E Mohandas

List of Publications by Year in descending order

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		236925	330143
114	1,943	25	37
papers	citations	h-index	g-index
			01.60
116	116	116	2168
all docs	docs citations	times ranked	citing authors

#	Article	IF	CITATIONS
1	Microstructure, optical and dielectric properties of cerium oxide thin films prepared by pulsed laser deposition. Journal of Materials Science: Materials in Electronics, 2019, 30, 16548-16553.	2.2	14
2	X-ray diffraction Rietveld analysis and Bond Valence analysis of nano titania containing oxygen vacancies synthesized via sol-gel route. Materials Chemistry and Physics, 2019, 225, 320-330.	4.0	15
3	Microstructural and microchemical studies of phase stability in V-O solid solution. Materials Characterization, 2017, 124, 129-135.	4.4	4
4	Crystal structure and bonding characteristics of transformation products of bcc \hat{l}^2 in Ti-Mo alloys. Journal of Alloys and Compounds, 2017, 705, 769-781.	5.5	25
5	Characterization and Performance of Magnetron-Sputtered Zirconium Coatings Deposited on 9Cr-1Mo Steel. Journal of Materials Engineering and Performance, 2016, 25, 4666-4679.	2.5	2
6	Phase and Microstructure Evolution in V-Ti-(Cr/W) Alloys. Materials Today: Proceedings, 2016, 3, 2920-2925.	1.8	0
7	Phase separation and ω transformation in binary V-Ti and ternary V-Ti-Cr alloys. Acta Materialia, 2016, 121, 310-324.	7.9	23
8	Microstructural characterization of transformation products of bcc \hat{l}^2 in Ti-15 Mo alloy. Journal of Alloys and Compounds, 2016, 658, 301-315.	5.5	21
9	Alloy design and microstructural evolution in V–Ti–Cr alloys. Materials Characterization, 2015, 106, 292-301.	4.4	17
10	Influence of CeO2 layer thickness on the properties of CeO2/Gd2O3 multilayers prepared by pulsed laser deposition. Vacuum, 2015, 113, 64-74.	3.5	3
11	Microstructure and optical properties of Gd2O3 thin films prepared by pulsed laser deposition. Surface and Coatings Technology, 2015, 262, 56-63.	4.8	25
12	Thermal stability and thermal expansion behaviour of ZrO2/Y2O3 multilayers deposited by pulsed laser deposition technique. Materials Chemistry and Physics, 2015, 162, 592-607.	4.0	9
13	Structure imaging and vanadium substitution in cubic TiCr ₂ Laves phase. Philosophical Magazine, 2015, 95, 2403-2426.	1.6	9
14	HRTEM investigation of phase stability in alumina–zirconia multilayer thin films. Bulletin of Materials Science, 2015, 38, 401-407.	1.7	2
15	Phase Transition and Thermal Expansion Studies of Alumina Thin Films Prepared by Reactive Pulsed Laser Deposition. Journal of Nanoscience and Nanotechnology, 2014, 14, 7728-7733.	0.9	19
16	Oxidation and Hot Corrosion Behavior of Nickel-Based Superalloy for Gas Turbine Applications. Materials and Manufacturing Processes, 2014, 29, 832-839.	4.7	36
17	Electrical Discharge Machining of Al (6351)-5% SiC-10% B ₄ C Hybrid Composite: A Grey Relational Approach. Modelling and Simulation in Engineering, 2014, 2014, 1-7.	0.7	24
18	Plasma plume behavior of laser ablated cerium oxide: Effect of oxygen partial pressure. Laser and Particle Beams, 2014, 32, 429-435.	1.0	6

