Anuraag Gaddam

List of Publications by Year
in descending order

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119	3,548	136950	168389
papers	citations	32 h-index	53 g-index

121	121	121	3797
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Robocasting and surface functionalization with highly bioactive glass of ZrO₂ scaffolds for load bearing applications. Journal of the American Ceramic Society, 2022, 105, 1753-1764.	3.8	8
2	Use of colemanite and borax penta-hydrate in soda lime silicate glass melting - A strategy to reduce energy consumption and improve glass properties. Ceramics International, 2022, 48, 1181-1190.	4.8	2
3	Tunable femtosecond nonlinear absorption and optical limiting thresholds of La2O3â€'B2O3 glasses by controlling the borate structural units. Scripta Materialia, 2022, 211, 114530.	5.2	24
4	ElucidatingÂthe influence of structure and Ag+-Na+Âion-exchange on crack-resistance and ionic conductivity of Na3Al1.8Si1.65P1.8O12Âglass electrolyte. Acta Materialia, 2022, 227, 117745.	7.9	6
5	Robocasting of 3D printed and sintered ceria scaffold structures with hierarchical porosity for solar thermochemical fuel production from the splitting of CO₂. Nanoscale, 2022, 14, 4994-5001.	5.6	10
6	New and Efficient Bioactive Glass Compositions for Controlling Endodontic Pathogens. Nanomaterials, 2022, 12, 1577.	4.1	4
7	Role of vanadium oxide on the lithium silicate glass structure and properties. Journal of the American Ceramic Society, 2021, 104, 2495-2505.	3.8	10
8	Fabrication of three dimensional bioactive Sr 2+ substituted apatite scaffolds by gelâ€casting technique for hard tissue regeneration. Journal of Tissue Engineering and Regenerative Medicine, 2021, 15, 577-585.	2.7	5
9	Development of microfibers for bone regeneration based on alkaliâ€free bioactive glasses doped with boron oxide. Journal of the American Ceramic Society, 2021, 104, 4492-4504.	3.8	4
10	Threeâ€dimensional printing of zirconia scaffolds for load bearing applications: Study of the optimal fabrication conditions. Journal of the American Ceramic Society, 2021, 104, 4368-4380.	3.8	18
11	Effect of Vanadium Oxide on the Structure and Li-Ion Conductivity of Lithium Silicate Glasses. Journal of Physical Chemistry C, 2021, 125, 16843-16857.	3.1	5
12	Ionic Conductivity of Na₃Al₂P₃O₁₂ Glass Electrolytesâ€"Role of Charge Compensators. Inorganic Chemistry, 2021, 60, 12893-12905.	4.0	20
13	Solâ€"Gel Synthesis and Characterization of a Quaternary Bioglass for Bone Regeneration and Tissue Engineering. Materials, 2021, 14, 4515.	2.9	10
14	3D Printing of Macro Porous Sol-Gel Derived Bioactive Glass Scaffolds and Assessment of Biological Response. Materials, 2021, 14, 5946.	2.9	8
15	Highly Porous Composite Scaffolds Endowed with Antibacterial Activity for Multifunctional Grafts in Bone Repair. Polymers, 2021, 13, 4378.	4.5	9
16	Design and synthesis of foam glasses from recycled materials. International Journal of Applied Ceramic Technology, 2020, 17, 64-74.	2.1	8
17	The Beneficial Mechanical and Biological Outcomes of Thin Copper-Gallium Doped Silica-Rich Bio-Active Glass Implant-Type Coatings. Coatings, 2020, 10, 1119.	2.6	23
18	Combined Occupancy of Gadolinium at the Lattice Sites of Î²â€Ca₃(PO₄)₂ and tâ€ZrO₂ Crystal Structures. European Journal of Inorganic Chemistry, 2020, 2020, 1163-1171.	2.0	4

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19	Direct Ink Writing Glass: A Preliminary Step for Optical Application. Materials, 2020, 13, 1636.	2.9	16
