

Balakumar Subramanian

List of Publications by Year in descending order

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103
papers

2,019
citations

270111

25
h-index

312153

41
g-index

105
all docs

105
docs citations

105
times ranked

2675
citing authors

#	ARTICLE	IF	CITATIONS
1	Role of bioglass in enamel remineralization: Existing strategies and future prospectsâ€”A narrative review. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2022, 110, 45-66.	1.6	27
2	Coexistence of ferri and ferromagnetism in cobalt substituted samarium iron garnet. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2022, 276, 115521.	1.7	4
3	Drug infused Al ₂ O ₃ -bioactive glass coatings toward the cure of orthopedic infection. <i>Progress in Biomaterials</i> , 2022, 11, 79-94.	1.8	3
4	Electromagnetic shielding performance of reduced graphene oxide reinforced iron oxide nanostructured materials prepared by polyol method. <i>Journal of Materials Research</i> , 2022, 37, 1216-1230.	1.2	8
5	Unravelling the effects of ibuprofen-acetaminophen infused copper-bioglass towards the creation of root canal sealant. <i>Biomedical Materials (Bristol)</i> , 2022, 17, 035001.	1.7	3
6	Unscrambling the Influence of Sodium Cation on the Structure, Bioactivity, and Erythrocyte Compatibility of 45S5 Bioactive Glass. <i>ACS Applied Bio Materials</i> , 2022, 5, 1576-1590.	2.3	12
7	Egg white-mediated synthesis of BiFeO ₃ cubes and their enhanced photocatalytic degradation properties under solar irradiation. <i>Journal of Materials Science: Materials in Electronics</i> , 2022, 33, 12638-12647.	1.1	7
8	Lattice composition dictated photocatalytic activity of bismuth chromium niobate pyrochlore under visible light. <i>Materials Today: Proceedings</i> , 2022, , .	0.9	0
9	Enhanced photocatalytic activity of TiO ₂ nanotubes arrays decorated with Ag and Pt nanoparticles. <i>Materials Today: Proceedings</i> , 2022, 64, 1822-1831.	0.9	2
10	Insight into the investigation on nanostructured defect pyrochlore Bi _{2-x} Fe _x WO ₆ and its photocatalytic degradation of mixed cationic dyes. <i>Materials Science in Semiconductor Processing</i> , 2022, 150, 106961.	1.9	6
11	Interplay between surface chemistry and osteogenic behaviour of sulphate substituted nano-hydroxyapatite. <i>Materials Science and Engineering C</i> , 2021, 120, 111617.	3.8	9
12	Insight into the impingement of different sodium precursors on structural, biocompatible, and hemostatic properties of bioactive materials. <i>Materials Science and Engineering C</i> , 2021, 123, 111959.	3.8	8
13	Controlled synthesis of photoactive gallium based sillenite single crystal and its application in environmental remediation. <i>Solar Energy</i> , 2021, 220, 890-900.	2.9	3
14	Ice Bath Assisted BiMn ₂ O ₅ (Mullite) Phase Synthesis, Structural and Compositional Analysis under Different Bi Concentration. <i>ECS Journal of Solid State Science and Technology</i> , 2021, 10, 061001.	0.9	1
15	Recent advances in graphene-based micro-supercapacitors: Processes and applications. <i>Journal of Materials Research</i> , 2021, 36, 4102-4119.	1.2	7
16	Pulsed laser deposition of nanostructured bioactive glass and hydroxyapatite coatings: Microstructural and electrochemical characterization. <i>Materials Science and Engineering C</i> , 2021, 130, 112459.	3.8	16
17	Graphene-Ag ₂ S hybrid nanostructures: A hybrid gas sensor for room temperature hydrogen sensing application. <i>Materials Letters</i> , 2021, 303, 130470.	1.3	9
18	Interfacial engineering in 3D/2D and 1D/2D bismuth ferrite (BiFeO ₃)/Graphene oxide nanocomposites for the enhanced photocatalytic activities under sunlight. <i>Chemosphere</i> , 2021, 284, 131280.	4.2	18

