C Suryanarayana

List of Publications by Year
in descending order

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114	15,050	61857	28224
papers	citations	43 h-index	105 g-index

116	116	116	9390
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Mechanical alloying and milling. Progress in Materials Science, 2001, 46, 1-184.	16.0	6,942
2	Nanocrystalline materials. International Materials Reviews, 1995, 40, 41-64.	9.4	808
3	Mechanically alloyed nanocomposites. Progress in Materials Science, 2013, 58, 383-502.	16.0	622
4	The science and technology of mechanical alloying. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 304-306, 151-158.	2.6	515
5	Iron-based bulk metallic glasses. International Materials Reviews, 2013, 58, 131-166.	9.4	485
6	Synthesis, properties and applications of titanium aluminides. Journal of Materials Science, 1992, 27, 5113-5140.	1.7	381
7	Rapidly Quenched Metals. , 1980, , .		348
8	Nanocrystalline materials â€“ Current research and future directions. Hyperfine Interactions, 2000, 130, 5-44.	0.2	319
9	Synthesis and characterization of high volume fraction Alâ€“Al2O3 nanocomposite powders by high-energy milling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 425, 192-200.	2.6	244
10	Effect of clustering on the mechanical properties of SiC particulate-reinforced aluminum alloy 2024 metal matrix composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 347, 198-204.	2.6	203
11	Structure and properties of nanocrystalline materials. Bulletin of Materials Science, 1994, 17, 307-346.	0.8	185
12	Review: A decade of quenching from the melt. Journal of Materials Science, 1971, 6, 1111-1135.	1.7	173
13	Nanocrystalline materials. International Materials Reviews, 1995, 40, 41-64.	9.4	169
14	Grain size effects in nanocrystalline materials. Journal of Materials Research, 1992, 7, 2114-2118.	1.2	155
15	Nanocrystalline titanium-magnesium alloys through mechanical alloying. Journal of Materials Research, 1990, 5, 1880-1886.	1.2	133
16	Rapid quenching from the melt: An annotated bibliography 1958?72. Journal of Materials Science, 1973, 8, 705-753.	1.7	130
17	Synthesis of nanocomposites by mechanical alloying. Journal of Alloys and Compounds, 2011, 509, S229-S234.	2.8	125
18	The structure and mechanical properties of metallic nanocrystals. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1992, 23, 1071-1081.	1.4	120

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19	Structural evolution in mechanically alloyed Al-Fe powders. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1995, 26, 1939-1946.	1.1	102
20	A critical analysis of the glass-forming ability of alloys. Journal of Non-Crystalline Solids, 2009, 355, 355-360.	1.5	98
21	Fabrication of nano-grained Tiâ€“Nbâ€“Zr biomaterials using spark plasma sintering. Materials and Design, 2015, 87, 693-700.	3.3	97
22	Materials and Process Design through Mechanochemical Routes. Journal of Materials Synthesis and Processing, 2000, 8, 235-244.	0.3	73
23	Recent Developments in Nanostructured Materials. Advanced Engineering Materials, 2005, 7, 983-992.	1.6	73
24	Structural evolution of mechanically alloyed Tiî—¸Al alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1992, 158, 93-101.	2.6	72
25	Phase Transformation in Nanometer-Sized gamma-Alumina by Mechanical Milling. Journal of the American Ceramic Society, 2005, 88, 780-783.	1.9	69
26	Synthesis of nanocomposites and amorphous alloys by mechanical alloying. Journal of Materials Science, 2011, 46, 6301-6315.	1.7	69
27	Microstructure and mechanical properties of Alâ€“Zr nanocomposite materials. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 518, 100-107.	2.6	66
28	The structure and properties of nanocrystalline materials: Issues and concerns. Jom, 2002, 54, 24-27.	0.9	63
29	Homogeneous dispersion of graphite in a 6061 aluminum alloy by ball milling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 348, 163-169.	2.6	63
30	Synthesis of Mg2X (X = Si, Ge, or Sn) intermetallics by mechanical alloying. Materials Letters, 1997, 33, 71-75.	1.3	62
31	Mechanical alloying of nb-al powders. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1996, 27, 41-48.	1.1	60
32	Rapid solidification processing of titanium alloys. International Materials Reviews, 1991, 36, 85-123.	9.4	58
33	Does a disordered Î³-TiAl phase exist in mechanically alloyed TiAl powders?. Intermetallics, 1995, 3, 153-160.	1.8	58
34	Extended homogeneity range of intermetallic phases in mechanically alloyed Mgâ€“Al alloys. Intermetallics, 2003, 11, 373-376.	1.8	56
35	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.	2.6	56
36	Effect of premilling elemental powders on solid solubility extension of magnesium in titanium by mechanical alloying. Materials Letters, 1995, 23, 27-31.	1.3	53