20	Robocasting: Prediction of ink printability in solgel bioactive glass. Journal of the American Ceramic Society, 2019, 102, 1608-1618.	3.8	13
21	Cytotoxicity and bioactivity assessments for Cu²⁺ and La³⁺ doped highâ€silica solâ€gel derived bioglasses: The complex interplay between additive ions revealed. Journal of Biomedical Materials Research - Part A, 2019, 107, 2680-2693.	4.0	7
22	Structure and Stability of High CaO- and P2O5-Containing Silicate and Borosilicate Bioactive Glasses. Journal of Physical Chemistry B, 2019, 123, 7558-7569.	2.6	14
23	Surface functionalization of cuttlefish bone-derived biphasic calcium phosphate scaffolds with polymeric coatings. Materials Science and Engineering C, 2019, 105, 110014.	7.3	22
24	Cuttlefish Bone-Derived Biphasic Calcium Phosphate Scaffolds Coated with Sol-Gel Derived Bioactive Glass. Materials, 2019, 12, 2711.	2.9	5
25	Robocasting of Cu2+ & La3+ doped solâ€“gel glass scaffolds with greatly enhanced mechanical properties: Compressive strength up to 14â€¯MPa. Acta Biomaterialia, 2019, 87, 265-272.	8.3	18
26	Dielectric and optical properties of Ni- and Fe-doped CeO2 Nanoparticles. Applied Physics A: Materials Science and Processing, 2019, 125, 1.	2.3	18
27	Structural and Femtosecond Third-Order Nonlinear Optical Properties of Sodium Borate Oxide Glasses: Effect of Antimony. Journal of Physical Chemistry C, 2019, 123, 5591-5602.	3.1	68
28	Elucidating the formation of Alâ€“NBO bonds, Alâ€“Oâ€“Al linkages and clusters in alkaline-earth aluminosilicate glasses based on molecular dynamics simulations. Physical Chemistry Chemical Physics, 2019, 21, 23966-23977.	2.8	20
29	The structural role of lanthanum oxide in silicate glasses. Journal of Non-Crystalline Solids, 2019, 505, 18-27.	3.1	24
30	Direct ink writing of macroporous leadâ€free piezoelectric Ba_{0.85}Ca_{0.15}Zr_{0.1}Ti_{0.9}O₃. Journal of the American Ceramic Society, 2019, 102, 3191-3203.	3.8	29
31	Doping Î²-TCP as a Strategy for Enhancing the Regenerative Potential of Composite Î²-TCPâ€”Alkali-Free Bioactive Glass Bone Grafts. Experimental Study in Rats. Materials, 2019, 12, 4.	2.9	17
32	Structure and Crystallization of Alkaline-Earth Aluminosilicate Glasses: Prevention of the Alumina-Avoidance Principle. Journal of Physical Chemistry B, 2018, 122, 4737-4747.	2.6	42
33	Effects of catalysts on polymerization and microstructure of solâ€gel derived bioglasses. Journal of the American Ceramic Society, 2018, 101, 2831-2839.	3.8	10
34	Enhanced bioactivity of a rapidly-dried sol-gel derived quaternary bioglass. Materials Science and Engineering C, 2018, 91, 36-43.	7.3	18
35	Synthesis and bioactivity assessment of high silica content quaternary glasses with <scp>C</scp>a: <scp>P</scp> ratios of 1.5 and 1.67, made by a rapid solâ€gel process. Journal of Biomedical Materials Research - Part A, 2018, 106, 510-520.	4.0	13
36	The roles of P2O5 and SiO2/Li2O ratio on the network structure and crystallization kinetics of non-stoichiometric lithium disilicate based glasses. Journal of Non-Crystalline Solids, 2018, 481, 512-521.	3.1	37

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37	Bioactive Glasses and Glass-Ceramics for Healthcare Applications in Bone Regeneration and Tissue Engineering. Materials, 2018, 11, 2530.	2.9	196
38	Cationic Substitutions in Hydroxyapatite: Current Status of the Derived Biofunctional Effects and Their In Vitro Interrogation Methods. Materials, 2018, 11, 2081.	2.9	179
