

# Silk fibroin/hydroxyapatite composites for bone tissue

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| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 1  | Bacterial cellulose-based scaffold materials for bone tissue engineering. <i>Applied Materials Today</i> , 2018, 11, 34-49.   | 2.3 | 208       |
| 2  | Characterization of biogenic hydroxyapatite derived from animal bones for biomedical applications. <i>Ceramics International</i> , 2018, 44, 10525-10530.   | 2.3 | 95        |
| 3  | Evaluación del crecimiento de fibroblastos humanos en andamios de fibra de Bombyx mori L.. <i>Revista Colombiana De Biotecnología</i> , 2018, 20, 47-56.  | 0.5 | 1         |
| 4  | Design and Evaluation of Europium Containing Mesoporous Bioactive Glass Nanospheres: Doxorubicin Release Kinetics and Inhibitory Effect on Osteosarcoma MG 63 Cells. <i>Nanomaterials</i> , 2018, 8, 961.   | 1.9 | 26        |
| 5  | Biocomposites for Hard Tissue Replacement and Repair. <i>Materials Horizons</i> , 2018, , 281-296.  | 0.3 | 9         |
| 6  | Stem Cell and Advanced Nano Bioceramic Interactions. <i>Advances in Experimental Medicine and Biology</i> , 2018, 1077, 317-342.  | 0.8 | 16        |
| 7  | Silk Fibroin-Based Scaffold for Bone Tissue Engineering. <i>Advances in Experimental Medicine and Biology</i> , 2018, 1077, 371-387.  | 0.8 | 41        |
| 8  | Biomimetic synthesis of novel polyvinyl alcohol/hydroxyapatite composite microspheres for biomedical applications. <i>Materials Research Express</i> , 2018, 5, 115401.   | 0.8 | 12        |
| 9  | Protein Nanofibril Assemblies Templated by Graphene Oxide Nanosheets Accelerate Early Cell Adhesion and Induce Osteogenic Differentiation of Human Mesenchymal Stem Cells. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 31988-31997. | 4.0 | 37        |
| 10 | Development of 3D scaffolds using nanochitosan/silk-fibroin/hyaluronic acid biomaterials for tissue engineering applications. <i>International Journal of Biological Macromolecules</i> , 2018, 120, 876-885.                                     | 3.6 | 47        |
| 11 | Biopolymer based nanomaterials in drug delivery systems: A review. <i>Materials Today Chemistry</i> , 2018, 9, 43-55.   | 1.7 | 362       |
| 12 | Preparation of a Codelivery System Based on Vancomycin/Silk Scaffold Containing Silk Nanoparticle Loaded VEGF. <i>ACS Biomaterials Science and Engineering</i> , 2018, 4, 2836-2846.  | 2.6 | 36        |
| 13 | Chemical Self-Assembly of Multifunctional Hydroxyapatite with a Coral-like Nanostructure for Osteoporotic Bone Reconstruction. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 25547-25560.   | 4.0 | 41        |
| 14 | Biomimetic hydroxyapatite/gelatin composites for bone tissue regeneration: Fabrication, characterization, and osteogenic differentiation in vitro. <i>Materials and Design</i> , 2018, 156, 381-388.  | 3.3 | 32        |
| 15 | Polymer-Based Electrospun Nanofibers for Biomedical Applications. <i>Nanomaterials</i> , 2018, 8, 259.  | 1.9 | 171       |
| 16 | Bone tissue engineering: Scaffold preparation using chitosan and other biomaterials with different design and fabrication techniques. <i>International Journal of Biological Macromolecules</i> , 2018, 119, 1228-1239.                           | 3.6 | 203       |
| 17 | Magnetron-sputtered Ti <sub>x</sub> Ny thin films applied on titanium-based alloys for biomedical applications: Composition-microstructure-property relationships. <i>Surface and Coatings Technology</i> , 2018, 349, 251-259.                   | 2.2 | 56        |
| 18 | Recent Advances in Biomaterials Science and Engineering Research in India: A Minireview. <i>ACS Biomaterials Science and Engineering</i> , 2019, 5, 3-18.   | 2.6 | 8         |

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 19 | Enhanced mechanical and osteogenic differentiation performance of hydroxyapatite/zein composite for bone tissue engineering. <i>Journal of Materials Science</i> , 2019, 54, 719-729.  | 1.7  | 32        |
| 20 | Conductive hydrogels based on agarose/alginate/chitosan for neural disorder therapy. <i>Carbohydrate Polymers</i> , 2019, 224, 115161.   | 5.1  | 109       |
| 21 | Chemistry of biomaterials: future prospects. <i>Current Opinion in Biomedical Engineering</i> , 2019, 10, 181-190.   | 1.8  | 58        |
| 22 | Nano-hydroxyapatite mineralized silk fibroin porous scaffold for tooth extraction site preservation. <i>Dental Materials</i> , 2019, 35, 1397-1407.  | 1.6  | 30        |
| 23 | Genetically Engineered Flagella Form Collagen-like Ordered Structures for Inducing Stem Cell Differentiation. <i>IScience</i> , 2019, 17, 277-287.   | 1.9  | 5         |
| 24 | A review of biomimetic surface functionalization for bone-integrating orthopedic implants: Mechanisms, current approaches, and future directions. <i>Progress in Materials Science</i> , 2019, 106, 100588.  | 16.0 | 147       |
| 25 | Evaluation of the biomedical properties of a Ca <sup>+</sup> -conjugated silk fibroin porous material. <i>Materials Science and Engineering C</i> , 2019, 104, 110003.   | 3.8  | 17        |
| 26 | Nanostructured Biopolymers for Application as Drug-Delivery Vehicles. , 2019, , 189-210.   |      | 5         |
| 27 | Biocompatible silk fibroin/carboxymethyl chitosan/strontium substituted hydroxyapatite/cellulose nanocrystal composite scaffolds for bone tissue engineering. <i>International Journal of Biological Macromolecules</i> , 2019, 136, 1247-1257.  | 3.6  | 88        |
| 28 | The Transcivilizational Perspective: A Legitimate and Feasible Approach to International Law. <i>Asian Journal of International Law</i> , 2019, 9, 165-169.  | 0.1  | 1         |
| 29 | Silk Fibroin Regulates Osteoconduction of Hydroxyapatite in Rat Spine Fusion Model. <i>Journal of Hard Tissue Biology</i> , 2019, 28, 341-348.   | 0.2  | 2         |
| 30 | Electrically Conductive Materials: Opportunities and Challenges in Tissue Engineering. <i>Biomolecules</i> , 2019, 9, 448.   | 1.8  | 142       |
| 31 | Application of supercritical gel drying method on fabrication of mechanically improved and biologically safe three-component scaffold composed of graphene oxide/chitosan/hydroxyapatite and characterization studies. <i>Journal of Materials Research and Technology</i> , 2019, 8, 5201-5216. | 2.6  | 25        |
| 32 | Osteogenic differentiation of BMSCs in collagen-based 3D scaffolds. <i>New Journal of Chemistry</i> , 2019, 43, 1980-1986.   | 1.4  | 1         |
| 33 | Biotechnological Applications of Polyhydroxyalkanoates. , 2019, , .  |      | 24        |
| 34 | Nanofibers from Polyhydroxyalkanoates and Their Applications in Tissue Engineering. , 2019, , 409-420.   |      | 2         |
