

Divakar Ramachandran

List of Publications by Year in descending order

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89
papers

2,284
citations

394286

19
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223716

46
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90
all docs

90
docs citations

90
times ranked

3185
citing authors

#	ARTICLE	IF	CITATIONS
1	Photosensitization of ZnO Nanowires with CdSe Quantum Dots for Photovoltaic Devices. Nano Letters, 2007, 7, 1793-1798.	4.5	935
2	Low energy dislocation structures caused by sliding and by particle impact. Materials Science and Engineering, 1986, 81, 409-425.	0.1	152
3	Development and characterization of advanced 9Cr ferritic/martensitic steels for fission and fusion reactors. Journal of Nuclear Materials, 2011, 409, 131-139.	1.3	78
4	Influence of nitrogen flow rate on microstructural and nanomechanical properties of Zr ³ N thin films prepared by pulsed DC magnetron sputtering. Applied Surface Science, 2013, 280, 117-123.	3.1	62
5	Interface structures in nanocrystalline materials. Scripta Materialia, 2001, 44, 1169-1174.	2.6	59
6	X-ray diffraction, Raman and photoluminescence studies of nanocrystalline cerium oxide thin films. Ceramics International, 2013, 39, 8327-8333.	2.3	59
7	Eu ³⁺ doped gadolinium oxysulfide (Gd ₂ O ₂ S) nanostructures—synthesis and optical and electronic properties. Nanotechnology, 2008, 19, 395703.	1.3	49
8	Deformation substructures associated with very large plastic strains. Scripta Metallurgica Et Materialia, 1992, 27, 975-980.	1.0	42
9	PVA aided microwave synthesis: A novel route for the production of nanocrystalline thoria powder. Journal of Nuclear Materials, 1996, 231, 213-220.	1.3	38
10	Thermal expansion studies on Inconel-600 [®] by high temperature X-ray diffraction. Journal of Nuclear Materials, 2004, 325, 18-25.	1.3	38
11	Synthesis and characterization of SnS nanosheets through simple chemical route. Materials Letters, 2011, 65, 1148-1150.	1.3	35
12	Nanopatterning by solid-state dewetting on reconstructed ceramic surfaces. Applied Physics Letters, 2009, 94, .	1.5	33
13	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.	2.8	33
14	Blue green and UV emitting ZnO nanoparticles synthesized through a non-aqueous route. Optical Materials, 2012, 34, 1241-1245.	1.7	32
15	Effect of substrate heating and microwave attenuation on the catalyst free growth and field emission of carbon nanotubes. Carbon, 2015, 94, 256-265.	5.4	27
16	Structure and growth mechanism of ZnSe nanowires. Journal of Applied Physics, 2008, 104, .	1.1	23
17	Phase separation and β transformation in binary V-Ti and ternary V-Ti-Cr alloys. Acta Materialia, 2016, 121, 310-324.	3.8	23
18	A unified approach to phase and microstructural stability for Fe-ETM alloys through Miedema's model. Intermetallics, 2012, 23, 148-157.	1.8	22