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19	Cognizing the crystallization aspects of NaCaPO ₄ concomitant 53S bioactive-structures and their imprints in <i>in vitro</i> bio-mineralization. <i>New Journal of Chemistry</i> , 2021, 45, 15350-15362.	1.4	9
20	Hierarchical Nanostructures for Photocatalytic Applications. , 2021, , 65-84.		0
21	Nanostructured Heterojunction (1D-0D and 2D-0D) Photocatalysts for Environmental Remediation. , 2021, , 33-63.		0
22	Effect of microwave and probe sonication processes on sol-gel derived bioactive glass and its structural and biocompatible investigations. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2020, 108, 143-155.	1.6	18
23	A review on multifunctional attributes of zinc antimonate nanostructures towards energy and environmental applications. <i>Chemical Papers</i> , 2020, 74, 55-75.	1.0	12
24	Bioactive assessment of bioactive glass nanostructures synthesized using synthetic and natural silica resources. <i>International Journal of Applied Ceramic Technology</i> , 2020, 17, 1976-1984.	1.1	3
25	Impact of copper on in-vitro biomineralization, drug release efficacy and antimicrobial properties of bioactive glasses. <i>Materials Science and Engineering C</i> , 2020, 109, 110598.	3.8	46
26	Evolution of phase pure magnetic cobalt ferrite nanoparticles by varying the synthesis conditions of polyol method. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2020, 252, 114451.	1.7	22
27	Formation of bioactive nano hybrid thin films on anodized titanium via electrophoretic deposition intended for biomedical applications. <i>Materials Today Communications</i> , 2020, 25, 101666.	0.9	8
28	Bioactivity and hemocompatibility of sol-gel bioactive glass synthesized under different catalytic conditions. <i>New Journal of Chemistry</i> , 2020, 44, 21026-21037.	1.4	8
29	Exploration of thermal treatment dependent in-vitro mineralization on 45S5 bioactive nanostructured materials. <i>AIP Conference Proceedings</i> , 2020, , .	0.3	2
30	Nanostructuring of graphitic carbon nitride as potential and economical electrode materials for supercapacitors. <i>AIP Conference Proceedings</i> , 2020, , .	0.3	1
31	Fabrication of nickel oxide nanostructures and evaluation of morphology-dependent photocatalytic and supercapacitor performance. <i>AIP Conference Proceedings</i> , 2020, , .	0.3	1
32	Bioactive, degradable and multi-functional three-dimensional membranous scaffolds of bioglass and alginate composites for tissue regenerative applications. <i>Biomaterials Science</i> , 2020, 8, 4003-4025.	2.6	43
33	Zirconia reinforced bio-active glass coating by spray pyrolysis: Structure, surface topography, in-vitro biological evaluation and antibacterial activities. <i>Materials Today Communications</i> , 2020, 25, 101253.	0.9	11
34	Anisotropic growth and strain-induced tunable optical properties of Ag-ZnO hierarchical nanostructures by a microwave synthesis method. <i>Materials Chemistry and Physics</i> , 2020, 244, 122720.	2.0	12
35	Size dependent photoremediation of water pollutant using Bi ₂ WO ₆ nanoparticles. <i>AIP Conference Proceedings</i> , 2020, , .	0.3	0
36	Graphitic carbon nitride: An active and economical visible light photocatalyst towards diversified organic pollutants. <i>AIP Conference Proceedings</i> , 2020, , .	0.3	2