| 35 | Strontium Ranelate Incorporated Enzyme-Cross-Linked Gelatin Nanoparticle/Silk Fibroin Aerogel for Osteogenesis in OVX-Induced Osteoporosis. <i>ACS Biomaterials Science and Engineering</i> , 2019, 5, 1440-1451.  | 2.6  | 28        |
| 36 | Hierarchical nanomaterials <i>via</i> biomolecular self-assembly and bioinspiration for energy and environmental applications. <i>Nanoscale</i> , 2019, 11, 4147-4182.   | 2.8  | 122       |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 37 | Functionalization of SF/HAP Scaffold with GO-PEI-miRNA inhibitor Complexes to Enhance Bone Regeneration through Activating Transcription Factor 4. <i>Theranostics</i> , 2019, 9, 4525-4541.  | 4.6 | 43        |
| 38 | Osteoblast studied on gelatin based biomaterials in rabbit Bone Bioengineering. <i>Materials Science and Engineering C</i> , 2019, 104, 109892.   | 3.8 | 6         |
| 39 | A novel technique in the preparation of environmentally friendly cellulose nanofiber/silk fibroin fiber composite films with improved thermal and mechanical properties. <i>Journal of Cleaner Production</i> , 2019, 234, 200-207. | 4.6 | 41        |
| 40 | “Tree to Bone” Lignin/Polycaprolactone Nanofibers for Hydroxyapatite Biomineralization. <i>Biomacromolecules</i> , 2019, 20, 2684-2693.   | 2.6 | 82        |
| 41 | Tightly adhered silk fibroin coatings on Ti6Al4V biomaterials for improved wettability and compatible mechanical properties. <i>Materials and Design</i> , 2019, 175, 107825.   | 3.3 | 31        |
| 42 | Mechanically Strong Silica-Silk Fibroin Bioaerogel: A Hybrid Scaffold with Ordered Honeycomb Micromorphology and Multiscale Porosity for Bone Regeneration. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 17256-17269.  | 4.0 | 115       |
| 43 | Effect of different cocoon stifling methods on the properties of silk fibroin biomaterials. <i>Scientific Reports</i> , 2019, 9, 6703.  | 1.6 | 17        |
| 44 | Silk fibroin scaffolds for common cartilage injuries: Possibilities for future clinical applications. <i>European Polymer Journal</i> , 2019, 115, 251-267.   | 2.6 | 71        |
| 45 | Upgrading prevascularization in tissue engineering: A review of strategies for promoting highly organized microvascular network formation. <i>Acta Biomaterialia</i> , 2019, 95, 112-130.   | 4.1 | 78        |
| 46 | Endothelial and Osteoblast Differentiation of Adipose-Derived Mesenchymal Stem Cells Using a Cobalt-Doped CaP/Silk Fibroin Scaffold. <i>ACS Biomaterials Science and Engineering</i> , 2019, 5, 2134-2146.                          | 2.6 | 25        |
| 47 | A strong, tough, and osteoconductive hydroxyapatite mineralized polyacrylamide/dextran hydrogel for bone tissue regeneration. <i>Acta Biomaterialia</i> , 2019, 88, 503-513.  | 4.1 | 143       |
| 48 | Regenerated <i>Antheraea pernyi</i> Silk Fibroin/Poly(N-isopropylacrylamide) Thermosensitive Composite Hydrogel with Improved Mechanical Strength. <i>Polymers</i> , 2019, 11, 302.   | 2.0 | 15        |
| 49 | Synthesis of nickel “ hydroxyapatite by electrochemical method. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019, 543, 012026.  | 0.3 | 4         |
| 50 | The assembly of silk fibroin and graphene-based nanomaterials with enhanced mechanical/conductive properties and their biomedical applications. <i>Journal of Materials Chemistry B</i> , 2019, 7, 6890-6913.                       | 2.9 | 29        |
| 51 | Functionalized calcium orthophosphates (CaPO <sub>4</sub> ) and their biomedical applications. <i>Journal of Materials Chemistry B</i> , 2019, 7, 7471-7489.  | 2.9 | 55        |
| 52 | Effects of polyethylene glycol content on the properties of a silk fibroin/nano-hydroxyapatite/polyethylene glycol electrospun scaffold. <i>RSC Advances</i> , 2019, 9, 33941-33948.  | 1.7 | 9         |
| 53 | Silk Fibroin-Based Biomaterials for Biomedical Applications: A Review. <i>Polymers</i> , 2019, 11, 1933.  | 2.0 | 259       |
| 54 | Regulation of MSC and macrophage functions in bone healing by peptide LL-37-loaded silk fibroin nanoparticles on a titanium surface. <i>Biomaterials Science</i> , 2019, 7, 5492-5505.  | 2.6 | 25        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 55 | The Biomedical Use of Silk: Past, Present, Future. <i>Advanced Healthcare Materials</i> , 2019, 8, e1800465.  | 3.9 | 522       |
| 56 | Using co-axial electrospray deposition to eliminate burst release of simvastatin from microparticles and to enhance induced osteogenesis. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2019, 30, 355-375.    | 1.9 | 13        |
| 57 | Biocompatible Fe <sub>3</sub> O <sub>4</sub> /chitosan scaffolds with high magnetism. <i>International Journal of Biological Macromolecules</i> , 2019, 128, 406-413.   | 3.6 | 23        |
| 58 | Enzymatically Cross-Linked Silk Fibroin-Based Hierarchical Scaffolds for Osteochondral Regeneration. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 3781-3799.   | 4.0 | 83        |
| 59 | Fabrication of hydroxyapatite/hydrophilic graphene composites and their modulation to cell behavior toward bone reconstruction engineering. <i>Colloids and Surfaces B: Biointerfaces</i> , 2019, 173, 512-520.           | 2.5 | 27        |
| 60 | Osteoblast responses to injectable bone substitutes of kappa-carrageenan and nano hydroxyapatite. <i>Acta Biomaterialia</i> , 2019, 83, 425-434.  | 4.1 | 54        |
| 61 | In situ synthesis of three dimensional graphene-hydroxyapatite nano powders via hydrothermal process. <i>Materials Chemistry and Physics</i> , 2019, 222, 251-255.  | 2.0 | 31        |
| 62 | Physiochemical characteristics and bone/cartilage tissue engineering potentialities of protein-based macromolecules – A review. <i>International Journal of Biological Macromolecules</i> , 2019, 121, 13-22.             | 3.6 | 34        |
| 63 | Review of craniofacial regeneration in China. <i>Journal of Oral Rehabilitation</i> , 2020, 47, 107-117.  | 1.3 | 0         |
| 64 | An introduction to bone tissue engineering. <i>International Journal of Artificial Organs</i> , 2020, 43, 69-86.  | 0.7 | 107       |
| 65 | Silk fibroin/hydroxyapatite composite membranes: Production, characterization and toxicity evaluation. <i>Toxicology in Vitro</i> , 2020, 62, 104670.   | 1.1 | 17        |
| 66 | a-C:H films produced by PECVD technique onto substrate of Ti6Al4V alloy: Chemical and biological responses. <i>Applied Surface Science</i> , 2020, 503, 144084.   | 3.1 | 12        |
| 67 | 3D Porous poly(lactic acid)/regenerated cellulose composite scaffolds based on electrospun nanofibers for biomineralization. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2020, 585, 124048. | 2.3 | 43        |
| 68 | The synthesis of hydroxyapatite crystals with various morphologies via the solvothermal method using double surfactants. <i>Materials Letters</i> , 2020, 259, 126881.  | 1.3 | 14        |
