

Aruna St

List of Publications by Year in descending order

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108
papers

6,693
citations

94269

37
h-index

64668

79
g-index

115
all docs

115
docs citations

115
times ranked

7081
citing authors

#	ARTICLE	IF	CITATIONS
1	Combustion synthesis and nanomaterials. Current Opinion in Solid State and Materials Science, 2008, 12, 44-50.	5.6	812
2	Combustion synthesis: an update. Current Opinion in Solid State and Materials Science, 2002, 6, 507-512.	5.6	765
3	Combustion synthesis. Current Opinion in Solid State and Materials Science, 1997, 2, 158-165.	5.6	447
4	Sonochemical Synthesis of SnO ₂ Nanoparticles and Their Preliminary Study as Li Insertion Electrodes. Chemistry of Materials, 2000, 12, 2557-2566.	3.2	331
5	Properties and development of Ni/YSZ as an anode material in solid oxide fuel cell: A review. Renewable and Sustainable Energy Reviews, 2014, 36, 149-179.	8.2	280
6	The sonochemical preparation of amorphous silver nanoparticles. Journal of Materials Chemistry, 1999, 9, 1333-1335.	6.7	228
7	Nanosize rutile titania particle synthesis via a hydrothermal method without mineralizers. Journal of Materials Chemistry, 2000, 10, 2388-2391.	6.7	214
8	The Effect of the Preparation Condition of TiO ₂ Colloids on Their Surface Structures. Journal of Physical Chemistry B, 2000, 104, 4130-4133.	1.2	186
9	Synthesis and properties of Ni-YSZ cermet: anode material for solid oxide fuel cells. Solid State Ionics, 1998, 111, 45-51.	1.3	159
10	Studies on Cu/CeO ₂ : A New NO Reduction Catalyst. Journal of Catalysis, 1999, 186, 36-44.	3.1	159
11	Present status and future prospects of plasma sprayed multilayered thermal barrier coating systems. Journal of the European Ceramic Society, 2020, 40, 2731-2745.	2.8	130
12	Synthesis and properties of electrodeposited Ni/ceria nanocomposite coatings. Surface and Coatings Technology, 2006, 200, 6871-6880.	2.2	127
13	A Novel Method for the Preparation of Lead Selenide: Pulse Sonochemical Synthesis of Lead Selenide Nanoparticles. Chemistry of Materials, 2000, 12, 143-147.	3.2	112
14	Ni-based electrodeposited composite coating exhibiting improved microhardness, corrosion and wear resistance properties. Journal of Alloys and Compounds, 2009, 468, 546-552.	2.8	102
15	Mixture of fuels approach for the solution combustion synthesis of Al ₂ O ₃ -ZrO ₂ nanocomposite. Materials Research Bulletin, 2004, 39, 157-167.	2.7	101
16	Combustion synthesis in nanostructured reactive systems. Advanced Powder Technology, 2015, 26, 954-976.	2.0	98
17	Electrospinning in solid oxide fuel cells – A review. Renewable and Sustainable Energy Reviews, 2017, 67, 673-682.	8.2	94
18	Electrolyte bi-layering strategy to improve the performance of an intermediate temperature solid oxide fuel cell: A review. Journal of Power Sources, 2018, 381, 136-155.	4.0	93