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19	A new combustion process for nanosized YBa ₂ ZrO _{5.5} powders. Scripta Materialia, 1999, 11, 623-629.	0.5	21
20	Microstructural characterization of transformation products of bcc β in Ti-15 Mo alloy. Journal of Alloys and Compounds, 2016, 658, 301-315.	2.8	21
21	Synthesis of novel Ru ₂ C under high pressureâ€“high temperature conditions. Journal of Physics Condensed Matter, 2012, 24, 362202.	0.7	20
22	Low-cost hydrothermal synthesis and characterization of pentanary Cu ₂ Zn _x Ni _{1-x} SnS ₄ nanoparticle inks for thin film solar cell applications. Materials Science in Semiconductor Processing, 2017, 63, 127-136.	1.9	20
23	Synthesis and sintering of nanocrystalline thoria doped with CaO and MgO derived through oxalate-deagglomeration. Journal of Nuclear Materials, 2013, 434, 223-229.	1.3	19
24	Thermal property characterization of a titanium modified austenitic stainless steel (alloy D9). Journal of Nuclear Materials, 2005, 347, 20-30.	1.3	18
25	High Temperature Heat Capacity of Alloy D9 Using Drop Calorimetry Based Enthalpy Increment Measurements. International Journal of Thermophysics, 2007, 28, 97-108.	1.0	18
26	Microwave synthesis of solid solutions of urania and thoria â€“ a comparative study. Journal of Nuclear Materials, 1998, 254, 55-64.	1.3	17
27	Alloy design and microstructural evolution in Vâ€“Tiâ€“Cr alloys. Materials Characterization, 2015, 106, 292-301.	1.9	17
28	Synthesis, microstructure and corrosion behavior of compositionally graded Ni-YSZ diffusion barrier coatings on inconel-690 for applications in high temperature environments. Corrosion Science, 2018, 135, 243-254.	3.0	17
29	Thermal expansion characteristics of a titanium modified austenitic stainless steel: measurement by high-temperature X-ray diffraction and modelling using Gr ^{1/4} neisen formalism. Journal of Nuclear Materials, 2003, 317, 54-61.	1.3	16
30	Low-temperature and ambient-pressure synthesis and shape evolution of nanocrystalline pure, La-doped and Gd-doped CeO ₂ . Applied Surface Science, 2010, 256, 3772-3777.	3.1	16
31	Microstructural, nanomechanical and antibacterial properties of magnetron sputtered nanocomposite thin films of CrN/Cu. Surface Engineering, 2012, 28, 134-140.	1.1	16
32	Microstructural features of a type 304L stainless steel deformed at 1473 K in the strain rate interval 10^{-3} s ⁻¹ to 10^2 s ⁻¹ . Scripta Metallurgica Et Materialia, 1993, 28, 1077-1082.	1.0	15
33	Characterisation of interfaces in nanocrystalline palladium. Sadhana - Academy Proceedings in Engineering Sciences, 2003, 28, 47-62.	0.8	14
34	Irradiation performance of PFBR MOX fuel after 112GWd/t burn-up. Journal of Nuclear Materials, 2014, 449, 31-38.	1.3	14
35	Nano-quasicrystalline phase formation in Mgâ€“Cdâ€“Yb alloys. Journal of Alloys and Compounds, 2002, 342, 261-264.	2.8	11
36	Al-Cu-Fe quasicrystals: Stability and microstructure. Progress in Crystal Growth and Characterization of Materials, 1997, 34, 263-269.	1.8	10

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37	Synthesis and characterization of nanoparticles of Ba ₂ EuZrO _{5.5} : A new complex perovskite ceramic oxide. Journal of Materials Research, 2000, 15, 2125-2130.	1.2	10
38	Development of cladding materials for sodium-cooled fast reactors in India. Transactions of the Indian Institute of Metals, 2009, 62, 89-94.	0.7	10
39	Characterization of Al ₂ O ₃ /ZrO ₂ nano multilayer thin films prepared by pulsed laser deposition. Materials Chemistry and Physics, 2012, 133, 299-303.	2.0	10
40	Structural characterization of electrodeposited boron. Bulletin of Materials Science, 2013, 36, 1323-1329.	0.8	10
41	Probing luminescent Fe-doped ZnO nanowires for high-performance oxygen gas sensing application. RSC Advances, 2014, 4, 54953-54959.	1.7	10
42	Molecular dynamics studies on formation of stacking fault tetrahedra in FCC metals. Computational Materials Science, 2021, 186, 110017.	1.4	10
43	Synthesis, crystal structure, dielectric properties, and potential use of nanocrystalline complex perovskite ceramic oxide Ba ₂ ErZrO _{5.5} . Materials Research Bulletin, 2007, 42, 1976-1985.	2.7	9
44	Modified electron-beam-induced deposition of metal nanostructure arrays using a parallel electron beam. Applied Physics Letters, 2008, 93, 133104.	1.5	9
45	Thermal stability and thermal expansion behaviour of ZrO ₂ /Y ₂ O ₃ multilayers deposited by pulsed laser deposition technique. Materials Chemistry and Physics, 2015, 162, 592-607.	2.0	9
46	Structure imaging and vanadium substitution in cubic TiCr ₂ Laves phase. Philosophical Magazine, 2015, 95, 2403-2426.	0.7	9
47	Freeze drying vs microwave drying—methods for synthesis of sinteractive thoria powders. Journal of Nuclear Materials, 2017, 484, 51-58.	1.3	9
48	Synthesis of Nanoparticles of Barium Lanthanum Hafnium Oxide by a Modified Combustion Process. Journal of Nanoscience and Nanotechnology, 2002, 2, 107-111.	0.9	8
49	Electron Microscopy Studies on Oxide Dispersion Strengthened Steels. , 2012, , 117-128.		8
50	Reply to comments on “Microstructural features of a type 304L stainless steel deformed at 1473 K in the strain rate interval 10 ⁻³ s ⁻¹ to 10 ² s ⁻¹ ” Scripta Metallurgica Et Materialia, 1994, 30, 1617-1622.	1.0	7
51	A study on the thermal expansion characteristics of Inconel-82® filler wire by high temperature X-ray diffraction. Materials Letters, 2004, 58, 216-221.	1.3	7
52	Nano-ionic thin films of gadolinia-doped ceria prepared by pulsed laser ablation. Ionics, 2007, 13, 343-348.	1.2	7
53	Synthesis and Structural Characterization of V ₄ Ti ₄ Cr Alloy. Transactions of the Indian Institute of Metals, 2013, 66, 381-385.	0.7	7
54	Transmission electron microscopy studies and modeling of 3D reciprocal space of β forming alloy. Micron, 2017, 102, 73-87.	1.1	7