| 69 | Silk/Natural Rubber (NR) and 3,4-Dihydroxyphenylalanine (DOPA)-Modified Silk/NR Composites: Synthesis, Secondary Structure, and Mechanical Properties. <i>Molecules</i> , 2020, 25, 235.                                  | 1.7 | 8         |
| 70 | Topical application of silk fibroin-based hydrogel in preventing hypertrophic scars. <i>Colloids and Surfaces B: Biointerfaces</i> , 2020, 186, 110735.   | 2.5 | 32        |
| 71 | Progress toward Safe Tumor Diagnosis and Therapy via Degradable Inorganic Nanomaterials Constructed with Metabolically Safe Elements. <i>ACS Applied Nano Materials</i> , 2020, 3, 1028-1042.                             | 2.4 | 5         |
| 72 | Biogenic silica nanostructures derived from Sorghum bicolor induced osteogenic differentiation through BSP, BMP-2 and BMP-4 gene expression. <i>Process Biochemistry</i> , 2020, 91, 231-240.                             | 1.8 | 6         |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 73 | Functionalization of Silk Fibers by PDGF and Bioceramics for Bone Tissue Regeneration. <i>Coatings</i> , 2020, 10, 8.   | 1.2 | 8         |
| 74 | Poly(Vinyl Alcohol)-Based Nanofibrous Electrospun Scaffolds for Tissue Engineering Applications. <i>Polymers</i> , 2020, 12, 7.   | 2.0 | 141       |
| 75 | Synthesis and characterization of injectable self-healing hydrogels based on oxidized alginate-hybrid-hydroxyapatite nanoparticles and carboxymethyl chitosan. <i>International Journal of Biological Macromolecules</i> , 2020, 165, 1164-1174.                  | 3.6 | 47        |
| 76 | Silk as templates for hydroxyapatite biomineralization: A comparative study of Bombyx mori and Antheraea pernyi silkworm silks. <i>International Journal of Biological Macromolecules</i> , 2020, 164, 2842-2850.   | 3.6 | 26        |
| 77 | Homogeneous organic/inorganic hybrid scaffolds with high osteoinductive activity for bone tissue engineering. <i>Polymer Testing</i> , 2020, 91, 106798.  | 2.3 | 6         |
| 78 | Chitosan-Based Biomimetically Mineralized Composite Materials in Human Hard Tissue Repair. <i>Molecules</i> , 2020, 25, 4785.   | 1.7 | 34        |
| 79 | Hydroxyapatite powders prepared using two different methods as modifying agents of PVP/collagen composites designed for biomedical applications. <i>International Journal of Polymeric Materials and Polymeric Biomaterials</i> , 2020, , 1-11.                   | 1.8 | 0         |
| 80 | Preparation and characterization of new materials based on silk fibroin, chitosan and nanohydroxyapatite. <i>International Journal of Polymer Analysis and Characterization</i> , 2020, 25, 315-333.  | 0.9 | 9         |
| 81 | Bionic Silk Fibroin Film Promotes Tenogenic Differentiation of Tendon Stem/Progenitor Cells by Activating Focal Adhesion Kinase. <i>Stem Cells International</i> , 2020, 2020, 1-10.  | 1.2 | 6         |
| 82 | Sodium alginate/collagen composite multiscale porous scaffolds containing poly( $\mu$ -caprolactone) microspheres fabricated based on additive manufacturing technology. <i>RSC Advances</i> , 2020, 10, 39241-39250.   | 1.7 | 19        |
| 83 | Ultrasmall Superparamagnetic Iron Oxide Labeled Silk Fibroin/Hydroxyapatite Multifunctional Scaffold Loaded With Bone Marrow-Derived Mesenchymal Stem Cells for Bone Regeneration. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 697.           | 2.0 | 19        |
| 84 | Silk Fibroin 3D Microparticle Scaffolds with Bioactive Ceramics: Chemical, Mechanical, and Osteoregenerative Characteristics. <i>Advanced Engineering Materials</i> , 2020, 22, 2000458.  | 1.6 | 0         |
| 85 | Fibrous scaffolds for bone tissue engineering. , 2020, , 351-382.   |     | 3         |
| 86 | Cytochrome c adsorption on various poly-L-glutamic acid-containing calcium phosphate particles. <i>Open Ceramics</i> , 2020, 2, 100009.   | 1.0 | 1         |
| 87 | An insight into cell-laden 3D-printed constructs for bone tissue engineering. <i>Journal of Materials Chemistry B</i> , 2020, 8, 9836-9862.   | 2.9 | 21        |
| 88 | Characterization of Ground Silk Fibroin through Comparison of Nanofibroin and Higher Order Structures. <i>ACS Omega</i> , 2020, 5, 22786-22792.   | 1.6 | 29        |
| 89 | Stem Cell-Friendly Scaffold Biomaterials: Applications for Bone Tissue Engineering and Regenerative Medicine. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 598607.   | 2.0 | 57        |
| 90 | Dual-Anchoring Intercalation Structure and Enhanced Bioactivity of Poly(vinyl alcohol)/Graphene Oxide-Hydroxyapatite Nanocomposite Hydrogels as Artificial Cartilage Replacement. <i>Industrial &amp; Engineering Chemistry Research</i> , 2020, 59, 20359-20370. | 1.8 | 13        |

| #   | ARTICLE  | IF  | CITATIONS |
|-----|--|-----|-----------|
| 91  | Hydroxyapatite as a biomaterial â€“ a gift that keeps on giving. <i>Drug Development and Industrial Pharmacy</i> , 2020, 46, 1035-1062.  | 0.9 | 64        |
| 92  | Factors Influencing the Interactions in Gelatin/Hydroxyapatite Hybrid Materials. <i>Frontiers in Chemistry</i> , 2020, 8, 489.   | 1.8 | 6         |
| 93  | Osteoimmunomodulatory effects of biomaterial modification strategies on macrophage polarization and bone regeneration. <i>International Journal of Energy Production and Management</i> , 2020, 7, 233-245.  | 1.9 | 101       |
| 94  | Biomimetic bone regeneration using angle-ply collagen membrane-supported cell sheets subjected to mechanical conditioning. <i>Acta Biomaterialia</i> , 2020, 112, 75-86.   | 4.1 | 23        |
| 95  | A systematic assessment of hydroxyapatite nanoparticles used in the treatment of melanoma. <i>Nano Research</i> , 2020, 13, 2106-2117.   | 5.8 | 15        |
| 96  | Biodegradable Polymers for Biomedical Additive Manufacturing. <i>Applied Materials Today</i> , 2020, 20, 100700.   | 2.3 | 86        |
| 97  | Recent Advances in Silk Sericin/Calcium Phosphate Biomaterials. <i>Frontiers in Materials</i> , 2020, 7, .   | 1.2 | 27        |
| 98  | Advances in Electrospinning of Natural Biomaterials for Wound Dressing. <i>Journal of Nanomaterials</i> , 2020, 2020, 1-14.  | 1.5 | 46        |
| 99  | Scaffolds and coatings for bone regeneration. <i>Journal of Materials Science: Materials in Medicine</i> , 2020, 31, 27.   | 1.7 | 86        |
| 100 | Natural Sources and Applications of Demineralized Bone Matrix in the Field of Bone and Cartilage Tissue Engineering. <i>Advances in Experimental Medicine and Biology</i> , 2020, 1249, 3-14.  | 0.8 | 15        |
| 101 | Three-dimensional silk fibroin scaffolds enhance the bone formation and angiogenic differentiation of human amniotic mesenchymal stem cells: a biocompatibility analysis. <i>Acta Biochimica Et Biophysica Sinica</i> , 2020, 52, 590-602.                                   | 0.9 | 14        |