39	Synthetic and Marine-Derived Porous Scaffolds for Bone Tissue Engineering. Materials, 2018, 11, 1702.	2.9	55
40	The in vivo performance of an alkaliâ€free bioactive glass for bone grafting, <scp>F</scp>ast<scp>O</scp>s^{Â®}<scp>BG</scp>, assessed with an ovine model. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2017, 105, 30-38.	3.4	25
41	A hundred times faster: Novel, rapid solâ€gel synthesis of bioâ€glass nanopowders (Siâ€Naâ€Caâ€P system, Ca:P =) Tj ETQq1 1 0.784	2.0	22
42	Understanding the Formation of CaAl₂Si₂O₈ in Melilite-Based Glass-Ceramics: Combined Diffraction and Spectroscopic Studies. ACS Omega, 2017, 2, 6233-6243.	3.5	26
43	Structure and thermal relaxation of network units and crystallization of lithium silicate based glasses doped with oxides of Al and B. Physical Chemistry Chemical Physics, 2017, 19, 26034-26046.	2.8	9
44	Additive manufacturing of 3D porous alkali-free bioactive glass scaffolds for healthcare applications. Journal of Materials Science, 2017, 52, 12079-12088.	3.7	21
45	Nanocrystalline ZnOâ€“SnO2 mixed metal oxide powder: microstructural study, optical properties, and photocatalytic activity. Journal of Sol-Gel Science and Technology, 2017, 84, 274-282.	2.4	16
46	Osteogenic capacity of alkaliâ€free bioactive glasses. In vitro studies. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2017, 105, 2360-2365.	3.4	26
47	Novel route for rapid sol-gel synthesis of hydroxyapatite, avoiding ageing and using fast drying with a 50-fold to 200-fold reduction in process time. Materials Science and Engineering C, 2017, 70, 796-804.	7.3	59
48	The key Features expected from a Perfect Bioactive Glass â€“How Far we still are from an Ideal Composition?. Biomedical Journal of Scientific & Technical Research, 2017, 1, .	0.1	5
49	Composite and Nanocomposite Metal Foams. Materials, 2016, 9, 79.	2.9	102
50	Statistics of silicate units in binary glasses. Journal of Chemical Physics, 2016, 145, 124505.	3.0	7
51	The Influence of Cu²⁺ and Mn²⁺ Ions on the Structure and Crystallization of Diopsideâ€“Calcium Pyrophosphate Bioglasses. International Journal of Applied Glass Science, 2016, 7, 345-354.	2.0	5
52	Influence of Al₂O₃ and B₂O₃ on Sintering and Crystallization of Lithium Silicate Glass System. Journal of the American Ceramic Society, 2016, 99, 833-840.	3.8	12
53	Insights on the properties of levofloxacin-adsorbed Sr- and Mg-doped calcium phosphate powders. Journal of Materials Science: Materials in Medicine, 2016, 27, 123.	3.6	9
54	Understanding the compositionâ€“structureâ€“bioactivity relationships in diopside (CaOÂ·MgOÂ·2SiO2)â€“tricalcium phosphate (3CaOÂ·P2O5) glass system. Acta Biomaterialia, 2015, 15, 210-226.	8.3	34

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55	Development of bilayer glass-ceramic SOFC sealants via optimizing the chemical composition of glassesâ€"a review. Journal of Solid State Electrochemistry, 2015, 19, 2899-2916.	2.5	24
56	Influence of ZnO/MgO substitution on sintering, crystallisation, and bio-activity of alkali-free glass-ceramics. Materials Science and Engineering C, 2015, 53, 252-261.	7.3	27
57	Influence of Strontium Oxide on Structural Transformations in Diopside-Based Glass-Ceramics Assessed by Diverse Structural Tools. Journal of Physical Chemistry C, 2015, 119, 11482-11492.	3.1	15
58	Glass structure and crystallization of Al and B containing glasses belonging to the Li₂Oâ€"SiO₂system. RSC Advances, 2015, 5, 41066-41078.	3.6	25