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55	Evidence for spinodal decomposition in Ti-15Mo quenched alloy using transmission electron microscopy. <i>Micron</i> , 2019, 121, 43-52.	1.1	7
56	Synthesis of Nanosized Ba ₂ LaZrO _{5.5} Ceramic Powders through a Novel Combustion Route. <i>Journal of Materials Synthesis and Processing</i> , 2000, 8, 1-5.	0.3	6
57	In-situ electron microscopy investigation of reduction-induced microstructural changes in NiO. <i>Ceramics International</i> , 2015, 41, 12658-12667.	2.3	5
58	Crystalline Phases Relating to Stable Al–Cu–Fe Quasicrystal. <i>Materials Transactions, JIM</i> , 1990, 31, 1033-1040.	0.9	4
59	Microstructural Changes Associated with Annealing of Melt Spun Al₆₅Cu₂₀Fe₁₅. <i>Materials Transactions, JIM</i> , 1992, 33, 23-28.	0.9	4
60	Barium Holmium Zirconate, A New Perovskite Oxide: II, Synthesis as Nanoparticles through a Modified Combustion Process. <i>Journal of the American Ceramic Society</i> , 2002, 85, 2395-2398.	1.9	4
61	Enthalpy measurements on a titanium modified austenitic stainless steel. <i>Materials Letters</i> , 2005, 59, 1219-1222.	1.3	4
62	Growth of ZnO Nanorods: A TEM Study. <i>Microscopy and Microanalysis</i> , 2006, 12, 698-699.	0.2	4
63	Electroextraction of boron from boron carbide scrap. <i>Materials Characterization</i> , 2013, 84, 134-141.	1.9	4
64	Comparative Study of Fe&Dedot;Doped ZnO Nanowire Bundle and Their Thin Film for NO₂ and CH₄ Gas Sensing. <i>Macromolecular Symposia</i> , 2015, 357, 99-104.	0.4	4
65	Dimensional measurements on 112GWd/t irradiated MOX fuel pins using X-ray radiography. <i>Annals of Nuclear Energy</i> , 2015, 83, 8-13.	0.9	4
66	Microstructural and microchemical studies of phase stability in V-O solid solution. <i>Materials Characterization</i> , 2017, 124, 129-135.	1.9	4
67	Direct structure imaging of partially collapsed omega domains in phase-separated V&Dedot;Ti alloy through atom column contrast interpretation. <i>Journal of Materials Science</i> , 2018, 53, 13186-13202.	1.7	4
68	Heterogeneous Nucleation of the Amorphous Phase and Dissolution of Nanocrystalline Grains in Bilayer Al-Ge Thin Films. <i>Scripta Materialia</i> , 1997, 38, 59-65.	2.6	3
69	Synthesis and characterization of nanoparticles of Ba ₂ EuHfO _{5.5} : a new complex perovskite ceramic oxide. <i>Materials Letters</i> , 2001, 51, 275-280.	1.3	3
70	Influence of CeO ₂ layer thickness on the properties of CeO ₂ /Gd ₂ O ₃ multilayers prepared by pulsed laser deposition. <i>Vacuum</i> , 2015, 113, 64-74.	1.6	3
71	Evaluation of Fuel-Clad Chemical Interaction in PFBR MOX test fuel pins. <i>Journal of Nuclear Materials</i> , 2018, 509, 94-101.	1.3	3
72	Studies of interfaces in Al ₆₅ Cu ₂₀ Fe ₁₅ . <i>Bulletin of Materials Science</i> , 1997, 20, 519-523.	0.8	2