| 102 | The lamininâ€“211â€“derived PFECCIWN motif accelerates wound reepithelialization and increases phosphoâ€“FAKâ€“Tyr397 and Rac1â€“GTP levels in a rat excisional wound splinting model. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2020, 14, 1100-1112. | 1.3 | 0         |
| 103 | Effect of the nano/microscale structure of biomaterial scaffolds on bone regeneration. <i>International Journal of Oral Science</i> , 2020, 12, 6.   | 3.6 | 240       |
| 104 | Surface Characterization of Electro-Assisted Titanium Implants: A Multi-Technique Approach. <i>Materials</i> , 2020, 13, 705.  | 1.3 | 12        |
| 105 | 3Dâ€“Printing for the future of medicine. <i>Journal of 3D Printing in Medicine</i> , 2020, 4, 45-67.  | 1.0 | 5         |
| 106 | Recent advances in multifunctional hydroxyapatite coating by electrochemical deposition. <i>Journal of Materials Science</i> , 2020, 55, 6352-6374.  | 1.7 | 68        |
| 107 | Homogeneously dispersed composites of hydroxyapatite nanorods and poly(lactic acid) and their mechanical properties and crystallization behavior. <i>Composites Part A: Applied Science and Manufacturing</i> , 2020, 132, 105841.   | 3.8 | 18        |
| 108 | Degradation behaviors of three-dimensional hydroxyapatite fibrous scaffolds stabilized by different biodegradable polymers. <i>Ceramics International</i> , 2020, 46, 14124-14133.   | 2.3 | 14        |

| #   | ARTICLE   | IF   | CITATIONS |
|-----|---|------|-----------|
| 109 | Three-dimensional porous composite scaffolds for <i>in vitro</i> marrow microenvironment simulation to screen leukemia drug. <i>Biomedical Materials</i> (Bristol), 2020, 15, 035016.   | 1.7  | 6         |
| 110 | Functionalized silk fibroin nanofibers as drug carriers: Advantages and challenges. <i>Journal of Controlled Release</i> , 2020, 321, 324-347.  | 4.8  | 125       |
| 111 | Malleability and Pliability of Silk-Derived Electrodes for Efficient Deformable Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2020, 10, 1903357.   | 10.2 | 19        |
| 112 | Chitosan Derivatives and Their Application in Biomedicine. <i>International Journal of Molecular Sciences</i> , 2020, 21, 487.  | 1.8  | 467       |
| 113 | Polymer nanocomposites based on two-dimensional nanomaterials. , 2020, , 249-279.   |      | 7         |
| 114 | Dynamic mechanical analysis of polyethylene terephthalate/hydroxyapatite biocomposites for tissue engineering applications. <i>Journal of Materials Research and Technology</i> , 2020, 9, 2350-2356.                         | 2.6  | 22        |
| 115 | Surface functionalization of dual growth factor on hydroxyapatite-coated nanofibers for bone tissue engineering. <i>Applied Surface Science</i> , 2020, 520, 146311.  | 3.1  | 44        |
| 116 | Carbohydrate and protein based biopolymeric nanoparticles: Current status and biotechnological applications. <i>International Journal of Biological Macromolecules</i> , 2020, 154, 390-412.                                  | 3.6  | 103       |
| 117 | Protein-Based Hydroxyapatite Materials: Tuning Composition toward Biomedical Applications. <i>ACS Applied Bio Materials</i> , 2020, 3, 3441-3455.   | 2.3  | 20        |
| 118 | Bioinspired 3D porous human placental derived extracellular matrix/silk fibroin sponges for accelerated bone regeneration. <i>Materials Science and Engineering C</i> , 2020, 113, 110990.                                    | 3.8  | 20        |
| 119 | Sol-gel (template) synthesis of osteoplastic CaSiO <sub>3</sub> /HAp powder biocomposite: <i>in vitro</i> and <i>in vivo</i> biocompatibility assessment. <i>Powder Technology</i> , 2020, 367, 762-773.                      | 2.1  | 25        |
| 120 | Tanshinone IIA Delivery Silk Fibroin Scaffolds Significantly Enhance Articular Cartilage Defect Repairing <i>via</i> Promoting Cartilage Regeneration. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 21470-21480. | 4.0  | 35        |
| 121 | Silk fibroin/hydroxyapatite scaffold: a highly compatible material for bone regeneration. <i>Science and Technology of Advanced Materials</i> , 2020, 21, 242-266.  | 2.8  | 72        |
| 122 | Gradient Biomineralized Silk Fibroin Nanofibrous Scaffold with Osteochondral Inductivity for Integration of Tendon to Bone. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 841-851.                               | 2.6  | 24        |
| 123 | Bioactive and Biodegradable Polymer-Based Composites. , 2021, , 674-700.  |      | 1         |
| 124 | Effect of the silica nanoparticle size on the osteoinduction of biomineralized silk-silica nanocomposites. <i>Acta Biomaterialia</i> , 2021, 120, 203-212.  | 4.1  | 19        |
| 125 | Synergistic anti-inflammatory and osteogenic n-HA/resveratrol/chitosan composite microspheres for osteoporotic bone regeneration. <i>Bioactive Materials</i> , 2021, 6, 1255-1266.  | 8.6  | 82        |
| 126 | Synthesis and characterization of collagen/calcium phosphate scaffolds incorporating antibacterial agent for bone tissue engineering application. <i>Journal of Bioactive and Compatible Polymers</i> , 2021, 36, 29-43.      | 0.8  | 12        |



| #   | ARTICLE  | IF  | CITATIONS |
|-----|--|-----|-----------|
| 127 | Co-inspired hydroxyapatite-based scaffolds for vascularized bone regeneration. <i>Acta Biomaterialia</i> , 2021, 119, 419-431.   | 4.1 | 47        |
| 128 | Development of composite hydrogel based on hydroxyapatite mineralization over pectin reinforced with cellulose nanocrystal. <i>International Journal of Biological Macromolecules</i> , 2021, 167, 726-735.                      | 3.6 | 18        |
| 129 | Enhancement of mechanical and biological performance on hydroxyapatite/silk fibroin scaffolds facilitated by microwave-assisted mineralization strategy. <i>Colloids and Surfaces B: Biointerfaces</i> , 2021, 197, 111401.      | 2.5 | 19        |
| 130 | Influence of silk fibroin on the preparation of nanofibrous scaffolds for the effective use in osteoregenerative applications. <i>Journal of Drug Delivery Science and Technology</i> , 2021, 61, 102182.                        | 1.4 | 9         |
| 131 | Viscoelastic Silk Fibroin Hydrogels with Tunable Strength. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 636-647.   | 2.6 | 21        |
| 132 | Fiber orientation effect on fracture toughness of silk fiber-reinforced zeolite/HDPE composites. <i>FME Transactions</i> , 2021, 49, 128-134.  | 0.7 | 1         |
| 133 | Caffeic acid treatment augments the cell proliferation, differentiation, and calcium mineralization in the human osteoblast-like MG-63 cells. <i>Pharmacognosy Magazine</i> , 2021, 17, 38.                                      | 0.3 | 4         |
| 134 | Highly porous and elastic aerogel based on ultralong hydroxyapatite nanowires for high-performance bone regeneration and neovascularization. <i>Journal of Materials Chemistry B</i> , 2021, 9, 1277-1287.                       | 2.9 | 33        |