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37	Effect of Nb on the glass-forming ability of mechanically alloyed Feâ€“Niâ€“Zrâ€“B alloys. Scripta Materialia, 2008, 58, 508-511.	2.6	52
38	Milling maps for phase identification during mechanical alloying. Scripta Metallurgica Et Materialia, 1992, 26, 1727-1732.	1.0	51
39	Mechanical alloying: a critical review. Materials Research Letters, 2022, 10, 619-647.	4.1	49
40	An unusual phase transformation during mechanical alloying of an Fe-based bulk metallic glass composition. Journal of Alloys and Compounds, 2005, 389, 121-126.	2.8	48
41	Criterion for predicting the glass-forming ability of alloys. Applied Physics Letters, 2007, 90, 111915.	1.5	48
42	Recent advances in the synthesis of alloy phases by mechanical alloying/milling. Metals and Materials International, 1996, 2, 195-209.	0.2	46
43	Synthesis of a nanocrystalline Wâ€“25 wt.% Re alloy by mechanical alloying. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1998, 251, 255-261.	2.6	46
44	Nanocrystalline metals for structural applications. Jom, 1989, 41, 12-17.	0.9	45
45	Structure of mechanically alloyed Ti-Al-Nb powders. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1995, 26, 1379-1387.	1.1	45
46	Numerical Investigation of Mechanical Behaviour of Nanocrystalline Copper. Powder Metallurgy, 1998, 41, 217-220.	0.9	40
47	Mechanical crystallization of Fe-based amorphous alloys. Journal of Applied Physics, 2007, 102, .	1.1	40
48	Development of new Al-based nanocomposites by mechanical alloying. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 480, 392-396.	2.6	40
49	Effect of sintering parameters on microstructure, mechanical properties and electrochemical behavior of Nbâ€“Zr alloy for biomedical applications. Materials and Design, 2015, 83, 344-351.	3.3	39
50	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.	2.6	37
51	Synthesis of Mgâ€“Al2O3 nanocomposites by mechanical alloying. Journal of Alloys and Compounds, 2013, 563, 165-170.	2.8	37
52	Synthesis of bulk nanocrystalline samarium hexaboride. Journal of the European Ceramic Society, 2015, 35, 4121-4136.	2.8	35
53	Extended solid solutions in Cdî—¸Zn powders by mechanical alloying. Scripta Metallurgica Et Materialia, 1994, 30, 133-137.	1.0	34
54	Combustion Characteristics of Mechanically Alloyed Ultrafine-Grained Al-Mg Powders. Advanced Engineering Materials, 2006, 8, 563-567.	1.6	34

