Alginate composites for bone tissue engineering: a review

DOI: 10.1016/j.ijbiomac.2014.07.008
International Journal of Biological Macromolecules, 2015, 72, 269-81.

#	Paper	IF	Citations
609	Alginate/Hydroxyapatite Bone Scaffolds with Isotropic or Anisotropic Pore Structure: Material Properties and Biological Behavior. **2015**, 300, 989-1000		23
608	Clinical applications of naturally derived biopolymer-based scaffolds for regenerative medicine. **2015**, 43, 657-80		86
607	Seaweed polysaccharides and their potential biomedical applications. **2015**, 67, 381-390		97
606	Controlled mechanical and swelling properties of urethane acrylate grafted calcium alginate hydrogels. *International Journal of Biological Macromolecules*, **2015**, 81, 11-6	7.9	12
605	Chondrogenically primed mesenchymal stem cell-seeded alginate hydrogels promote early bone formation in critically-sized defects. **2015**, 72, 464-472		26
604	Alginate based polyurethanes: A review of recent advances and perspective. *International Journal of Biological Macromolecules*, **2015**, 79, 377-87	7.9	86
603	Design of a thermosensitive bioglass/agarose-alginate composite hydrogel for chronic wound healing. **2015**, 3, 8856-8864		70
602	Biopolymers in Medical Implants. **2015**, 311-348		3
601	Modulation of Bone-Specific Tissue Regeneration by Incorporating Bone Morphogenetic Protein and Controlling the Shell Thickness of Silk Fibroin/Chitosan/Nanohydroxyapatite Core-Shell Nanofibrous Membranes. **2015**, 7, 21170-81		74
600	Utilization of Compounds of Phosphorus. **2016**,		
599	Composite Coatings Based on Renewable Resources Synthesized by Advanced Laser Techniques. **2016**,		1
598	Alginate Biosynthesis inAzotobacter vinelandii: Overview of Molecular Mechanisms in Connection with the Oxygen Availability. **2016**, 2016, 1-12		13
597	Biocompatibility Evaluation of Titanium Produced by Laser Rapid Forming. **2016**, 25, 413-420		
596	The preosteoblast response of electrospinning PLGA/PCL nanofibers: effects of biomimetic architecture and collagen I. **2016**, 11, 4157-71		26
595	Seaweed Polysaccharide-Based Nanoparticles: Preparation and Applications for Drug Delivery. **2016**, 8,		101
594	Fabrication of Gelatin/PCL Electrospun Fiber Mat with Bone Powder and the Study of Its Biocompatibility. **2016**, 7,		31
593	Preclinical Cancer Models with the Potential to Predict Clinical Response. **2016**, 97-122		

592	Mesenchymal stem cells and alginate microcarriers for craniofacial bone tissue engineering: A review. **2016**, 104, 1276-84	37
591	The performance of bone tissue engineering scaffolds in in vivo animal models: A systematic review. **2016**, 31, 625-636	26
590	Tackling Mg alloy corrosion by natural polymer coatings-A review. **2016**, 104, 2628-41	55
589	In situ microscopy reveals reversible cell wall swelling in kelp sieve tubes: one mechanism for turgor generation and flow control?. **2016**, 39, 1727-36	13
588	Early cellular responses of BMSCs genetically modified with bFGF/BMP2 co-cultured with ligament fibroblasts in a three-dimensional model in vitro. **2016**, 38, 1578-1586	7
587	Immobilization of salvianolic acid B-loaded chitosan microspheres distributed three-dimensionally and homogeneously on the porous surface of hydroxyapatite scaffolds. **2016**, 11, 055014	8
586	The Superficial Mechanical and Physical Properties of Matrix Microenvironment as Stem Cell Fate Regulator. **2016**, 23-43	7
585	A new insight to the effect of calcium concentration on gelation process and physical properties of alginate films. **2016**, 51, 5791-5801	25
584	A bird's eye view on the use of electrospun nanofibrous scaffolds for bone tissue engineering: Current state-of-the-art, emerging directions and future trends. **2016**, 12, 2181-2200	84
583	Electrical impedance spectroscopy - a potential method for the study and monitoring of a bone critical-size defect healing process treated with bone tissue engineering and regenerative medicine approaches. **2016**, 4, 2757-2767	16
582	A review of chitosan and its derivatives in bone tissue engineering. **2016**, 151, 172-188	363
581	Alginate dialdehyde (AD)-crosslinked casein films: synthesis, characterization and water absorption behavior. **2016**, 19, 406-419	12
580	The effect of fiber size and pore size on cell proliferation and infiltration in PLLA scaffolds on bone tissue engineering. **2016**, 30, 1545-51	44
579	Prolongation of the degradation period and improvement of the angiogenesis of zein porous scaffolds in vivo. **2016**, 27, 92	3
578	Poly (lactic acid)-based biomaterials for orthopaedic regenerative engineering. **2016**, 107, 247-276	234
577	Magnesium Phosphate Cement Systems for Hard Tissue Applications: A Review. **2016**, 2, 1067-1083	94
576	Non toxic, antibacterial, biodegradable hydrogels with pH-stimuli sensitivity: Investigation of swelling parameters. **2016**, 148, 206-15	31
575	Fabrication and characterization of bioactive glass/alginate composite scaffolds by a self-crosslinking processing for bone regeneration. **2016**, 6, 91201-91208	24