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73	Microstructural study of thin films of 5 mol% gadolinia-doped ceria prepared by pulsed laser ablation. <i>Ionics</i> , 2007, 13, 87-92.	1.2	2
74	In situ Microscopy: A Tool to Understand Mechanisms. <i>Microscopy and Microanalysis</i> , 2008, 14, 246-247.	0.2	2
75	Thermal stability of CeO ₂ /ZrO ₂ multilayer thin films prepared by pulsed laser deposition. <i>Transactions of the Indian Institute of Metals</i> , 2011, 64, 297-299.	0.7	2
76	HRTEM investigation of phase stability in alumina/zirconia multilayer thin films. <i>Bulletin of Materials Science</i> , 2015, 38, 401-407.	0.8	2
77	Irradiation behaviour of alloy D9 clad and wrapper in FBTR. <i>Journal of Nuclear Materials</i> , 2022, 565, 153711.	1.3	2
78	Microstructural study of thin films of 5 mol% gadolinia doped ceria prepared by pulsed laser ablation. <i>Ionics</i> , 2007, 12, 365-370.	1.2	1
79	Complementary Microscopy Techniques for Characterizing Nanostructures. <i>Microscopy and Microanalysis</i> , 2008, 14, 374-375.	0.2	1
80	Microstructural Studies of Nanocomposite Thin Films of Ni/CrN Prepared by Reactive Magnetron Sputtering. <i>Journal of Nanoscience and Nanotechnology</i> , 2009, 9, 5592-5595.	0.9	1
81	TEM Characterization of ZnO Nanorods. <i>Springer Proceedings in Physics</i> , 2008, , 237-240.	0.1	1
82	Interfaces In Quasicrystalline Systems. <i>Materials Research Society Symposia Proceedings</i> , 1998, 553, 209.	0.1	0
83	A study on the thermal expansion characteristics of a dissimilar fusion joint by high temperature X-ray diffraction. <i>Materials Letters</i> , 2006, 60, 1527-1532.	1.3	0
84	Inversion Domain Boundaries in Wurtzite GaN. <i>Microscopy and Microanalysis</i> , 2006, 12, 1084-1085.	0.2	0
85	Hydrothermal Synthesis of Cuboidal Nanocrystalline Ceria. <i>Microscopy and Microanalysis</i> , 2007, 13, .	0.2	0
86	TEM Characterization of CdSe Quantum Dot Sensitized ZnO Nanowires. <i>Microscopy and Microanalysis</i> , 2007, 13, .	0.2	0
87	High temperature XRD of zirconia/alumina multilayer thin films prepared by pulsed laser deposition. <i>Proceedings of SPIE</i> , 2009, , .	0.8	0
88	Phase Formation and Microstructural Evaluation in V-Ti-Cr System Using Advanced Microscopy Analysis. <i>Microscopy and Microanalysis</i> , 2019, 25, 2280-2281.	0.2	0
89	The effect of orientation and pore size on nano mechanical behaviour of Ag thin films: a comparison between experiment and atomistic simulation. <i>Philosophical Magazine</i> , 0, , 1-44.	0.7	0