59	Effects of <scp>M</scp>gâ€Doping and of Reinforcing <scp>Multiwalled Carbon Nanotubes</scp> Content on the Structure and Properties of Hydroxyapatite Nanocomposite Ceramics. International Journal of Applied Ceramic Technology, 2015, 12, 264-272.	2.1	4
60	Role of glass structure in defining the chemical dissolution behavior, bioactivity and antioxidant properties of zinc and strontium co-doped alkali-free phosphosilicate glasses. Acta Biomaterialia, 2014, 10, 3264-3278.	8.3	64
61	Fabrication of Barium Strontium Titanate (<scp><scp>Ba</scp></scp>_{0.6}<scp><scp>Sr</scp></scp>_{0.4}<scp><scp>TiO</scp></scp>₃) 3D Microcomponents from Aqueous Suspensions. Journal of the American Ceramic Society, 2014, 97, 725-732.	3.8	17
62	Role of manganese on the structure, crystallization and sintering of non-stoichiometric lithium disilicate glasses. RSC Advances, 2014, 4, 13581.	3.6	28
63	Structure, biodegradation behavior and cytotoxicity of alkali-containing alkaline-earth phosphosilicate glasses. Materials Science and Engineering C, 2014, 44, 159-165.	7.3	33
64	Structure, properties and crystallization of non-stoichiometric lithium disilicate glasses containing CaF2. Journal of Non-Crystalline Solids, 2014, 406, 54-61.	3.1	5
65	Thermal and mechanical stability of lanthanide-containing glassâ€"ceramic sealants for solid oxide fuel cells. Journal of Materials Chemistry A, 2014, 2, 1834-1846.	10.3	31
66	Multifunctional materials for bone cancer treatment. International Journal of Nanomedicine, 2014, 9, 2713.	6.7	64
67	Al2O3/K2O-containing non-stoichiometric lithium disilicate-based glasses. Journal of Thermal Analysis and Calorimetry, 2013, 112, 1359-1368.	3.6	8
68	Structural role of zinc in biodegradation of alkali-free bioactive glasses. Journal of Materials Chemistry B, 2013, 1, 3073.	5.8	54
69	Sintering and devitrification of glass-powder compacts in the akermaniteâ€"gehlenite system. Journal of Materials Science, 2013, 48, 4128-4136.	3.7	27
70	The role of P2O5, TiO2 and ZrO2 as nucleating agents on microstructure and crystallization behaviour of lithium disilicate-based glass. Journal of Materials Science, 2013, 48, 765-773.	3.7	65
71	Melilite glassâ€"ceramic sealants for solid oxide fuel cells: effects of ZrO2 additions assessed by microscopy, diffraction and solid-state NMR. Journal of Materials Chemistry A, 2013, 1, 6471.	10.3	13
72	KCa4(BO3)3:Ln3+ (Ln = Dy, Eu, Tb) phosphors for near UV excited whiteâ€"lightâ€"emitting diodes. AIP Advances, 2013, 3, .	1.3	53

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73	Hydrolysis Control of AlN Powders for the Aqueous Processing of Spherical AlN Granules. Journal of the American Ceramic Society, 2013, 96, 1383-1389.	3.8	20
74	Structural and Optical Investigation of Rare Earth Doped Oxyfluoride Glasses. Transactions of the Indian Ceramic Society, 2013, 72, 18-20.	1.0	6
75	Lithium Disilicate based Glass-Ceramics for Dental Applications. Transactions of the Indian Ceramic Society, 2013, 72, 56-60.	1.0	9
76	Sintering behavior of lanthanide-containing glass-ceramic sealants for solid oxide fuel cells. Journal of Materials Chemistry, 2012, 22, 10042.	6.7	41
77	Influence of the annealing temperatures on the photoluminescence of KCaBO3:Eu3+ phosphor. RSC Advances, 2012, 2, 8768.	3.6	61
78	Study of melilite based glasses and glass-ceramics nucleated by Bi2O3 for functional applications. RSC Advances, 2012, 2, 10955.	3.6	29
79	Alkali-free bioactive glasses for bone tissue engineering: A preliminary investigation. Acta Biomaterialia, 2012, 8, 361-372.	8.3	96