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55	Metastable phases in mechanically alloyed Alî—¸Mn powder mixtures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1991, 131, 237-242.	2.6	33
56	Transformation studies and mechanical properties of melt-quenched amorphous titanium-silicon alloys. Journal of Materials Science, 1980, 15, 1993-2000.	1.7	32
57	Phase selection in a mechanically alloyed Cu2013;Inâ€“Gaâ€“Se powder mixture. Journal of Materials Research, 1999, 14, 377-383.	1.2	32
58	Structure and properties of rapidly solidified Mg-Al alloys. Journal of Materials Science, 1999, 34, 4311-4320.	1.7	31
59	Synthesis, characterisation and mechanical properties of SiC reinforced Al based nanocomposites processed by MA and SPS. Powder Metallurgy, 2013, 56, 149-157.	0.9	31
60	Nanostructured Materials and Nanocomposites by Mechanical Alloying: An Overview. Metals and Materials International, 2022, 28, 41-53.	1.8	31
61	Microstructure and wear characteristics of rapidly solidified Alâ€“Pbâ€“Cu alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2000, 287, 59-65.	2.6	29
62	Mechanically induced fcc phase formation in nanocrystalline hafnium. Journal of Applied Physics, 2009, 105, .	1.1	29
63	Low-temperature superplasticity in ultrafine-grained Ti5Si3â€“TiAl composites. Scripta Materialia, 2008, 59, 455-458.	2.6	25
64	Phase evolution during high energy ball milling of immiscible Nbâ€“Zr alloys. Advanced Powder Technology, 2015, 26, 385-391.	2.0	25
65	Synthesis of nanocrystalline Al5Fe2 by mechanical alloying. Scripta Metallurgica Et Materialia, 1994, 31, 333-338.	1.0	24
66	A comparison of the sintering characteristics of ball-milled and attritor-milled Wâ€“Niâ€“Fe heavy alloy. Journal of Materials Research, 1996, 11, 1673-1682.	1.2	23
67	Synthesis of metastable NiGe2 by mechanical alloying. Materials and Design, 2015, 87, 520-526.	3.3	22
68	Phase formation under non-equilibrium processing conditions: rapid solidification processing and mechanical alloying. Journal of Materials Science, 2018, 53, 13364-13379.	1.7	22
69	TiAl formation by mechanical alloying. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1992, 150, 117-121.	2.6	21
70	X-ray powder profile analyses on nanostructured niobium metal powders. Scripta Materialia, 1995, 5, 53-61.	0.5	21
71	Mechanism of low-temperature Î¸-CuGa2 phase formation in Cu-Ga alloys by mechanical alloying. Journal of Applied Physics, 2004, 96, 6120-6126.	1.1	20
72	Effect of carbon addition on the glass-forming ability of mechanically alloyed Fe-based alloys. Journal of Applied Physics, 2008, 103, 013504.	1.1	20

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73	Mechanochemical synthesis of nanocrystalline metal powders. , 2013, , 42-68.		20
74	Formation of an amorphous phase and its crystallization in the immiscible Nbâ€“Zr system by mechanical alloying. Journal of Applied Physics, 2013, 114, 153512.	1.1	19
75	Synthesis of Nanostructured Materials by Inert-Gas Condensation Methods. , 2007, , 47-90.		18
76	Synthesis of austenitic stainless steel powder alloys by mechanical alloying. Journal of Materials Science, 2017, 52, 11919-11932.	1.7	18
77	Synthesis and thermal stability of homogeneous nanostructured Fe3C (cementite). Journal of Materials Science, 2018, 53, 7877-7890.	1.7	18
78	Production of nanostructure titanium-based alloys by mechanical alloying. Scripta Materialia, 1992, 1, 191-196.	0.5	17
79	Synthesis and processing of a Cu-In-Ga-Se sputtering target. Thin Solid Films, 1998, 332, 340-344.	0.8	16
80	Synthesis of ordered Al3Nb intermetallic by mechanical alloying. Scripta Metallurgica Et Materialia, 1994, 30, 781-785.	1.0	15
81	Synthesis of metastable L12 cubic phases in (Al,M)3Zr (M = Fe,Ni) powders by mechanical alloying. Scripta Metallurgica Et Materialia, 1994, 31, 1465-1470.	1.0	15
82	Size-dependent structure and properties of rapidly solidified aluminum alloy powders. Scripta Materialia, 2001, 45, 1341-1347.	2.6	15
83	Synthesis of B2 phase in Tiî—¸Alî—¸Nb alloys by mechanical alloying. Scripta Metallurgica Et Materialia, 1991, 25, 2537-2540.	1.0	14
84	Synthesis and stability of the austenite phase in mechanically alloyed Feâ€“Crâ€“Ni alloys. Materials Letters, 2017, 187, 140-143.	1.3	14
85	Synthesis of metastable phases in Al-Nb powders by mechanical alloying. Scripta Metallurgica Et Materialia, 1992, 27, 475-480.	1.0	13
86	Thermal stability of nanostructured titanium aluminides. Scripta Materialia, 1993, 2, 527-535.	0.5	13
87	Chapter 4 Mechanical alloying. Pergamon Materials Series, 1999, , 49-85.	0.2	13
88	Isothermal nanocrystallisation behaviour of melt spun Al86Ni9Mm5(Mmmischmetal)amorphous alloy. Materials Science and Technology, 2003, 19, 966-972.	0.8	13
89	Synthesis of stable and metastable phases in the Ni Si system by mechanical alloying. Powder Technology, 2016, 302, 8-14.	2.1	13
90	Pressure-assisted sintering of Alâ€“Gdâ€“Niâ€“Co amorphous alloy powders. Materialia, 2018, 2, 157-166.	1.3	13