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19	Chemical and Microstructural Analysis of a Tin Coin of Sangam Period. Transactions of the Indian Institute of Metals, 2014, 67, 835-839.	1.5	O
20	Effect of Creep Exposure on Microstructure and Mechanical Properties of Modified 9Cr-1Mo Steel. Procedia Engineering, 2014, 86, 116-122.	1.2	9
21	X-ray diffraction, Raman and photoluminescence studies of nanocrystalline cerium oxide thin films. Ceramics International, 2013, 39, 8327-8333.	4.8	59
22	Characterisation of ZrAl and ZrAlN Thin Films Prepared by Pulsed DC Magnetron Sputtering. Transactions of the Indian Institute of Metals, 2013, 66, 363-367.	1.5	2
23	Synthesis and Structural Characterization of V–4Ti–4Cr Alloy. Transactions of the Indian Institute of Metals, 2013, 66, 381-385.	1.5	7
24	Effect of substrate temperature on microstructure and optical properties of nanocrystalline alumina thin films. Ceramics International, 2013, 39, 9017-9023.	4.8	44
25	Influence of nitrogen flow rate on microstructural and nanomechanical properties of Zr–N thin films prepared by pulsed DC magnetron sputtering. Applied Surface Science, 2013, 280, 117-123.	6.1	62
26	Structural characterization of electrodeposited boron. Bulletin of Materials Science, 2013, 36, 1323-1329.	1.7	10
27	Microstructural, nanomechanical and tribological properties of ZrAlN thin films prepared by pulsed DC magnetron sputtering. , 2013, , .		0
28	Electroextraction of boron from boron carbide scrap. Materials Characterization, 2013, 84, 134-141.	4.4	4
29	Synthesis and sintering of nanocrystalline thoria doped with CaO and MgO derived through oxalate-deagglomeration. Journal of Nuclear Materials, 2013, 434, 223-229.	2.7	19
30	Microstructural, nanomechanical and antibacterial properties of magnetron sputtered nanocomposite thin films of CrN/Cu. Surface Engineering, 2012, 28, 134-140.	2.2	16
31	Development of a CrN/Cu nanocomposite coating on titanium-modified stainless steel for antibacterial activity against Pseudomonas aeruginosa. Biofouling, 2012, 28, 779-787.	2.2	9
32	Phase evolution in zirconia thin films prepared by pulsed laser deposition. Applied Surface Science, 2012, 258, 5157-5165.	6.1	15
33	A unified approach to phase and microstructural stability for Fe-ETM alloys through Miedema's model. Intermetallics, 2012, 23, 148-157.	3.9	22
34	High temperature xâ€ray diffraction studies of zirconia thin films prepared by reactive pulsed laser deposition. Crystal Research and Technology, 2012, 47, 415-422.	1.3	7
35	Characterization of Al2O3/ZrO2 nano multilayer thin films prepared by pulsed laser deposition. Materials Chemistry and Physics, 2012, 133, 299-303.	4.0	10
36	X-ray diffraction Rietveld analysis of cold worked austenitic stainless steel. Materials Letters, 2012, 67, 173-176.	2.6	32

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37	Tribological properties of sputter deposited ZrN coatings on titanium modified austenitic stainless steel. Wear, 2012, 280-281, 22-27.	3.1	27
38	Electron Microscopy Studies on Oxide Dispersion Strengthened Steels., 2012,, 117-128.		8
39	Differential scanning calorimetry study of diffusional and martensitic phase transformations in some 9 wt-%Cr low carbon ferritic steels. Materials Science and Technology, 2011, 27, 500-512.	1.6	54
40	Study of microstructure and nanomechanical properties of Zr films prepared by pulsed magnetron sputtering. Applied Surface Science, 2011, 257, 9909-9914.	6.1	33
41	Synthesis and high temperature XRD studies of tantalum nitride thin films prepared by reactive pulsed dc magnetron sputtering. Journal of Alloys and Compounds, 2011, 509, 6400-6407.	5 . 5	33
42	Synthesis and characterization of SnS nanosheets through simple chemical route. Materials Letters, 2011, 65, 1148-1150.	2.6	35
43	Development and characterization of advanced 9Cr ferritic/martensitic steels for fission and fusion reactors. Journal of Nuclear Materials, 2011, 409, 131-139.	2.7	78
44	A comparative wear study of sputtered ZrN coatings on Si substrate. Transactions of the Indian Institute of Metals, 2011, 64, 37-40.	1.5	2
45	Thermal stability of CeO2/ZrO2 multilayer thin films prepared by pulsed laser deposition. Transactions of the Indian Institute of Metals, 2011, 64, 297-299.	1.5	2
46	Effect of substrate temperature and oxygen partial pressure on microstructure and optical properties of pulsed laser deposited yttrium oxide thin films. Applied Surface Science, 2011, 257, 7665-7670.	6.1	29
47	Influence of oxygen partial pressure on the properties of pulsed laser deposited nanocrystalline zirconia thin films. Applied Surface Science, 2011, 257, 8506-8510.	6.1	29
48	A study of microstructural and optical properties of nanocrystalline ceria thin films prepared by pulsed laser deposition. Thin Solid Films, 2011, 519, 2520-2526.	1.8	59
49	X-Ray Diffraction Analysis of Defects in Cold Worked Type 316 Stainless Steel. AIP Conference Proceedings, 2011, , .	0.4	3
50	Kinetics of solid state phase transformations: Measurement and modelling of some basic issues. Journal of Chemical Sciences, 2010, 122, 83-89.	1.5	11
51	Drop Calorimetry Studies on 9Cr–1W–0.23V–0.06Ta–0.09C Reduced Activation Steel. International Journal of Thermophysics, 2010, 31, 399-415.	2.1	26
52	Rietveld X-ray diffraction analysis of nanostructured rutile films of titania prepared by pulsed laser deposition. Materials Research Bulletin, 2010, 45, 6-9.	5.2	21
53	A study of structural transition in nanocrystalline titania thin films by X-ray diffraction Rietveld method. Materials Research Bulletin, 2010, 45, 1973-1977.	5.2	7
54	Nanostructured CrN thin films prepared by reactive pulsed DC magnetron sputtering. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2010, 167, 17-25.	3 . 5	53