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37	In vitro bioactivity and wound healing efficiency of 45S5 nanobioactive glass-Al ₂ O ₃ composites. AIP Conference Proceedings, 2020, , .	0.3	1
38	Functional nanomaterial in energy and environmental science. , 2020, , 1-23.		2
39	Enhanced magnetic behavior of hydrogenated Fe and FeCo nanoparticles prepared by chemical reduction method. AIP Conference Proceedings, 2020, , .	0.3	2
40	Electrochemical Performance of Nitrogen-Doped TiO ₂ Nanotubes as Electrode Material for Supercapacitor and Li-Ion Battery. Molecules, 2019, 24, 2952.	1.7	39
41	Conductometric sensing characteristics of nanoplatelet Bi ₂ WO ₆ as nanosensor for hydrogen detection. AIP Conference Proceedings, 2019, , .	0.3	1
42	Enhancing the electrochemical properties of zinc antimonate nanorods by anchoring silver nanoparticles as hybrid electrode material for supercapacitors. AIP Conference Proceedings, 2019, , .	0.3	1
43	Fabrication of BiFeO ₃ nanostructures and their visible light photocatalytic degradation and water splitting properties. AIP Conference Proceedings, 2019, , .	0.3	1
44	Zinc antimonate nanorods integrated porous graphitic carbon nitride nanosheets as hybrid electrode materials for supercapacitors. Diamond and Related Materials, 2019, 97, 107460.	1.8	2
45	FeO/rGO nanocomposites for cadmium remediation from drinking water and EMI shielding applications. AIP Conference Proceedings, 2019, , .	0.3	3
46	On the investigation of structural and biological properties of 45S5 bioglass and β -tricalcium phosphate nanostructured materials. AIP Conference Proceedings, 2019, , .	0.3	1
47	Modulation in the Band Dispersion of Bi ₂ WO ₆ Nanocrystals Using the Electronegativity of Transition Elements for Enhanced Visible Light Photocatalysis. Crystal Growth and Design, 2019, 19, 6224-6238.	1.4	35
48	Insights into the apatite mineralization potential of thermally processed nanocrystalline Ca ₁₀ (PO ₄) ₆ (OH) ₂ . New Journal of Chemistry, 2019, 43, 1358-1371.	1.4	11
49	Sonochemistry-assisted fabrication of 1D-ZnSb ₂ O ₆ @2D-MoS ₂ nanostructures: A synergistic energy storage material for supercapacitors. Ultrasonics Sonochemistry, 2019, 58, 104589.	3.8	3
50	Ultrasonication-assisted fabrication of hierarchical architectures of copper oxide/zinc antimonate nanocomposites based supercapacitor electrode materials. Ultrasonics Sonochemistry, 2019, 56, 337-349.	3.8	17
51	Rapid Dilapidation of Alcohol Using Magnesium Oxide and Magnesium Aspartate based Nanostructures: A Raman Spectroscopic and Molecular Simulation Approach. Journal of Inorganic and Organometallic Polymers and Materials, 2019, 29, 1390-1399.	1.9	7
52	Nanostructuring of silver nanoparticles anchored 1D zinc antimonate electrode material by ultrasonication assisted chemical reduction approach for supercapacitors. Materials Chemistry and Physics, 2019, 224, 334-348.	2.0	8
53	Role of sintering temperature dependent crystallization of bioactive glasses on erythrocyte and cytocompatibility. Processing and Application of Ceramics, 2019, 13, 12-23.	0.4	28
54	Fabrication of bismuth ferrite based hybrid nanostructures: Insight into a catalytic and sensing properties for the detection of biomolecules. AIP Conference Proceedings, 2018, , .	0.3	1

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55	Decoration of 1-D nano bioactive glass on reduced graphene oxide sheets: Strategies and in vitro bioactivity studies. <i>Materials Science and Engineering C</i> , 2018, 90, 85-94.	3.8	21
56	Deriving magnetite nanostructures from natural resources and investigation of its erythrocyte compatibility. <i>AIP Conference Proceedings</i> , 2018, , .	0.3	0
57	Structural, Mechanical and Biological Insights on Reduced Graphene Nanosheets Reinforced Sonochemically Processed Nano-Hydroxyapatite Ceramics. <i>Ceramics International</i> , 2018, 44, 8777-8787.	2.3	17
58	Dual oxidation state induced oxygen vacancies in Pr substituted BiFeO ₃ compounds: An effective material activation strategy to enhance the magnetic and visible light-driven photocatalytic properties. <i>Materials Research Bulletin</i> , 2018, 101, 107-115.	2.7	31
59	Reverse Ostwald ripening process induced dispersion of Cu ₂ O nanoparticles in silver-matrix and their interfacial mechanism mediated sunlight driven photocatalytic properties. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2018, 356, 150-158.	2.0	14
60	Nanostructuring of a one-dimensional zinc antimonate electrode material through a precipitation strategy for use in supercapacitors. <i>New Journal of Chemistry</i> , 2018, 42, 6613-6616.	1.4	10
61	Understanding the lattice composition directed in situ structural disorder for enhanced visible light photocatalytic activity in Bismuth iron niobate pyrochlore. <i>Applied Catalysis B: Environmental</i> , 2018, 225, 386-396.	10.8	37
62	Highly reactive crystalline-phase-embedded strontium-bioactive nanorods for multimodal bioactive applications. <i>Biomaterials Science</i> , 2018, 6, 1764-1776.	2.6	18
63	Enhanced shielding effectiveness in nanohybrids of graphene derivatives with Fe ₃ O ₄ and μ -Fe ₃ N in the X-band microwave region. <i>Nanoscale</i> , 2018, 10, 12018-12034.	2.8	49
64	Beyond Chemical Bonding Interaction: An Insight into the Growth Process of 1D ZnO on Few-Layer Graphene for Excellent Photocatalytic and Room Temperature Gas Sensing Applications. <i>ChemistrySelect</i> , 2018, 3, 7302-7309.	0.7	13
65	Contribution of tin in electrochemical properties of zinc antimonate nanostructures: An electrode material for supercapacitors. <i>AIP Conference Proceedings</i> , 2018, , .	0.3	1
66	A novel nano-hydroxyapatite α PMMA hybrid scaffolds adopted by conjugated thermal induced phase separation (TIPS) and wet-chemical approach: Analysis of its mechanical and biological properties. <i>Materials Science and Engineering C</i> , 2017, 75, 221-228.	3.8	36
67	Effect of synthesis parameters of polyol technique on photoluminescence properties of ZnSe nanoparticles. <i>Journal of Luminescence</i> , 2017, 190, 272-278.	1.5	5
68	Preparation, Properties and the Application of Hybrid Nanomaterials in Sensing Environmental Pollutants. , 2017, , 321-347.		1
69	A perspective on the hemolytic activity of chemical and green-synthesized silver and silver oxide nanoparticles. <i>Materials Research Express</i> , 2017, 4, 105406.	0.8	39
70	Electron spin resonance studies of Bi-Sc FeO ₃ nanoparticulates: Observation of an enhanced spin canting over a large temperature range. <i>Solid State Communications</i> , 2017, 268, 61-63.	0.9	2
71	On the Development of Hierarchical Nanostructures of Graphene-Zinc antimonate as Inexpensive Electrode Materials for Supercapacitors. <i>Electrochimica Acta</i> , 2017, 253, 178-189.	2.6	6
72	In vitro studies of graphene oxide reinforced hydroxyapatite nanobiocomposite on human erythrocytes. <i>AIP Conference Proceedings</i> , 2017, , .	0.3	2