574	Preparation and characterization of foamy poly(γ-benzyl-L-glutamate-co-L-phenylalanine)/bioglass composite scaffolds for bone tissue engineering. **2016**, 6, 73699-73708		7
573	In Vitro and In Vivo Evaluation of Composite Scaffolds for Bone Tissue Engineering. **2016**, 615-636		1
572	Rheological evaluations and in vitro studies of injectable bioactive glass-polycaprolactone-sodium alginate composites. **2016**, 27, 137		12
571	Alginate Bead Based Hexagonal Close Packed 3D Implant for Bone Tissue Engineering. **2016**, 8, 32132-32145		23
570	Structure and properties of various hybrids fabricated by silk nanofibrils and nanohydroxyapatite. **2016**, 8, 20096-20102		28
569	3D Printed scaffolds with bactericidal activity aimed for bone tissue regeneration. *International Journal of Biological Macromolecules*, **2016**, 93, 1432-1445	7.9	27
568	Collagen–Bioceramic Smart Composites. **2016**, 301-324		1
567	Peptide-incorporated 3D porous alginate scaffolds with enhanced osteogenesis for bone tissue engineering. **2016**, 143, 243-251		44
566	Comparison of bone regeneration in alveolar bone of dogs on mineralized collagen grafts with two composition ratios of nano-hydroxyapatite and collagen. **2016**, 3, 33-40		24
565	Proving the suitability of magnetoelectric stimuli for tissue engineering applications. **2016**, 140, 430-436		99
564	Electrodeposited conductive polymers for controlled drug release: polypyrrole. **2016**, 20, 839-859		49
563	A review of hydrogel-based composites for biomedical applications: enhancement of hydrogel properties by addition of rigid inorganic fillers. **2016**, 51, 271-310		173
562	Porous nanoplate-like hydroxyapatite–sodium alginate nanocomposite scaffolds for potential bone tissue engineering. **2017**, 32, 78-84		12
561	Electrodiffusion versus Chemical Diffusion in Alkali Calcium Phosphate Glasses: Implication of Structural Changes. **2017**, 121, 3203-3211		8
560	Antimicrobial and anticancer activities of porous chitosan-alginate biosynthesized silver nanoparticles. *International Journal of Biological Macromolecules*, **2017**, 98, 515-525	7.9	103
559	Synthesis and characterization of polyvinyl alcohol- carboxymethyl tamarind gum based composite films. **2017**, 165, 159-168		25
558	Synthesis, Structural, and Adsorption Properties and Thermal Stability of Nanohydroxyapatite/Polysaccharide Composites. **2017**, 12, 155		33
557	Redox- and light-responsive alginate nanoparticles as effective drug carriers for combinational anticancer therapy. **2017**, 9, 3304-3314		36