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55	Structural and optical properties of \hat{l}^3 -alumina thin films prepared by pulsed laser deposition. Thin Solid Films, 2010, 518, 3898-3902.	1.8	45
56	Microstructure Analysis of TaN/Cu Nanocomposite Coatings Deposited by Pulsed DC Magnetron Sputtering. Advanced Materials Research, 2010, 123-125, 427-430.	0.3	0
57	Influence of background gas atmosphere on formation of Cr ₂ O ₃ thin films prepared by pulsed laser deposition. Surface Engineering, 2009, 25, 223-227.	2.2	12
58	Effect of heating and cooling rate on the kinetics of allotropic phase changes in uranium: A differential scanning calorimetry study. Journal of Nuclear Materials, 2009, 383, 215-225.	2.7	32
59	Measurement of transformation temperatures and specific heat capacity of tungsten added reduced activation ferritic–martensitic steel. Journal of Nuclear Materials, 2009, 389, 385-393.	2.7	50
60	A Study on the Effect of Thermal Ageing on the Specific-Heat Characteristics of 9Cr–1Mo–0.1C (mass%) Steel. International Journal of Thermophysics, 2009, 30, 619-634.	2.1	9
61	Synthesis and Properties of Ceria Thin Films Prepared by Pulsed Laser Deposition. Journal of Nanoscience and Nanotechnology, 2009, 9, 5421-5424.	0.9	11
62	A Study on the Influence of Copper Content in CrN/Cu Nanocomposite Thin Films Prepared by Pulsed DC Magnetron Sputtering. Journal of Nanoscience and Nanotechnology, 2009, 9, 5436-5440.	0.9	12
63	High temperature XRD of zirconia/alumina multilayer thin films prepared by pulsed laser deposition. Proceedings of SPIE, 2009, , .	0.8	0
64	X-Ray Diffraction Study of Nanocrystalline Titania Thin Films Prepared by Pulsed Laser Deposition. Journal of Nanoscience and Nanotechnology, 2009, 9, 5311-5314.	0.9	2
65	Microstructural Studies of Nanocomposite Thin Films of Ni/CrN Prepared by Reactive Magnetron Sputtering. Journal of Nanoscience and Nanotechnology, 2009, 9, 5592-5595.	0.9	1
66	Photoacoustic measurement of thermal properties of TiN thin films. Journal of Materials Science, 2008, 43, 1114-1120.	3.7	17
67	Microstructural studies of bulk and thin film GDC. Ionics, 2008, 14, 165-171.	2.4	13
68	Eu ³⁺ doped gadolinium oxysulfide (Gd ₂ O ₂ S) nanostructuresâ€"synthesis and optical and electronic properties. Nanotechnology, 2008, 19, 395703.	2.6	49
69	Thermal property characterization of a Ti–4wt.%Nb–4wt.%Zr alloy using drop and differential scanning calorimetry. Journal of Alloys and Compounds, 2008, 463, 160-167.	5.5	9
70	Effect of Thermal Aging on the Transformation Temperatures and Specific Heat Characteristics of 9Cr-1Mo Ferritic Steel. Defect and Diffusion Forum, 2008, 279, 85-90.	0.4	4
71	Influence of nitrogen flow rate on growth of TiAlN films prepared by DC magnetron sputtering. Surface Engineering, 2007, 23, 7-11.	2,2	26
72	PHOTOACOUSTIC STUDIES ON TIAIN NANOSTRUCTURED THIN FILMS. International Journal of Modern Physics B, 2007, 21, 3889-3900.	2.0	5