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19	Combustion synthesis and properties of strontium substituted lanthanum manganites $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ ($0 \leq x \leq 0.3$). Journal of Materials Chemistry, 1997, 7, 2499-2503.	6.7	81
20	Effect of critical plasma spray parameters on the microstructure, microhardness and wear and corrosion resistance of plasma sprayed alumina coatings. Surface and Coatings Technology, 2012, 208, 92-100.	2.2	81
21	Combustion synthesis and properties of $\text{Ce}_{1-x}\text{Pr}_x\text{O}_2$ red ceramic pigments. Solid State Sciences, 2001, 3, 387-392.	0.8	76
22	TiO_2 Nanocrystalline Pigmented Polyethylene Foils for Radiative Cooling Applications: Synthesis and Characterization. Langmuir, 2001, 17, 7118-7123.	1.6	76
23	Effect of microstructure and surface roughness on the wettability of superhydrophobic sol-gel nanocomposite coatings. Journal of Sol-Gel Science and Technology, 2010, 56, 278-286.	1.1	75
24	Combustion synthesis and properties of nanostructured ceria-zirconia solid solutions. Scripta Materialia, 1998, 10, 955-964.	0.5	72
25	Elongated Copper Nanoparticles Coated with a Zwitterionic Surfactant. Journal of Physical Chemistry B, 2000, 104, 893-897.	1.2	62
26	EIS and XPS studies on the self-healing properties of Ce-modified silica-alumina hybrid coatings: Evidence for Ce(III) migration. Surface and Coatings Technology, 2017, 309, 363-370.	2.2	58
27	Ceria nanoparticles vis-à-vis cerium nitrate as corrosion inhibitors for silica-alumina hybrid sol-gel coating. Applied Surface Science, 2017, 393, 397-404.	3.1	58
28	Sliding wear behavior of plasma sprayed nanoceramic coatings for biomedical applications. Wear, 2011, 271, 934-941.	1.5	56
29	Properties of phase separation method synthesized superhydrophobic polystyrene films. Applied Surface Science, 2012, 258, 3202-3207.	3.1	55
30	A study on the electrophoretic deposition of 8YSZ coating using mixture of acetone and ethanol solvents. Materials Chemistry and Physics, 2008, 111, 131-136.	2.0	48
31	Synthesis, characterisation and properties of Ni/PSZ and Ni/YSZ nanocomposites. Scripta Materialia, 2003, 48, 507-512.	2.6	44
32	Wear and corrosion resistant properties of electrodeposited Ni composite coating containing Al_2O_3 - TiO_2 composite powder. Surface Engineering, 2015, 31, 708-713.	1.1	44
33	Solution combustion synthesis of CeO_2 - CeAlO_3 nano-composites by mixture-of-fuels approach. Materials Research Bulletin, 2009, 44, 728-733.	2.7	43
34	Superhydrophobic surfaces fabricated by surface modification of alumina particles. Applied Surface Science, 2012, 258, 10199-10204.	3.1	43
35	A simple cost-effective and eco-friendly wet chemical process for the fabrication of superhydrophobic cotton fabrics. Applied Surface Science, 2013, 277, 302-309.	3.1	42
36	Phase transformation and wear studies of plasma sprayed yttria stabilized zirconia coatings containing various mol% of yttria. Materials Characterization, 2011, 62, 697-705.	1.9	41

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37	Studies on plasma sprayed bi-layered ceramic coating on bio-medical Ti-13Nb-13Zr alloy. <i>Ceramics International</i> , 2011, 37, 1333-1339.	2.3	41
38	Carbon nanotubes stabilize high temperature phase and toughen Al ₂ O ₃ -based thermal barrier coatings. <i>Composites Part B: Engineering</i> , 2017, 124, 76-87.	5.9	39
39	Synthesis and characterization of Ni-Al ₂ O ₃ composite coatings containing different forms of alumina. <i>Journal of Applied Electrochemistry</i> , 2010, 40, 2161-2169.	1.5	38
40	Corrosion- and wear-resistant properties of Ni-Al ₂ O ₃ composite coatings containing various forms of alumina. <i>Journal of Applied Electrochemistry</i> , 2011, 41, 461-468.	1.5	38
41	Synthesis of nanocrystalline CeAlO ₃ by solution-combustion route. <i>Materials Chemistry and Physics</i> , 2010, 119, 485-489.	2.0	36
42	A comparative study on the synthesis and properties of suspension and solution precursor plasma sprayed hydroxyapatite coatings. <i>Ceramics International</i> , 2017, 43, 9715-9722.	2.3	32
43	Studies on strontium substituted rare earth manganites. <i>Solid State Ionics</i> , 1999, 120, 275-280.	1.3	31
44	Comparative study on the effect of current density on Ni and Ni-Al ₂ O ₃ nanocomposite coatings produced by electrolytic deposition. <i>Surface Engineering</i> , 2005, 21, 209-214.	1.1	31
45	Properties of plasma sprayed La ₂ Zr ₂ O ₇ coating fabricated from powder synthesized by a single-step solution combustion method. <i>Surface and Coatings Technology</i> , 2013, 219, 131-138.	2.2	31
46	CO oxidation by CeO ₂ -Al ₂ O ₃ -CeAlO ₃ hybrid oxides. <i>Catalysis Science and Technology</i> , 2011, 1, 1683.	2.1	29
47	Hot corrosion studies on plasma sprayed bi-layered YSZ/La ₂ Ce ₂ O ₇ thermal barrier coating fabricated from synthesized powders. <i>Journal of Alloys and Compounds</i> , 2017, 711, 355-364.	2.8	27
48	A single step solution combustion approach for preparing gadolinia doped ceria solid oxide fuel cell electrolyte material suitable for wet powder and plasma spraying processes. <i>Journal of Power Sources</i> , 2012, 214, 358-364.	4.0	26
49	Studies on combustion synthesized LaMnO ₃ -LaCoO ₃ solid solutions. <i>Materials Research Bulletin</i> , 2000, 35, 289-296.	2.7	25
50	Improved hot corrosion resistance of plasma sprayed YSZ/Gd ₂ Zr ₂ O ₇ thermal barrier coating over single layer YSZ. <i>Materials Characterization</i> , 2019, 147, 199-206.	1.9	25
51	Effect of probe sonication and sodium hexametaphosphate on the microhardness and wear behavior of electrodeposited Ni-SiC composite coating. <i>Applied Surface Science</i> , 2014, 301, 383-390.	3.1	24
52	Enhanced mechanical properties of acrylate based shape memory polymer using grafted hydroxyapatite. <i>Journal of Polymer Research</i> , 2018, 25, 1.	1.2	21
53	Studies on electrodeposited nickel-yttria doped ceria composite coatings. <i>Journal of Applied Electrochemistry</i> , 2007, 37, 991-1000.	1.5	19
54	Effect of titania particles preparation on the properties of Ni-TiO ₂ electrodeposited composite coatings. <i>Journal of Applied Electrochemistry</i> , 2013, 43, 805-815.	1.5	19