| 135 | Polymeric Biomaterials in Tissue Engineering: Retrospect and Prospects. , 2021, , 89-118.  |     | 1         |
| 136 | Preparation of Silk Fibroin/Cellulose Blend Films. <i>Journal of Physics: Conference Series</i> , 2021, 1790, 012067.  | 0.3 | 3         |
| 137 | Review of zirconia-based biomimetic scaffolds for bone tissue engineering. <i>Journal of Materials Science</i> , 2021, 56, 8309-8333.  | 1.7 | 19        |
| 138 | Role of Block Copolymers in Tissue Engineering Applications. <i>Cells Tissues Organs</i> , 2022, , 76-89.  | 1.3 | 5         |
| 139 | Crosslinking strategies for silk fibroin hydrogels: promising biomedical materials. <i>Biomedical Materials (Bristol)</i> , 2021, 16, 022004.  | 1.7 | 37        |
| 140 | Multifunctional Hydroxyapatite-based Nanoparticles for Biomedicine: Recent Progress in Drug Delivery and Local Controlled Release. <i>Current Mechanics and Advanced Materials</i> , 2021, 1, 3-16.                              | 0.1 | 6         |
| 141 | Novel natural spider silk embedded electrospun nanofiber mats for wound healing. <i>Materials Today Communications</i> , 2021, 26, 101942.   | 0.9 | 13        |
| 142 | Multivalent display of chemical signals on self-assembled peptide scaffolds. <i>Peptide Science</i> , 2021, 113, e24224.   | 1.0 | 8         |
| 143 | Osteoinductive potential and antibacterial characteristics of collagen coated iron oxide nanosphere containing strontium and hydroxyapatite in long term bone fractures. <i>Arabian Journal of Chemistry</i> , 2021, 14, 102984. | 2.3 | 10        |
| 144 | Biomimetic Silk Fibroin Hydrogels Strengthened by Silica Nanoparticles Distributed Nanofibers Facilitate Bone Repair. <i>Advanced Healthcare Materials</i> , 2021, 10, e2001646.   | 3.9 | 41        |

| #   | ARTICLE   | IF  | CITATIONS |
|-----|---|-----|-----------|
| 145 | Review of the Applications of Biomedical Compositions Containing Hydroxyapatite and Collagen Modified by Bioactive Components. <i>Materials</i> , 2021, 14, 2096.   | 1.3 | 25        |
| 146 | The prominent role of fully-controlled surface co-modification procedure using titanium nanotubes and silk fibroin nanofibers in the performance enhancement of Ti6Al4V implants. <i>Surface and Coatings Technology</i> , 2021, 412, 127001. | 2.2 | 12        |
| 147 | Effect of Cerium-Containing Hydroxyapatite in Bone Repair in Female Rats with Osteoporosis Induced by Ovariectomy. <i>Minerals (Basel, Switzerland)</i> , 2021, 11, 377.  | 0.8 | 13        |
| 148 | Conjugation of CMCS to silk fibroin for tuning mechanical and swelling behaviors of fibroin hydrogels. <i>European Polymer Journal</i> , 2021, 150, 110411.   | 2.6 | 13        |
| 149 | Induction of Bone Remodeling by Raloxifene-Doped Iron Oxide Functionalized with Hydroxyapatite to Accelerate Fracture Healing. <i>Journal of Biomedical Nanotechnology</i> , 2021, 17, 932-941.   | 0.5 | 9         |
| 150 | Recent Trends in the Development of Bone Regenerative Biomaterials. <i>Frontiers in Cell and Developmental Biology</i> , 2021, 9, 665813.   | 1.8 | 82        |
| 151 | Recent progress on biomedical applications of functionalized hollow hydroxyapatite microspheres. <i>Ceramics International</i> , 2021, 47, 13552-13571.   | 2.3 | 14        |
| 152 | Biodegradable ceramic matrix composites made from nanocrystalline hydroxyapatite and silk fibers via crymilling and uniaxial pressing. <i>Materials Letters</i> , 2021, 293, 129672.  | 1.3 | 5         |
| 153 | Synthesis of silver modified hydroxyapatite nanoparticle and evaluation of its biological properties <i>in vitro</i> for potential biomedical application. <i>Journal of the Ceramic Society of Japan</i> , 2021, 129, 443-452.               | 0.5 | 2         |
| 154 | A new cancellous bone material of silk fibroin/cellulose dual network composite aerogel reinforced by nano-hydroxyapatite filler. <i>International Journal of Biological Macromolecules</i> , 2021, 182, 286-297.                             | 3.6 | 23        |
| 155 | Biomechanical Properties of 3D-Printed Cervical Interbody Fusion Cage With Novel SF/nHAp Composites. <i>Frontiers in Materials</i> , 2021, 8, .   | 1.2 | 1         |
| 156 | 3D Printing and Bioprinting to Model Bone Cancer: The Role of Materials and Nanoscale Cues in Directing Cell Behavior. <i>Cancers</i> , 2021, 13, 4065.   | 1.7 | 18        |
| 157 | A single-cell transcriptome of mesenchymal stromal cells to fabricate bioactive hydroxyapatite materials for bone regeneration. <i>Bioactive Materials</i> , 2022, 9, 281-298.  | 8.6 | 12        |
| 158 | Chitin-hydroxyapatite-collagen composite scaffolds for bone regeneration. <i>International Journal of Biological Macromolecules</i> , 2021, 184, 170-180.   | 3.6 | 55        |
| 159 | Identification and location of sericin in silkworm with anti-sericin antibodies. <i>International Journal of Biological Macromolecules</i> , 2021, 184, 522-529.  | 3.6 | 4         |
| 160 | Synthesis techniques, characterization and mechanical properties of natural derived hydroxyapatite scaffolds for bone implants: a review. <i>SN Applied Sciences</i> , 2021, 3, 1.  | 1.5 | 25        |
| 161 | Silk Fibroin: A Promising Tool for Wound Healing and Skin Regeneration. <i>International Journal of Polymer Science</i> , 2021, 2021, 1-10.   | 1.2 | 21        |
| 162 | Mineralized collagen scaffold bone graft accelerate the osteogenic process of HASCs in proper concentration. <i>Regenerative Therapy</i> , 2021, 18, 161-167.   | 1.4 | 4         |

| #   | ARTICLE   | IF  | CITATIONS |
|-----|---|-----|-----------|
| 163 | Silk fibroin nanomaterials. , 2021, , 171-202.  |     | 0         |
| 164 | Natural biopolymeric nanomaterials for tissue engineering: overview and recent advances. , 2021, , 675-696.   |     | 1         |
| 165 | Biopolymer-based nanofilms: Utility and toxicity. , 2021, , 353-385.  |     | 1         |
| 166 | Silk Fibroin-based Soft Biomaterial/Scaffolds for Tissue Engineering Strategies. RSC Soft Matter, 2021, , 88-111.   | 0.2 | 1         |
| 167 | Sophisticated Biocomposite Scaffolds from Renewable Biomaterials for Bone Tissue Engineering. , 2019, , 17-31.  |     | 3         |
| 168 | Recent Achievements and Future Challenges in Nanoscience and Nanotechnology. Eurasian Chemico-Technological Journal, 2020, 22, 241.   | 0.3 | 10        |
| 169 | Chitosan in Biomedical Engineering: A Critical Review. Current Stem Cell Research and Therapy, 2019, 14, 93-116.  | 0.6 | 165       |
| 170 | Characterization of Electrospun Silk Fibroin Scaffolds for Bone Tissue Engineering: A Review. Tecno LÁ <sup>3</sup> gicas, 2020, 23, 33-51.   | 0.1 | 7         |
| 171 | Applications of Polymeric Composites in Bone Tissue Engineering and Jawbone Regeneration. Polymers, 2021, 13, 3429.   | 2.0 | 15        |