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73	Characterization of crystallization kinetics of a Ni- (Cr, Fe, Si, B, C, P) based amorphous brazing alloy by non-isothermal differential scanning calorimetry. Journal of Alloys and Compounds, 2007, 440, 173-177.	5.5	19
74	Pulsed laser deposition of anatase and rutile TiO2 thin films. Surface and Coatings Technology, 2007, 201, 7713-7719.	4.8	59
75	Characterisation of thermal stability and phase transformation energetics in tempered 9Cr–1Mo steel using drop and differential scanning calorimetry. Materials Science & Diple Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 465, 29-37.	5.6	54
76	Synthesis, crystal structure, dielectric properties, and potential use of nanocrystalline complex perovskite ceramic oxide Ba2ErZrO5.5. Materials Research Bulletin, 2007, 42, 1976-1985.	5.2	9
77	High Temperature Heat Capacity of Alloy D9 Using Drop Calorimetry Based Enthalpy Increment Measurements. International Journal of Thermophysics, 2007, 28, 97-108.	2.1	18
78	Microstructural study of thin films of 5Âmol% gadolinia doped ceria prepared by pulsed laser ablation. lonics, 2007, 12, 365-370.	2.4	1
79	Thermal properties of 15-mol% gadolinia doped ceria thin films prepared by pulsed laser ablation. lonics, 2007, 13, 47-50.	2.4	13
80	Microstructural study of thin films of 5 mol% gadolinia-doped ceria prepared by pulsed laser ablation. Ionics, 2007, 13, 87-92.	2.4	2
81	Nano-ionic thin films of gadolinia-doped ceria prepared by pulsed laser ablation. Ionics, 2007, 13, 343-348.	2.4	7
82	The entropy based contribution to bulk modulus: A thermodynamic analysis. Journal of Alloys and Compounds, 2006, 416, 58-63.	5 . 5	7
83	A study on the thermal expansion characteristics of a dissimilar fusion joint by high temperature X-ray diffraction. Materials Letters, 2006, 60, 1527-1532.	2.6	0
84	Thermal property characterization of a titanium modified austenitic stainless steel (alloy D9). Journal of Nuclear Materials, 2005, 347, 20-30.	2.7	18
85	Enthalpy measurements on a titanium modified austenitic stainless steel. Materials Letters, 2005, 59, 1219-1222.	2.6	4
86	Pulsed laser deposition of novel oxide materials. Surface Engineering, 2005, 21, 172-175.	2.2	6
87	Thermal expansion studies on Inconel-600 \hat{A}^{\otimes} by high temperature X-ray diffraction. Journal of Nuclear Materials, 2004, 325, 18-25.	2.7	38
88	Development of a thermodynamic framework for a combined analysis of thermal and elastic properties based on a linear scaling relation between logarithmic bulk modulus and enthalpy. Journal of Alloys and Compounds, 2004, 375, 72-85.	5 . 5	1
89	A study on the thermal expansion characteristics of Inconel-82 \hat{A}^{\otimes} filler wire by high temperature X-ray diffraction. Materials Letters, 2004, 58, 216-221.	2.6	7
90	Thermal expansion characteristics of a titanium modified austenitic stainless steel: measurement by high-temperature X-ray diffraction and modelling using $Gr\tilde{A}^{1}/4$ neisen formalism. Journal of Nuclear Materials, 2003, 317, 54-61.	2.7	16