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73	Concept of collective Nernstian-Capacitive mechanism in graphene nanosheets for electrochemical energy storage. AIP Conference Proceedings, 2017, , .	0.3	1
74	A mechanistic view into the morphology-reconstruction mediated facile synthesis of bismuth ferrite (BiFeO ₃) hierarchical nanostructures. Nano Structures Nano Objects, 2017, 12, 188-193.	1.9	4
75	Electron Spin Resonance Studies of Undoped and Dysprosium Doped Bismuth Ferrite Nanoparticles. Journal of Superconductivity and Novel Magnetism, 2017, 30, 819-823.	0.8	5
76	Visible Light Driven Photocatalytic Efficiency of rGO@Ag@BiFeO ₃ Ternary Nanohybrids on the Decontamination of Dye@Polluted Water: An Amalgamation of 1D, 2D and 3D Systems. ChemistrySelect, 2016, 1, 6961-6971.	0.7	7
77	Influence of physicochemical interactions of capping agent on magnetic properties of magnetite nanoparticles. Materials Chemistry and Physics, 2016, 173, 364-371.	2.0	20
78	Insights into the nitridation of zero-valent iron nanoparticles for the facile synthesis of iron nitride nanoparticles. RSC Advances, 2016, 6, 45850-45857.	1.7	36
79	Exploration of electrochemical properties of zinc antimonate nanoparticles as supercapacitor electrode material. Materials Science in Semiconductor Processing, 2016, 56, 287-294.	1.9	23
80	Experimental Evidence for the Carrier Transportation Enhanced Visible Light Driven Photocatalytic Process in Bismuth Ferrite (BiFeO ₃) One-Dimensional Fiber Nanostructures. Journal of Physical Chemistry C, 2016, 120, 18811-18821.	1.5	64
81	Tri-solvent mediated probing of ultrasonic energy towards exfoliation of graphene nanosheets for supercapacitor application. Materials Letters, 2016, 182, 63-67.	1.3	15
82	Reduced graphene oxide/nano-Bioglass composites: processing and super-anion oxide evaluation. RSC Advances, 2016, 6, 19657-19661.	1.7	11
83	Particulates vs. fibers: dimension featured magnetic and visible light driven photocatalytic properties of Sc modified multiferroic bismuth ferrite nanostructures. Nanoscale, 2016, 8, 1147-1160.	2.8	49
84	Anatase TiO ₂ nanotube by electrochemical anodization method: effect of tubes dimension on the supercapacitor application. Ionics, 2016, 22, 99-105.	1.2	19
85	Phase separation induced shell thickness variations in electrospun hollow Bioglass 45S5 fiber mats for drug delivery applications. Physical Chemistry Chemical Physics, 2015, 17, 15316-15323.	1.3	19
86	Versatility of electrospinning in the fabrication of fibrous mat and mesh nanostructures of bismuth ferrite (BiFeO ₃) and their magnetic and photocatalytic activities. Physical Chemistry Chemical Physics, 2015, 17, 17745-17754.	1.3	67
87	Stacked Bioglass/TiO ₂ nanocoatings on titanium substrate for enhanced osseointegration and its electrochemical corrosion studies. Applied Surface Science, 2015, 349, 561-569.	3.1	28
88	Synthesis and dose interval dependent hepatotoxicity evaluation of intravenously administered polyethylene glycol-8000 coated ultra-small superparamagnetic iron oxide nanoparticle on Wistar rats. Environmental Toxicology and Pharmacology, 2015, 39, 727-735.	2.0	15
89	Evaluation of hemocompatibility and in vitro immersion on microwave-assisted hydroxyapatite@alumina nanocomposites. Materials Science and Engineering C, 2015, 50, 143-150.	3.8	69
90	Nanostructuring of a GNS-V ₂ O ₅ @TiO ₂ core@shell photocatalyst for water remediation applications under sun-light irradiation. RSC Advances, 2015, 5, 18633-18641.	1.7	43