| 172 | Osteo-conductive hydrogel scaffolds of poly(vinylalcohol) with silk fibroin particles for bone augmentation: Structural formation and in vitro testing. Journal of Bioactive and Compatible Polymers, 0, , 088391152110557. | 0.8 | 0         |
| 173 | Calcium Phosphate Mineralization on Calcium Carbonate Particle Incorporated Silk-Fibroin Composites. Celal Bayar Universitesi Fen Bilimleri Dergisi, 2019, 15, 301-306.   | 0.1 | 1         |
| 174 | Biomimetic Inorganic Nanoparticle-Loaded Silk Fibroin-Based Coating with Enhanced Antibacterial and Osteogenic Abilities. ACS Omega, 2021, 6, 30027-30039.  | 1.6 | 5         |
| 175 | Early Recognition of the PCL/Fibrous Carbon Nanocomposites Interaction with Osteoblast-like Cells by Raman Spectroscopy. Nanomaterials, 2021, 11, 2890.   | 1.9 | 9         |
| 176 | Bionic Silk Fibroin Film Induces Morphological Changes and Differentiation of Tendon Stem/Progenitor Cells. Applied Bionics and Biomechanics, 2020, 2020, 1-10.   | 0.5 | 10        |
| 177 | Hydroxyapatite-based adsorbents: Applications in sequestering heavy metals and dyes. Journal of Environmental Management, 2022, 302, 113989.  | 3.8 | 44        |
| 178 | Research on the Application of Conductive Materials in Tissue Engineering. Hans Journal of Nanotechnology, 2021, 11, 278-287.   | 0.1 | 0         |
| 179 | Different types of biomaterials: Structure and application: A short review. Advanced Technologies, 2020, 9, 69-79.  | 0.2 | 7         |
| 180 | Silk: An Amazing Biomaterial for Future Medication. , 2020, , 39-49.  |     | 2         |

| #   | ARTICLE  | IF  | CITATIONS |
|-----|--|-----|-----------|
| 181 | Preparation and characterization of magnetic chitosan hydroxyapatite nanoparticles for protein drug delivery and antibacterial activity. <i>Journal of Materials Research</i> , 2021, 36, 4307-4316.   | 1.2 | 5         |
| 182 | Silk-based microcarriers: current developments and future perspectives. <i>IET Nanobiotechnology</i> , 2020, 14, 645-653.  | 1.9 | 11        |
| 183 | Biological macromolecules in tissue engineering. , 2022, , 381-392.  |     | 3         |
| 184 | Antibiotics-free wound dressing combating bacterial infections: A clean method using silkworm cocoon shell for preparation. <i>Materials Chemistry and Physics</i> , 2022, 277, 125484.  | 2.0 | 8         |
| 185 | Sandwich-like nanocomposite electrospun silk fibroin membrane to promote osteogenesis and antibacterial activities. <i>Applied Materials Today</i> , 2022, 26, 101273.   | 2.3 | 4         |
| 186 | Bio-inspired composite by hydroxyapatite mineralization on (bis)phosphonate-modified cellulose-alginate scaffold for bone tissue engineering. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2022, 635, 127958.                                   | 2.3 | 9         |
| 187 | Chitosan/ $\beta$ -TCP composites scaffolds coated with silk fibroin: a bone tissue engineering approach. <i>Biomedical Materials (Bristol)</i> , 2022, 17, 015003.  | 1.7 | 7         |
| 188 | Biomedical Applications of Silkworm ( Bombyx Mori ) Proteins in Regenerative Medicine (a Narrative) Tj ETQq1 1 0.784314 rgBT /Over   | 1.3 | 10        |
| 189 | A comparative insight into the mechanical properties, antibacterial potential, and cytotoxicity profile of nano-hydroxyapatite and nano-whitlockite-incorporated poly-L-lactic acid for bone tissue engineering. <i>Applied Nanoscience (Switzerland)</i> , 2022, 12, 47-68. | 1.6 | 5         |
| 190 | Graphene oxide-modified silk fibroin/nanohydroxyapatite scaffold loaded with urine-derived stem cells for immunomodulation and bone regeneration. <i>Stem Cell Research and Therapy</i> , 2021, 12, 591.   | 2.4 | 20        |
| 191 | Recent progress in surgical adhesives for biomedical applications. <i>Smart Materials in Medicine</i> , 2022, 3, 41-65.  | 3.7 | 32        |
| 192 | Injectable and self-healing nanocomposite hydrogel loading needle-like nano-hydroxyapatite and graphene oxide for synergistic tumour proliferation inhibition and photothermal therapy. <i>Journal of Materials Chemistry B</i> , 2021, 9, 9734-9743.                        | 2.9 | 13        |
| 193 | Effectiveness of bio-dispersant in homogenizing hydroxyapatite for proliferation and differentiation of osteoblast. <i>Journal of Colloid and Interface Science</i> , 2022, 611, 491-502.  | 5.0 | 14        |
| 194 | N-Acetyl-Cysteine-Loaded Biomimetic Nanofibrous Scaffold for Osteogenesis of Induced-Pluripotent-Stem-Cell-Derived Mesenchymal Stem Cells and Bone Regeneration. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 767641.                                     | 2.0 | 3         |
| 195 | Morphology-Based Deep Learning Approach for Predicting Osteogenic Differentiation. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 802794.   | 2.0 | 6         |
| 196 | Sustained release of naringin from silk-fibroin-nanohydroxyapatite scaffold for the enhancement of bone regeneration. <i>Materials Today Bio</i> , 2022, 13, 100206.   | 2.6 | 19        |
| 197 | Toughening robocast chitosan/biphasic calcium phosphate composite scaffolds with silk fibroin: Tuning printable inks and scaffold structure for bone regeneration. <i>Materials Science and Engineering C</i> , 2022, 134, 112690.   | 3.8 | 13        |
| 198 | A review of recent advances on osteogenic applications of Silk fibroin as a potential bio-scaffold in bone tissue engineering. <i>International Journal of Polymeric Materials and Polymeric Biomaterials</i> , 0, , 1-16.   | 1.8 | 1         |

| #   | ARTICLE  | IF  | CITATIONS |
|-----|--|-----|-----------|
| 199 | Recent developments of biomaterial scaffolds and regenerative approaches for craniomaxillofacial bone tissue engineering. <i>Journal of Polymer Research</i> , 2022, 29, 1.  | 1.2 | 15        |
| 200 | Bio-nanocomposites in Biomedical Application. <i>Composites Science and Technology</i> , 2022, , 275-291.  | 0.4 | 2         |
| 202 | Fibrous Aerogels for Solar Vapor Generation. <i>Frontiers in Chemistry</i> , 2022, 10, 843070.   | 1.8 | 5         |
| 203 | Biological, physical, and chemical properties of wallostonite-added $\hat{2}$ -SiAlON ceramics. <i>Ceramics International</i> , 2022, , .  | 2.3 | 0         |
| 204 | The fabrication of multifunctional sodium alginate scaffold incorporating ibuprofen-loaded modified PLLA microspheres based on cryogenic 3D printing. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2022, 33, 1269-1288.                   | 1.9 | 3         |
| 205 | High Anticorrosion Properties due to Electron Spin Polarization of Hydroxyapatite with Point Defects. <i>Industrial &amp; Engineering Chemistry Research</i> , 2022, 61, 4179-4190.  | 1.8 | 2         |
| 206 | Silk-based bioinspired structural and functional materials. <i>IScience</i> , 2022, 25, 103940.  | 1.9 | 9         |