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91	Grain size softening effect in Al_{62.5}Cu₂₅Fe_{12.5} nanoquasicrystals. Applied Physics Letters, 2013, 103, 201914.	1.5	12
92	Lattice contraction during amorphization by mechanical alloying. Journal of Applied Physics, 2008, 104, 103503.	1.1	11
93	Mechanical characterization of mechanically alloyed ultrafine-grained Ti5Si3+40vol% Î³-TiAl composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 579, 18-25.	2.6	10
94	Magnesium nanocomposites reinforced with a high volume fraction of SiC particulates. International Journal of Materials Research, 2017, 108, 848-856.	0.1	10
95	GLASS FORMATION IN MECHANICALLY ALLOYED Fe-BASED SYSTEMS. Functional Materials Letters, 2009, 02, 147-155.	0.7	9
96	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.	2.6	9
97	Amorphous to Crystalline Phase Transformations. Materials Science Forum, 1985, 3, 173-185.	0.3	7
98	Effect of initial composition on phase selection in Niâ€“Si powder blends processed by mechanical alloying. Materials and Manufacturing Processes, 2018, 33, 840-848.	2.7	7
99	Consolidation of nanocrystalline powders. Metals and Materials International, 1999, 5, 121-128.	0.2	6
100	Reversible transformation of NiGe in mechanically alloyed Niâ€“Ge powders. Journal of Materials Research, 2015, 30, 2124-2132.	1.2	6
101	Synthesis and characterization of vanadium boride powders and their sintered bodies. Materials Research Express, 2019, 6, 096542.	0.8	6
102	Title is missing!. Journal of Materials Synthesis and Processing, 2001, 9, 39-47.	0.3	5
103	Phase Formation during Ball Milling of Ti-Al-B Powders. Materials Science Forum, 1996, 225-227, 471-476.	0.3	3
104	Development of a diffusion barrier layer for silicon and carbon in molybdenumâ€”a physical vapor deposition approach. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1999, 30, 799-806.	1.1	3
105	Alloyed Steels: Mechanically. , 2016, , 159-177.		3
106	Investigation of the magnetic properties and fracture behavior of Ndâ€“Feâ€“B alloy powders during high-energy ball milling. Materials Research Express, 2020, 7, 096101.	0.8	3
107	Rapid Solidification Processing. , 2002, , 1-10.		2
108	Inverse Hall-Petch Like Mechanical Behaviour in Nanophase Al-Cu-Fe Quasicrystals: A New Phenomenon. Acta Physica Polonica A, 2014, 126, 543-548.	0.2	2

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109	Fabrication of ultrafine powder using processing control agent, and investigation of its effect on microstructure and thermoelectric properties of p-type (Bi, Sb)2Te3 alloys. Advanced Powder Technology, 2022, 33, 103386.	2.0	2
110	Mechanical milling of gas-atomized Alâˆ’Niâˆ’Mm (Mm=misch metal) alloy powders. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2001, 32, 821-829.	1.1	1
111	Grain Boundaries in Metallic Materials. , 1992, , 229-237.		0
112	Mechanical milling of gas-atomized Al-Ni-Mm (Mm = misch metal) alloy powders. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2001, 32, 821-829.	1.1	0
113	Mechanical Alloying and Severe Plastic Deformation. , 2007, , 13-1-13-28.		0
114	Synthesis of Nano-Size Hydroxyapatite (HAp) Powders by Mechanical Alloying. Ceramic Engineering and Science Proceedings, 0, , 33-39.	0.1	0