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91	On the isobaric volume dependence of the ratio between volume thermal expansivity and specific heat ($\hat{l}\pm V/CP$). Materials Letters, 2003, 57, 3793-3801.	2.6	8
92	The relation between bulk modulus and relative enthalpy: a broad-based thermodynamic analysis and a case study on aluminium. Materials Letters, 2002, 54, 13-20.	2.6	4
93	Thermodynamic approximations for the mixed temperature and pressure derivative of bulk modulus: a case study on MgO. Physica B: Condensed Matter, 2002, 324, 312-321.	2.7	13
94	The high temperature bulk modulus of aluminium: an assessment using experimental enthalpy and thermal expansion data. Solid State Communications, 2002, 122, 671-676.	1.9	26
95	An integrated thermodynamic approach towards correlating thermal and elastic properties: development of some simple scaling relations. Solid State Communications, 2002, 124, 151-156.	1.9	9
96	Comment on "A new equation of state based on Grover, Getting and Kennedy's empirical relation between volume and bulk modulus. The high pressure thermodynamics of MgO'' by M. H. G. Jacobs and H. A. J. Oonk, Phys. Chem. Chem. Phys., 2000, 2, 2641. Physical Chemistry Chemical Physics, 2001, 3, 1391-1393.	2.8	12
97	Estimating enthalpy and bulk modulus from thermal expansion data— a case study with α-Al2O3 and SiC. Journal of the European Ceramic Society, 2001, 21, 1229-1235.	5.7	21
98	On the thermodynamic interrelationship between enthalpy, volume thermal expansion and bulk modulus. Scripta Materialia, 2001, 44, 269-274.	5.2	13
99	Microstructural investigation of TiAl thin films grown on (111) oriented silicon substrate by DC magnetron sputtering. Scripta Materialia, 2001, 44, 1837-1840.	5.2	5
100	Effect of ordering transformation on elastic and thermal properties: a simple phenomenological treatment. Scripta Materialia, 2000, 43, 977-981.	5.2	0
101	Microstructural characterisation of TiAl thin films grown by DC magnetron co-sputtering technique. Materials Letters, 2000, 43, 106-113.	2.6	9
102	The pressure derivative of bulk modulus of transition metals: An estimation using the method of model potentials and a study of the systematics. Journal of Physics and Chemistry of Solids, 1997, 58, 1367-1373.	4.0	35
103	Title is missing!. Journal of Materials Science: Materials in Electronics, 1997, 8, 391-398.	2.2	1
104	Oxygen diffusion and defect mechanism in c-axis textured thin films of YBa2Cu3O7â^'x by resistivity measurements. Bulletin of Materials Science, 1997, 20, 491-497.	1.7	0
105	Development of an effective interatomic potential for transition metals and alloys: Modified Wills-Harrison model. Bulletin of Materials Science, 1997, 20, 549-555.	1.7	0
106	Energetics of point defects in Î ³ -TiAl. Scripta Materialia, 1996, 34, 585-593.	5.2	5
107	A study of ternary element site substitution in Ni3Al using pseudopotential orbital radii based structure maps. Scripta Materialia, 1996, 34, 1785-1790.	5.2	30
108	A new parameter for structure maps of intermetallic compounds. Materials Letters, 1993, 16, 123-129.	2.6	1

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109	Structural systematics of cubic binary carbides and nitrides. Materials Letters, 1992, 15, 56-67.	2.6	6
110	Some observations on the paper by T.K. Nandy, D.Banerjee and A.K. Gogia. Scripta Metallurgica Et Materialia, 1991, 25, 975-978.	1.0	5
111	Site occupation of Nb, V, Mn and Cr in Î ³ -TiAl. Scripta Metallurgica Et Materialia, 1991, 25, 2023-2027.	1.0	58
112	Application of the macroscopic atom model of cohesion to structural systematics of L10 compounds. Materials Letters, 1991, 12, 356-362.	2.6	5
113	Energetic considerations of ternary element substitution in Î ³ -TiAl. Journal of Physics and Chemistry of Solids, 1991, 52, 931-938.	4.0	8
114	Details of an imaging atom probe. Bulletin of Materials Science, 1984, 6, 569-572.	1.7	0