| 207 | Bioinspired Silk Fibroin-Based Composite Grafts as Bone Tunnel Fillers for Anterior Cruciate Ligament Reconstruction. <i>Pharmaceutics</i> , 2022, 14, 697.  | 2.0 | 9         |
| 208 | Biomimetic Mineralized Hydroxyapatite Nanofiber-Incorporated Methacrylated Gelatin Hydrogel with Improved Mechanical and Osteoinductive Performances for Bone Regeneration. <i>International Journal of Nanomedicine</i> , 2022, Volume 17, 1511-1529. | 3.3 | 24        |
| 209 | Silk fibroin microfibril-reinforced polycaprolactone composites with enhanced biodegradation and biological characteristics. <i>Journal of Biomedical Materials Research - Part A</i> , 2022, , .  | 2.1 | 5         |
| 210 | Effect of glutaraldehyde and calcium chloride as different crosslinking agents on the characteristics of chitosan/cellulose nanocrystals scaffold. <i>International Journal of Biological Macromolecules</i> , 2022, 208, 912-924.                     | 3.6 | 29        |
| 211 | Injectable composite hydrogel based on carbon particles for photothermal therapy of bone tumor and bone regeneration. <i>Journal of Materials Science and Technology</i> , 2022, 118, 64-72.   | 5.6 | 16        |
| 212 | Free or fixed state of nHAP differentially regulates hBMSC morphology and osteogenesis through the valve role of ITGA7. <i>Bioactive Materials</i> , 2022, 18, 539-551.  | 8.6 | 6         |
| 213 | A General Protein Unfolding-Chemical Coupling Strategy for Pure Protein Hydrogels with Mechanically Strong and Multifunctional Properties. <i>Advanced Science</i> , 2022, 9, e2102557.  | 5.6 | 40        |
| 214 | Mechanical Properties of Differently Nanostructured and High-Pressure Compressed Hydroxyapatite-Based Materials for Bone Tissue Regeneration. <i>Minerals (Basel, Switzerland)</i> , 2021, 11, 1390.   | 0.8 | 8         |
| 215 | Silk-Based Bioengineered Diaphyseal Cortical Bone Unit Enclosing an Implantable Bone Marrow toward Atrophic Nonunion Grafting. <i>Advanced Healthcare Materials</i> , 2022, 11, e2102031.  | 3.9 | 11        |
| 216 | Robust bioactive protein-based screws with dual crosslinked network for internal bone fixation. <i>Composites Part B: Engineering</i> , 2022, 238, 109884.   | 5.9 | 6         |
| 218 | Ancient Fibrous Materials from Silkworm and Spider Silks: Biomechanical Patterns. <i>SSRN Electronic Journal</i> , 0, , .  | 0.4 | 0         |

| #   | ARTICLE   | IF  | CITATIONS |
|-----|---|-----|-----------|
| 219 | Biomimetic hydroxyapatite-chitosan nanoparticles deliver the erythromycin for improved antibacterial activity. <i>Journal of Drug Delivery Science and Technology</i> , 2022, 72, 103374.   | 1.4 | 3         |
| 220 | Multilayer MXene Heterostructures and Nanohybrids for Multifunctional Applications: A Review. , 2022, 4, 1174-1206.   |     | 25        |
| 221 | A review of current advancements for wound healing: Biomaterial applications and medical devices. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2022, 110, 2542-2573.   | 1.6 | 52        |
| 222 | A Critical Review of Additive Manufacturing Techniques and Associated Biomaterials Used in Bone Tissue Engineering. <i>Polymers</i> , 2022, 14, 2117.   | 2.0 | 25        |
| 223 | Synchronously promoted mechanical and biotribological properties of carbon fiber composites by constructing Si <sub>3</sub> N <sub>4</sub> nanowires@pyrolytic carbon intertwined network. <i>Ceramics International</i> , 2022, 48, 27462-27471. | 2.3 | 1         |
| 224 | Membranes for the life sciences and their future roles in medicine. <i>Chinese Journal of Chemical Engineering</i> , 2022, 49, 1-20.  | 1.7 | 5         |
| 225 | Formation of poly( $\epsilon$ -caprolactone)-embedded bioactive nanoparticles/collagen hierarchical scaffolds with the designed and customized porous structures. <i>Journal of Applied Polymer Science</i> , 2022, 139, .                        | 1.3 | 4         |
| 226 | Proportion-dependent osteogenic activity of electrospun nano-hydroxyapatite/poly(lactic acid) fiber membrane in vitro and in vivo. <i>Materials and Design</i> , 2022, 219, 110834.   | 3.3 | 6         |
| 227 | Zinc substituted hydroxyapatite/silk fiber/methylcellulose nanocomposite for bone tissue engineering applications. <i>International Journal of Biological Macromolecules</i> , 2022, 214, 324-337.  | 3.6 | 5         |
| 228 | Molecular simulations of the interfacial properties in silk-hydroxyapatite composites. <i>Nanoscale</i> , 2022, 14, 10929-10939.  | 2.8 | 6         |
| 229 | Dual drug delivery system of teicoplanin and phenamil based on pH-sensitive silk fibroin/sodium alginate hydrogel scaffold for treating chronic bone infection. , 2022, 139, 213032.  |     | 23        |
| 230 | Functionalization of Electrospun Nanofiber for Bone Tissue Engineering. <i>Polymers</i> , 2022, 14, 2940.   | 2.0 | 9         |
| 231 | Extrusion Printed Silk Fibroin Scaffolds with Post-mineralized Calcium Phosphate as a Bone Structural Material. <i>International Journal of Bioprinting</i> , 2022, 8, 596.   | 1.7 | 2         |
| 232 | Black phosphorous nanomaterials as a new paradigm for postoperative tumor treatment regimens. <i>Journal of Nanobiotechnology</i> , 2022, 20, .   | 4.2 | 5         |
| 234 | $\epsilon$ -Poly-l-lysine-modified natural silk fiber membrane wound dressings with improved antimicrobial properties. <i>International Journal of Biological Macromolecules</i> , 2022, 220, 1049-1059.  | 3.6 | 9         |
| 235 | 3D printed scaffold for repairing bone defects in apical periodontitis. <i>BMC Oral Health</i> , 2022, 22, .  | 0.8 | 5         |
| 236 | A study on in vitro and in vivo bioactivity of silk fibroin / nano-hydroxyapatite / graphene oxide composite scaffolds with directional channels. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2022, 652, 129886.    | 2.3 | 8         |
| 237 | Silkworm spinning inspired 3D printing toward a high strength scaffold for bone regeneration. <i>Journal of Materials Chemistry B</i> , 2022, 10, 6946-6957.  | 2.9 | 3         |

| #   | ARTICLE   | IF  | CITATIONS |
|-----|---|-----|-----------|
| 238 | Porous biomaterials for tissue engineering: a review. <i>Journal of Materials Chemistry B</i> , 2022, 10, 8111-8165.  | 2.9 | 27        |
| 239 | Chitosan-Based Scaffolds for Facilitated Endogenous Bone Re-Generation. <i>Pharmaceutics</i> , 2022, 15, 1023.  | 1.7 | 8         |
| 240 | Ancient fibrous biomaterials from silkworm protein fibroin and spider silk blends: Biomechanical patterns. <i>Acta Biomaterialia</i> , 2022, 153, 38-67.  | 4.1 | 17        |
| 241 | Scaffolds for bone-tissue engineering. <i>Matter</i> , 2022, 5, 2722-2759.  | 5.0 | 25        |
| 242 | Enhanced osteogenesis and angiogenesis of biphasic calcium phosphate scaffold by synergistic effect of silk fibroin coating and zinc doping. <i>Journal of Biomaterials Applications</i> , 2023, 37, 1007-1017.                                       | 1.2 | 1         |
