , 2011 , 46, 6301-6315	4.3	49
46	GLASS FORMATION IN MECHANICALLY ALLOYED Fe-BASED SYSTEMS. <i>Functional Materials Letters</i> , 2009 , 02, 147-155	1.2	9
45	Microstructure and mechanical properties of AlZr nanocomposite materials. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009 , 518, 100-107	5.3	56
44	A critical analysis of the glass-forming ability of alloys. <i>Journal of Non-Crystalline Solids</i> , 2009 , 355, 355-360	3.0	89
43	Low-temperature superplasticity in ultrafine-grained Ti ₅ Si ₃ TiAl composites. <i>Scripta Materialia</i> , 2008 , 59, 455-458	5.6	21
42	Effect of carbon addition on the glass-forming ability of mechanically alloyed Fe-based alloys. <i>Journal of Applied Physics</i> , 2008 , 103, 013504	2.5	18

41	Structure and properties of ultrafine-grained MoSi ₂ +Si ₃ N ₄ composites synthesized by mechanical alloying. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 479, 23-30	5.3	37
40	Six decades of metallurgical education and research: A magnificent obsession a tribute to professor T.R. Anantharaman. <i>Transactions of the Indian Institute of Metals</i> , 2008 , 61, 63-72	1.2	
39	Criterion for predicting the glass-forming ability of alloys. <i>Applied Physics Letters</i> , 2007 , 90, 111915	3.4	45
38	Mechanical crystallization of Fe-based amorphous alloys. <i>Journal of Applied Physics</i> , 2007 , 102, 083544	2.5	34
37	Combustion Characteristics of Mechanically Alloyed Ultrafine-Grained Al-Mg Powders. <i>Advanced Engineering Materials</i> , 2006 , 8, 563-567	3.5	28
36	Synthesis and characterization of high volume fraction Al ₂ O ₃ nanocomposite powders by high-energy milling. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006 , 425, 192-200	5.3	217
35	An unusual phase transformation during mechanical alloying of an Fe-based bulk metallic glass composition. <i>Journal of Alloys and Compounds</i> , 2005 , 389, 121-126	5.7	41
34	Phase Transformation in Nanometer-Sized γ -Alumina by Mechanical Milling. <i>Journal of the American Ceramic Society</i> , 2005 , 88, 780-783	3.8	65
33	Recent Developments in Nanostructured Materials. <i>Advanced Engineering Materials</i> , 2005 , 7, 983-992	3.5	61
32	Mechanical properties and fracture behavior of an ultrafine-grained Al-20 wt pct Si alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2005 , 36, 715-723	2.3	5
31	Mechanical properties and fracture behavior of an ultrafine-grained Al-20 wt pct Si alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2005 , 36, 715-723	2.3	24
30	Extended homogeneity range of intermetallic phases in mechanically alloyed Mg-Al alloys. <i>Intermetallics</i> , 2003 , 11, 373-376	3.5	48
29	The structure and properties of nanocrystalline materials: Issues and concerns. <i>Jom</i> , 2002 , 54, 24-27	2.1	54
28	Nanostructured Intermetallics 2002 , 749-764		
27	Consolidation of mechanically alloyed Cu-In-Ga-Se powders. <i>Journal of Materials Science Letters</i> , 2001 , 20, 2179-2181		10
26	Microstructural Evolution during Mechanical Milling of Rapidly Solidified Al ₄ Ni ₄ Mm ₁ Alloy Powders. <i>Journal of Materials Synthesis and Processing</i> , 2001 , 9, 39-47		5
25	Mechanical alloying and milling. <i>Progress in Materials Science</i> , 2001 , 46, 1-184	42.2	6146
24	X-Ray Diffraction 1998 ,		638

23	Compaction and characterization of mechanically alloyed nanocrystalline titanium aluminides. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1997 , 28, 293-302	2.3	36
22	Recent advances in the synthesis of alloy phases by mechanical alloying/milling. <i>Metals and Materials International</i> , 1996 , 2, 195-209		38
21	Does a disordered TiAl phase exist in mechanically alloyed TiAl powders?. <i>Intermetallics</i> , 1995 , 3, 153-160	9.5	53
20	Nanocrystalline materials. <i>International Materials Reviews</i> , 1995 , 40, 41-64	16.1	737
19	Structural evolution of mechanically alloyed TiAl alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1992 , 158, 93-101	5.3	66
18	Texture Evolution in a Hot Rolled Austenitic Stainless Steel. <i>Textures and Microstructures</i> , 1991 , 13, 227-241		6
17	Nanocrystalline titanium-magnesium alloys through mechanical alloying. <i>Journal of Materials Research</i> , 1990 , 5, 1880-1886	2.5	116
16	On the Nature of the Quasicrystalline Phase in Rapidly Solidified Al-Co-Si Alloys. <i>Materials Transactions, JIM</i> , 1989 , 30, 878-885		3
15	The Al-Co decagonal phase. <i>Physica Status Solidi A</i> , 1988 , 107, 693-708		12
14	In situ transformation behavior of icosahedral and decagonal quasicrystalline phases. <i>Journal of Materials Research</i> , 1988 , 3, 34-39	2.5	8
13	Quasicrystalline-to-crystalline transformation in rapidly solidified Mg ₃₂ (Al, Zn) ₄₉ . <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1988 , 58, 185-202		9
12	Crystallization of amorphous Zr-Ni alloys in the presence of H ₂ , CO, O ₂ , N ₂ and argon gases. <i>Journal of Materials Science</i> , 1986 , 21, 793-798	4.3	26
11	Metallic glasses. <i>Bulletin of Materials Science</i> , 1984 , 6, 579-594	1.7	16
10	A Structural Study of Vapour-Deposited AlPd Alloys. <i>Physica Status Solidi A</i> , 1982 , 73, 267-278		19
9	High-pressure synthesis of A15 Nb ₃ Si phase from amorphous Nb-Si alloys. <i>Solid State Communications</i> , 1980 , 34, 861-863	1.6	36
8	Electron Microscopic Studies of Phase Transformations in NiSe Thin Films. <i>Physica Status Solidi A</i> , 1979 , 54, K103-K105		
7	Solute-vacancy binding energies in magnesium alloys. <i>Physica Status Solidi A</i> , 1978 , 45, K131-K133		4
6	Lattice parameters of liquid-quenched aluminium. <i>Physica Status Solidi A</i> , 1973 , 18, K135-K137		4

- 5 A comment on a 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
- 4 Review: A decade of quenching from the melt. *Journal of Materials Science*, **1971**, 6, 1111-1135 4.3 158
- 3 Developing a MoSi₂+SiC Oxidation Resistant Coating for Mo, A Prototype Refractory Metal 207-216
- 2 Crystallization Behavior of a Melt-Spun Al₈₆Ni₉Mn₅ Alloy 171-182
- 1 Nanostructured Materials and Nanocomposites by Mechanical Alloying: An Overview. *Metals and Materials International*, 1 2.4 4