80	Characterization of cement-bonded particleboards manufactured with maritime pine, blue gum and cork grown in Portugal. European Journal of Wood and Wood Products, 2012, 70, 107-111.	2.9	7
81	Diopside (CaOÂ·MgOÂ·2SiO2)â€“fluorapatite (9CaOÂ·3P2O5Â·CaF2) glass-ceramics: potential materials for bone tissue engineering. Journal of Materials Chemistry, 2011, 21, 16247.	6.7	41
82	Structure, surface reactivity and physico-chemical degradation of fluoride containing phospho-silicate glasses. Journal of Materials Chemistry, 2011, 21, 8074.	6.7	41
83	Hydrolysis-Induced Aqueous Gelcasting of Magnesium Aluminate Spinel. International Journal of Applied Ceramic Technology, 2011, 8, 873-884.	2.1	8
84	Cosubstitution of Zinc and Strontium in Î²-Tricalcium Phosphate: Synthesis and Characterization. Journal of the American Ceramic Society, 2011, 94, 230-235.	3.8	27
85	MeltâEDerived Condensed Polymorphic Calcium Phosphate as Bone Substitute Material: An In Vitro Study. Journal of the American Ceramic Society, 2011, 94, 3023-3029.	3.8	7
86	Influence of strontium on structure, sintering and biodegradation behaviour of CaOâ€“MgOâ€“SrOâ€“SiO2â€“P2O5â€“CaF2 glasses. Acta Biomaterialia, 2011, 7, 4071-4080.	8.3	98
87	Structural characterisation and thermo-physical properties of glasses in the Li2Oâ€“SiO2â€“Al2O3â€“K2O system. Journal of Thermal Analysis and Calorimetry, 2011, 103, 827-834.	3.6	18
88	Dynamic Stability of Organic Conducting Polymers and Its Replication in Electrical Conduction and Degradation Mechanisms. Advanced Functional Materials, 2011, 21, 2240-2250.	14.9	2
89	The effect of TiO2 and P2O5 on densification behavior and properties of Anortite-Diopside glass-ceramic substrates. Journal of Electroceramics, 2010, 25, 38-44.	2.0	10
90	Structural analysis and thermal behavior of diopsideâ€“fluorapatiteâ€“wollastonite-based glasses and glassâ€“ceramics. Acta Biomaterialia, 2010, 6, 4380-4388.	8.3	59

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91	Structure, Sintering, and Crystallization Kinetics of Alkalineâ€Earth Aluminosilicate Glassâ€“Ceramic Sealants for Solid Oxide Fuel Cells. Journal of the American Ceramic Society, 2010, 93, 830-837.	3.8	36
92	Sintering and crystallization behavior of CaMgSi2O6â€“NaFeSi2O6 based glass-ceramics. Journal of Applied Physics, 2009, 106, .	2.5	7
93	Single step synthesis of nanosized CeO2â€“MxOy mixed oxides (MxOyÂ=ÂSiO2, TiO2, ZrO2, and Al2O3) by microwave induced solution combustion synthesis: characterization and CO oxidation. Journal of Materials Science, 2009, 44, 2743-2751.	3.7	45
94	Characterization and photocatalytic activity of TiO2â€“M x O y (M x O y Â=ÂSiO2, Al2O3, and ZrO2) mixed oxides synthesized by microwave-induced solution combustion technique. Journal of Materials Science, 2009, 44, 4874-4882.	3.7	29
95	Thermal stability and crystallization kinetics of ternary Seâ€“Teâ€“Sb semiconducting glassy alloys. Journal of Thermal Analysis and Calorimetry, 2009, 98, 347-354.	3.6	36
96	Microwave-assisted Synthesis and Structural Characterization of Nanosized Ce0.5Zr0.5O2 for CO Oxidation. Catalysis Letters, 2009, 130, 227-234.	2.6	31
97	Gelcasting of Magnesium Aluminate Spinel Powder. Journal of the American Ceramic Society, 2009, 92, 350-357.	3.8	35
98	Formation and Densification Behavior of Mullite Aggregates from Beach Sand Sillimanite. Journal of the American Ceramic Society, 2008, 91, 2464-2468.	3.8	4