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55	Properties of plasma sprayed yttria stabilized zirconia thermal barrier coating prepared from co-precipitation synthesized powder. <i>Ceramics International</i> , 2014, 40, 11157-11162.	2.3	19
56	Tailored poly(ethylene) glycol dimethacrylate based shape memory polymer for orthopedic applications. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017, 65, 857-865.	1.5	19
57	Dual-Layer Oxidation-Protective Plasma-Sprayed SiC-ZrB ₂ /Al ₂ O ₃ -Carbon Nanotube Coating on Graphite. <i>Journal of Thermal Spray Technology</i> , 2017, 26, 417-431.	1.6	18
58	Preparation of Oil-Encapsulated Microcapsules and Tribological Property of Ni Composite Coating. <i>Materials and Manufacturing Processes</i> , 2016, 31, 107-111.	2.7	14
59	Silica-alumina based sol-gel coating containing cerium oxide nanofibers as a potent alternative to conversion coating for AA2024 alloy. <i>Surface and Coatings Technology</i> , 2021, 411, 127007.	2.2	14
60	Hydrocarbon Compatible SOFC Anode Catalysts and Their Syntheses: A Review. <i>Sustainable Chemistry</i> , 2021, 2, 707-763.	2.2	14
61	Photocatalytic Activity of Combustion Synthesized Nanocrystalline CeAlO ₃ . <i>Clean - Soil, Air, Water</i> , 2011, 39, 259-264.	0.7	13
62	Cost-effective wear and oxidation resistant electrodeposited Ni-pumice coating. <i>Surface and Coatings Technology</i> , 2014, 251, 201-209.	2.2	13
63	The effect of additives on the properties of electrodeposited Ni-zircon composite coatings. <i>RSC Advances</i> , 2016, 6, 11185-11192.	1.7	13
64	Optimization of the Properties of Electrodeposited Ni-YSZ Composites Using Taguchi Method and Regression Analysis. <i>Portugaliae Electrochimica Acta</i> , 2011, 29, 23-37.	0.4	13
65	Solution precursor plasma spray process: A promising route for the fabrication of Mn-Co oxide based protective coating for SOFC. <i>Surface and Coatings Technology</i> , 2017, 324, 26-35.	2.2	12
66	Effect of composition on the polarization and ohmic resistances of LSM/YSZ composite cathodes in solid oxide fuel cell. <i>Bulletin of Materials Science</i> , 2017, 40, 441-452.	0.8	12
67	Microstructure and electrical properties of plasma sprayed Gd _{0.15} Ce _{0.85} O ₂ - γ coatings from solution combustion synthesized flowable powders. <i>Journal of the European Ceramic Society</i> , 2017, 37, 271-279.	2.8	12
68	Carbon plasma immersion ion implantation and DLC deposition on Ni-Ti alloy. <i>Materials and Manufacturing Processes</i> , 2018, 33, 1121-1127.	2.7	12
69	Plasma Sprayed Hydroxyapatite Bioceramic Coatings from Coprecipitation Synthesized Powder: Preparation, Characterization and in vitro Studies. <i>Transactions of the Indian Ceramic Society</i> , 2018, 77, 90-99.	0.4	12
70	Effect of the addition of diurethane dimethacrylate on the chemical and mechanical properties of tBA-PEGDMA acrylate based shape memory polymer network. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020, 110, 103951.	1.5	11
71	Optical and RF transparent protective alumina thin films. <i>Journal of Materials Science: Materials in Electronics</i> , 2015, 26, 9707-9716.	1.1	10
72	Microstructure and performance of LSM/YSZ based solid oxide fuel cell cathodes fabricated from solution combustion co-synthesized powders and by solution precursor plasma spraying. <i>Surface and Coatings Technology</i> , 2017, 310, 25-32.	2.2	10