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91	Compliments of confinements: substitution and dimension induced magnetic origin and band-bending mediated photocatalytic enhancements in $\text{Bi}_{1-x}\text{Dy}_x\text{FeO}_3$ particulate and fiber nanostructures. <i>Nanoscale</i> , 2015, 7, 10667-10679.	2.8	80
92	Structural, Morphological and Antibacterial Investigation of Ag-Impregnated Sol-Gel-Derived 45S5 NanoBioglass Systems. <i>Journal of Nanoscience and Nanotechnology</i> , 2015, 15, 4285-4295.	0.9	14
93	Tailored sunlight driven nano-photocatalyst: bismuth iron tungstate (BiFeWO_6). <i>Journal of Materials Chemistry C</i> , 2015, 3, 10285-10292.	2.7	49
94	Analysis of solvent induced porous PMMA-Bioglass monoliths by the phase separation method – mechanical and in vitro biocompatible studies. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 1247-1256.	1.3	20
95	Surface Enhanced Raman Scattering Studies of Silver-gold Normal and Inverted Core-shell Nanostructures on their Efficiency of Detecting Molecules. <i>Procedia Engineering</i> , 2014, 92, 19-25.	1.2	11
96	Nano-bioglass: A Versatile Antidote for Bone Tissue Engineering Problems. <i>Procedia Engineering</i> , 2014, 92, 2-8.	1.2	20
97	Role of oxygen vacancy and Fe-O-Fe bond angle in compositional, magnetic, and dielectric relaxation on Eu-substituted BiFeO_3 nanoparticles. <i>Dalton Transactions</i> , 2014, 43, 5731-5738.	1.6	168
98	A prototypical development of plasmonic multiferroic bismuth ferrite particulate and fiber nanostructures and their remarkable photocatalytic activity under sunlight. <i>Journal of Materials Chemistry C</i> , 2014, 2, 6835-6842.	2.7	62
99	Nanostructured $\text{Bi}_{(1-x)}\text{Gd}_x\text{FeO}_3$ – a multiferroic photocatalyst on its sunlight driven photocatalytic activity. <i>RSC Advances</i> , 2014, 4, 16871-16878.	1.7	71
100	Efficient sunlight-driven photocatalytic activity of chemically bonded GNS-TiO ₂ and GNS-ZnO heterostructures. <i>Journal of Materials Chemistry C</i> , 2014, 2, 6827.	2.7	54
101	Annealing temperature mediated physical properties of bismuth ferrite (BiFeO_3) nanostructures synthesized by a novel wet chemical method. <i>Materials Research Bulletin</i> , 2013, 48, 2878-2885.	2.7	100
102	A strategy to fabricate bismuth ferrite (BiFeO_3) nanotubes from electrospun nanofibers and their solar light-driven photocatalytic properties. <i>RSC Advances</i> , 2013, 3, 23737.	1.7	52
103	Manifestation of weak ferromagnetism and photocatalytic activity in bismuth ferrite nanoparticles. <i>AIP Conference Proceedings</i> , 2013, , .	0.3	6