99	Study of Crystallization Kinetics in Glasses along the Diopside-Ca-Tschermak Join. Journal of the American Ceramic Society, 2008, 91, 2690-2697.	3.8	21
100	Crystallization Process and Some Properties of Li₂Oâ€“SiO₂Glassâ€“Ceramics Doped with Al₂O₃and K₂O. Journal of the American Ceramic Society, 2008, 91, 3698-3703.	3.8	34
101	Hydrogenâ€Generation Materials for Portable Applications. Journal of the American Ceramic Society, 2008, 91, 3825-3834.	3.8	132
102	Influence of ZnO on the crystallization kinetics and properties of diopside-Ca-Tschermak based glasses and glass-ceramics. Journal of Applied Physics, 2008, 104, 043529.	2.5	17
103	Physicochemical Mechanism for the Continuous Reaction of ?-Al2O3-Modified Aluminum Powder with Water. Journal of the American Ceramic Society, 2007, 90, 1521-1526.	3.8	147
104	Nano-TiO2-Coated Unidirectional Porous Glass Structure Prepared by Freeze Drying and Solution Infiltration. Journal of the American Ceramic Society, 2007, 90, 1265-1268.	3.8	26
105	Effect of BaO Addition on Crystallization, Microstructure, and Properties of Diopside?Ca-Tschermak Clinopyroxene-Based Glass?Ceramics. Journal of the American Ceramic Society, 2007, 90, 2236-2244.	3.8	22
106	Influence of Li2O Doping on Non-Isothermal Evolution of Phases in K-Na-Containing Aluminosilicate Matrix. Journal of the American Ceramic Society, 2006, 89, 292-297.	3.8	3
107	Characterization and Mechanical Performance of the Mg-Stabilized beta-Ca3(PO4)2 Prepared from Mg-Substituted Ca-Deficient Apatite. Journal of the American Ceramic Society, 2006, 89, 060623005134017-???.	3.8	12
108	A new model formulation of the SiO2â€“Al2O3â€“B2O3â€“MgOâ€“CaOâ€“Na2Oâ€“F glass-ceramics. Biomaterials, 2005, 26, 2255-2264.	11.4	35

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109	Fabrication of Highly Porous Mullite Materials. Journal of the American Ceramic Society, 2005, 88, 777-779.	3.8	83
110	Temperature-Induced Gelation of Concentrated Sialon Suspensions. Journal of the American Ceramic Society, 2005, 88, 593-598.	3.8	28
111	Î±â€SiAlON Ceramics Obtained by Slip Casting and Pressureless Sintering. Journal of the American Ceramic Society, 2003, 86, 366-368.	3.8	15
112	Hydrothermal Synthesis of Submicrometer Î±â€Alumina from Seeded Tetraethylammonium Hydroxideâ€Peptized Aluminum Hydroxide. Journal of the American Ceramic Society, 2003, 86, 2055-2058.	3.8	15
113	Fabrication of Î±-sialon sheets by tape castingand pressureless sintering. Journal of Materials Research, 2003, 18, 1363-1367.	2.6	5
114	Hydrothermal synthesis of well-dispersed TiO₂ nano-crystals. Journal of Materials Research, 2002, 17, 2197-2200.	2.6	28
115	Synthesis, Characterization, and Processing of Cordieriteâ€Glass Particles Modified by Coating with an Alumina Precursor. Journal of the American Ceramic Society, 2002, 85, 155-160.	3.8	4
116	Feedstock Formulations for Direct Consolidation of Porcelains with Polysaccharides. Journal of the American Ceramic Society, 2001, 84, 719-725.	3.8	24
117	Hydrothermal Synthesis of Nanosized Titania Powders: Influence of Tetraalkyl Ammonium Hydroxides on Particle Characteristics. Journal of the American Ceramic Society, 2001, 84, 1696-1702.	3.8	94
118	Effect of Solids Loading on Slipâ€Casting Performance of Silicon Carbide Slurries. Journal of the American Ceramic Society, 1999, 82, 1993-2000.	3.8	51
119	Coprecipitation and Processing of Mullite Precursor Phases. Journal of the American Ceramic Society, 1996, 79, 1756-1760.	3.8	15