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73	Corrosion protection behaviour of silica-titania hybrid coatings embedded with silica nanoparticles. <i>Surface Engineering</i> , 2017, 33, 467-473.	1.1	9
74	Properties of nano-structured Ni/YSZ anodes fabricated from plasma sprayable NiO/YSZ powder prepared by single step solution combustion method. <i>Applied Surface Science</i> , 2016, 389, 983-989.	3.1	8
75	Low temperature assisted chemical coprecipitation synthesis of 8YSZ plasma sprayable powder for solid oxide fuel cells. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 14963-14970.	3.8	7
76	Deposition and Evaluation of Mn-Co Oxide Protective Sputtered Coating on SOFC Interconnects and Current Collectors. <i>Journal of the Electrochemical Society</i> , 2016, 163, F905-F912.	1.3	7
77	Electrical and thermal stimuli responsive thermoplastic shape memory polymer composites containing rGO, Fe ₃ O ₄ and rGO-Fe ₃ O ₄ fillers. <i>Polymer Bulletin</i> , 2021, 78, 6267-6289.	1.7	7
78	Corrosion, wear, and cell culture studies of oxygen ion implanted Ni-Ti alloy. <i>Surface and Interface Analysis</i> , 2017, 49, 828-836.	0.8	6
79	Solution combustion synthesis of calcia-magnesia-aluminosilicate powder and its interaction with yttria-stabilized zirconia and co-doped yttria-stabilized zirconia. <i>Ceramics International</i> , 2019, 45, 18255-18264.	2.3	6
80	Investigating the wetting phenomena and fabrication of sticky, para-hydrophobic cerium oxide coating. <i>Journal of the European Ceramic Society</i> , 2020, 40, 5749-5757.	2.8	6
81	Effect of high pressure and temperature on nanocrystalline Fe ₂ O ₃ and TiO ₂ . <i>High Pressure Research</i> , 2001, 21, 79-92.	0.4	5
82	Multifunctional properties of ceria nanocubes synthesized by a hydrothermal method. <i>Bulletin of Materials Science</i> , 2019, 42, 1.	0.8	5
83	Structural and ionic conductivity of Cu-doped titania (Ti _{0.95} Cu _{0.05} O ₂) for high temperature energy devices. <i>Ceramics International</i> , 2021, 47, 10284-10290.	2.3	5
84	Photocatalytic behavior of titania coatings fabricated by suspension and solution precursor plasma spray processes. <i>Materials and Manufacturing Processes</i> , 2021, 36, 868-875.	2.7	5
85	Hot corrosion properties of plasma sprayed La ₂ Ce ₂ O ₇ /YSZ vis-À-vis La ₂ Ce ₂ O ₇ /cluster paired zirconia thermal barrier coatings. <i>Surface and Coatings Technology</i> , 2021, 409, 126902.	2.2	5
86	Electrodeposited nickel composite coating containing in-situ nickel impregnated alumina particles. <i>Materials Letters</i> , 2012, 66, 141-143.	1.3	4
87	Microstructure and Polarization Studies on Interlayer Free La _{0.65} Sr _{0.3} Co _{0.2} Fe _{0.8} O ₃ Cathodes Fabricated on Yttria Stabilized Zirconia by Solution Precursor Plasma Spraying. <i>Fuel Cells</i> , 2016, 16, 617-627.	1.5	4
88	Co-fired anode-supported solid oxide fuel cell for internal reforming of hydrocarbon fuel. <i>Energy, Ecology and Environment</i> , 2021, 6, 55-68.	1.9	4
89	Modified solution combustion route for the preparation of plasma sprayable ceria powder. <i>Ceramics International</i> , 2009, 35, 1353-1355.	2.3	3
90	Fabrication of Superhydrophobic Zinc Stearate Hierarchical Surfaces from Different Precursors. <i>Materials and Manufacturing Processes</i> , 2016, 31, 1171-1176.	2.7	3