| 243 | Core-Shell Structured Porous Calcium Phosphate Bioceramic Spheres for Enhanced Bone Regeneration. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 47491-47506.  | 4.0 | 8         |
| 244 | Novel Approaches and Biomaterials for Bone Tissue Engineering: A Focus on Silk Fibroin. <i>Materials</i> , 2022, 15, 6952.  | 1.3 | 9         |
| 245 | Nano-Based Drug Delivery Systems for Periodontal Tissue Regeneration. <i>Pharmaceutics</i> , 2022, 14, 2250.  | 2.0 | 9         |
| 246 | Biocompatible Scaffold Based on Silk Fibroin for Tissue Engineering Applications. <i>Journal of the Institution of Engineers (India): Series C</i> , 2023, 104, 201-217.  | 0.7 | 1         |
| 247 | Biomimetic Calcium Phosphate Coated Macro-Microporous Poly( $\mu$ -caprolactone)/Silk Fibroin (PCL/SF) Scaffold for Bone Tissue Engineering. <i>Macromolecular Research</i> , 0, , .  | 1.0 | 0         |
| 248 | Surface-fill H <sub>2</sub> S-releasing silk fibroin hydrogel for brain repair through the repression of neuronal pyroptosis. <i>Acta Biomaterialia</i> , 2022, 154, 259-274.   | 4.1 | 18        |
| 249 | Recent advances in regenerative biomaterials. <i>Regenerative Biomaterials</i> , 2022, 9, .   | 2.4 | 54        |
| 250 | Review on Recent Developments in Bioinspired-Materials for Sustainable Energy and Environmental Applications. <i>Sustainability</i> , 2022, 14, 16931.  | 1.6 | 5         |
| 251 | Regenerated silk fibroin loaded with natural additives: a sustainable approach towards health care. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2023, 34, 1453-1490.  | 1.9 | 6         |
| 252 | Strontium-doped mesoporous bioactive glass microspheres developed for drug delivering and enhancing the bioactivity of polylactic acid scaffolds. <i>International Journal of Polymeric Materials and Polymeric Biomaterials</i> , 2024, 73, 279-291. | 1.8 | 0         |
| 253 | Harnessing electromagnetic fields to assist bone tissue engineering. <i>Stem Cell Research and Therapy</i> , 2023, 14, .  | 2.4 | 10        |
| 254 | A study on coating of collagen-containing hydroxyapatite on titanium using electrochemical deposition method. <i>Korean Journal of Dental Materials</i> , 2022, 49, 199-211.  | 0.2 | 0         |
| 255 | The Cytotoxicity of Carbon Nanotubes and Hydroxyapatite, and Graphene and Hydroxyapatite Nanocomposites against Breast Cancer Cells. <i>Nanomaterials</i> , 2023, 13, 556.  | 1.9 | 1         |

| #   | ARTICLE  | IF  | CITATIONS |
|-----|--|-----|-----------|
| 256 | Silk-Based Biomaterials for Designing Bioinspired Microarchitecture for Various Biomedical Applications. <i>Biomimetics</i> , 2023, 8, 55.   | 1.5 | 8         |
| 257 | A Comprehensive Review on Silk Fibroin as a Persuasive Biomaterial for Bone Tissue Engineering. <i>International Journal of Molecular Sciences</i> , 2023, 24, 2660.   | 1.8 | 6         |
| 258 | Chitosan Nanocomposites as Scaffolds for Bone Tissue Regeneration. <i>Biological and Medical Physics Series</i> , 2023, , 377-394.   | 0.3 | 3         |
| 259 | Bioinspired advanced nanomaterials for infection control and promotion of bone growth. , 2023, , 161-187.  |     | 0         |
| 260 | Biodegradable silk fibroin scaffold doped with mineralized collagen induces bone regeneration in rat cranial defects. <i>International Journal of Biological Macromolecules</i> , 2023, 235, 123861.           | 3.6 | 5         |
| 261 | Gelatin hydrogel reinforced with mussel-inspired polydopamine-functionalized nanohydroxyapatite for bone regeneration. <i>International Journal of Biological Macromolecules</i> , 2023, 240, 124287.          | 3.6 | 8         |
| 262 | Augmented Repair and Regeneration of Critical Size Rabbit Calvaria Defects with 3D Printed Silk Fibroin Microfibers Reinforced PCL Composite Scaffolds. , 2023, 1, 942-955.                                    |     | 0         |
| 263 | Biopolymer-based composites for tissue engineering applications: A basis for future opportunities. <i>Composites Part B: Engineering</i> , 2023, 258, 110701.  | 5.9 | 44        |
| 264 | Fabrication and <i>In Vitro</i> Drug Delivery Evaluation of Cephalexin Monohydrate-Loaded PLA:PVA/HAP:TiO <sub>2</sub> Fibrous Scaffolds for Bone Regeneration. <i>ACS Omega</i> , 2023, 8, 5017-5032.         | 1.6 | 7         |
| 265 | A Review of 3D Polymeric Scaffolds for Bone Tissue Engineering: Principles, Fabrication Techniques, Immunomodulatory Roles, and Challenges. <i>Bioengineering</i> , 2023, 10, 204.                             | 1.6 | 19        |
| 266 | Biomimetic-inspired mineralized hydrogel promotes the repair and regeneration of dentin/bone hard tissue. <i>Npj Regenerative Medicine</i> , 2023, 8, .  | 2.5 | 6         |
| 267 | Finite Element Analysis of Mechanical Properties of Different Topologies of Bone Scaffold Biomimetic Materials. <i>Modeling and Simulation</i> , 2023, 12, 668-676.  | 0.0 | 0         |
| 268 | Hydroxyapatite materials-synthesis routes, mechanical behavior, theoretical insights, and artificial intelligence models: a review. <i>Journal of the Australian Ceramic Society</i> , 2023, 59, 565-596.      | 1.1 | 2         |
| 269 | Green chemistry fabrication of durable antimicrobial peptide-immobilized silk fibroin films for accelerated full-thickness wound healing. <i>Materials Today Chemistry</i> , 2023, 29, 101468.                 | 1.7 | 6         |
| 270 | Phosphoserine-loaded chitosan membranes promote bone regeneration by activating endogenous stem cells. <i>Frontiers in Bioengineering and Biotechnology</i> , 0, 11, .   | 2.0 | 0         |
| 271 | Bone regeneration by hydroxyapatite-gelatin nanocomposites. <i>Emergent Materials</i> , 2023, 6, 583-593.  | 3.2 | 1         |
| 272 | Sericin/Nano-Hydroxyapatite Hydrogels Based on Graphene Oxide for Effective Bone Regeneration via Immunomodulation and Osteoinduction. <i>International Journal of Nanomedicine</i> , 0, Volume 18, 1875-1895. | 3.3 | 4         |
| 291 | Bio-inspired Protective Composite Structures for Automotive Applications. <i>SpringerBriefs in Materials</i> , 2023, , 87-115.   | 0.1 | 0         |



| #   | ARTICLE   | IF  | CITATIONS |
|-----|---|-----|-----------|
| 295 | Nanostructures and biomaterials based on silk polymer for medical diagnostic and therapeutic applications. Polymer Bulletin, 0, , . | 1.7 | 0         |
| 309 | Trends in silk biomaterials. , 2024, , 9-39.  |     | 0         |
| 310 | Recent trends in controlled drug delivery based on silk platforms. , 2024, , 417-444.   |     | 0         |
| 312 | Role and importance of hydroxyapatite in the healthcare sector. , 2024, , 159-207.  |     | 0         |
| 314 | Functionalized nanoceramics. , 2024, , 721-752.   |     | 0         |