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91	Evaluation of solution combustion synthesized NiO/GDC ceramic powders for anode substrate and anode functional layers of intermediate temperature solid oxide fuel cell. <i>Ceramics International</i> , 2017, 43, 12138-12144.	2.3	3
92	Reclamation of thermal power plant waste as a distributed phase in electrodeposited Ni composite coating. <i>Surface Engineering</i> , 2019, 35, 1042-1047.	1.1	3
93	Synthesis and Properties of a New Chitosan-Based Shape Memory Polymer and its Composites. <i>ChemistrySelect</i> , 2021, 6, 808-819.	0.7	3
94	Combustion Synthesis and Magnetic Properties of Nanosize Barium Hexaferrite. <i>Transactions of the Indian Ceramic Society</i> , 1996, 55, 147-150.	0.4	2
95	Preparation and Properties of Water Repellent Polystyrene-TiO ₂ Coatings. <i>Transactions of the Indian Ceramic Society</i> , 2012, 71, 25-30.	0.4	2
96	Effect of Feedstock Powders on the Microstructural and Electrical Characteristics of 8Åmol% Yttria-Stabilized Zirconia Plasma-Sprayed Coatings. <i>Journal of Thermal Spray Technology</i> , 2012, 21, 1300-1308.	1.6	2
97	Effect of silica and heat treatment on PS-SiO ₂ wetting behavior. <i>Surface Innovations</i> , 2013, 1, 105-111.	1.4	2
98	The Corrosion Resistance of Nickel Electrocomposite Coating Containing BaFe ₁₂ O ₁₉ Particles. <i>ISRN Corrosion</i> , 2013, 2013, 1-6.	0.3	2
99	Influence of Critical Parameters on the Properties of Plasma Sprayed Coatings Prepared from Spray Dried Alumina Powder. <i>Transactions of the Indian Ceramic Society</i> , 2014, 73, 293-298.	0.4	2
100	Comparative Studies on Tribocorrosion Behaviour of Plasma-Sprayed and Detonation Gun Coatings of Al ₂ O ₃ -13 %TiO ₂ on Biomedical Alloy Ti-13Nb-13Zr and Gum Metal. , 2013, , 88-104.		2
101	Co-Cu-YSZ-GDC as an anode material for internal reforming SOFC?. <i>Nanomaterials and Energy</i> , 2018, 7, 44-51.	0.1	1
102	Solution Combustion Synthesis of Calcium Phosphate-Based Bioceramic Powders for Biomedical Applications. <i>Springer Series in Biomaterials Science and Engineering</i> , 2021, , 175-196.	0.7	1
103	Enhanced power density in hydrocarbon-compatible anode-supported solid oxide fuel cell facilitated by a functional anode catalyst layer. <i>Nanomaterials and Energy</i> , 2021, 10, 118-127.	0.1	1
104	Luminescent Paint for Air Pressure Sensing. <i>Resonance</i> , 2020, 25, 1579-1593.	0.2	0
105	A Comparative Study on the Synthesis and Properties of Yttria Stabilized Zirconia (YSZ) and Lanthana Doped YSZ Plasma Sprayed Thermal Barrier Coatings. , 2013, , .		0
106	CHAPTER 7. Electrospinning: Large-scale Industrial Applications of Superhydrophobic Surfaces in Filtration/Sorbents Applications. <i>RSC Soft Matter</i> , 2018, , 156-186.	0.2	0
107	Solution Combustion Approach for the Synthesis of Solid Oxide Fuel Cell Materials and Coatings. <i>Sustainable Chemistry Series</i> , 2020, , 149-204.	0.1	0
108	La-and Gd-Doped CeO ₂ Nanoparticles as Electrolyte Materials for Intermediate Temperature Solid Oxide Fuel Cells. <i>Springer Proceedings in Materials</i> , 2022, , 127-137.	0.1	0