556	The effect of increasing the pore size of nanofibrous scaffolds on the osteogenic cell culture using a combination of sacrificial agent electrospinning and ultrasonication. **2017**, 105, 1887-1899		21
555	Bio-based materials with novel characteristics for tissue engineering applications - A review. *International Journal of Biological Macromolecules*, **2017**, 98, 837-846	7.9	115
554	Targeted antigen delivery to dendritic cell via functionalized alginate nanoparticles for cancer immunotherapy. **2017**, 256, 170-181		97
553	Hierarchical bioceramic scaffold for tissue engineering: A review. **2017**, 66, 877-890		3
552	Seaweed based sustainable films and composites for food and pharmaceutical applications: A review. **2017**, 77, 353-362		90
551	Preparation and Characterization of Biopolymers Chitosan/Alginate/Gelatin Gel Spheres Crosslinked by Glutaraldehyde. **2017**, 56, 359-372		23
550	Local controlled release of simvastatin and PDGF from core/shell microspheres promotes bone regeneration in vivo. **2017**, 7, 19621-19629		4
549	Cellularizing hydrogel-based scaffolds to repair bone tissue: How to create a physiologically relevant micro-environment?. **2017**, 8, 2041731417712073		52
548	Injectable hydrogels for cartilage and bone tissue engineering. **2017**, 5, 17014		578
547	Nanotechnology towards prevention of anaemia and osteoporosis: from concept to market. **2017**, 31, 863-879		36
546	Selective monophosphorylation of chitosan via phosphorus oxychloride. **2017**, 8, 2552-2558		7
545	Alginate microparticles as oral colon drug delivery device: A review. **2017**, 168, 32-43		219
544	Glucose-Triggered Insulin Release from Fe -Cross-linked Alginate Hydrogel: Experimental Study and Theoretical Modeling. **2017**, 18, 1541-1551		15
543	Monodisperse selenium-substituted hydroxyapatite: Controllable synthesis and biocompatibility. **2017**, 73, 596-602		43
542	Synthesis and Applications of Carbohydrate-Based Polyurethanes. **2017**, 1-43		3
541	Trilayer Three-Dimensional Hydrogel Composite Scaffold Containing Encapsulated Adipose-Derived Stem Cells Promotes Bladder Reconstruction via SDF-1/CXCR4 Pathway. **2017**, 9, 38230-38241		16
540	Nanocomposite particles with improved microstructure for 3D culture systems and bone regeneration. **2017**, 28, 153		3
539	In situ repair of bone and cartilage defects using 3D scanning and 3D printing. **2017**, 7, 9416		80

538	3D printed TCP-based scaffold incorporating VEGF-loaded PLGA microspheres for craniofacial tissue engineering. **2017**, 33, 1205-1216	51
537	Alginate-based hydrogels functionalised at the nanoscale using layer-by-layer assembly for potential cartilage repair. **2017**, 5, 1922-1931	19
536	Nanocomposite Biomaterials. **2017**, 299-320	
535	Three-Dimensional Bioprinting of Polycaprolactone Reinforced Gene Activated Bioinks for Bone Tissue Engineering. **2017**, 23, 891-900	61
534	Biodegradable Polymers for Bone Tissue Engineering. **2017**, 47-74	7
533	Preparation and characterization of nanoparticle reinforced alginate fibers with high porosity for potential wound dressing application. **2017**, 7, 39349-39358	18
532	Simultaneous Measurements of Geometric and Viscoelastic Properties of Hydrogel Microbeads Using Continuous-Flow Microfluidics with Embedded Electrodes. **2017**, 13, 1702821	13
531	Preparation and properties of a thin membrane based on sodium alginate grafting acrylonitrile. **2017**, 7, 50626-50633	7
530	Controlled production of sub-millimeter liquid core hydrogel capsules for parallelized 3D cell culture. **2016**, 17, 110-119	36
529	Modulating Zn(OH)2 Rods by Marine Alginate for Templates of Hybrid Tubes with Catalytic and Antimicrobial Properties. **2017**, 5, 862-868	12
528	Biodegradable ceramic-polymer composites for biomedical applications: A review. **2017**, 71, 1175-1191	116
527	Biopolymers for Biomimetic Processing of Metal Oxides. **2017**, 135-189	1
526	Preparation of oxidized sodium alginate with different molecular weights and its application for crosslinking collagen fiber. **2017**, 157, 1650-1656	74
525	Laponite as a rheology modifier of alginate solutions: Physical gelation and aging evolution. **2017**, 157, 1-8	48
524	Preparation and Characterization of HAp Coated Chitosan-Alginate PEC Porous Scaffold for Bone Tissue Engineering. **2017**, 376, 1600205	6
523	Alginate in Bone Tissue Engineering. **2017**, 349-368	1
522	Introduction to Seaweed Polysaccharides. **2017**, 1-9	7
521	Usage of Seaweed Polysaccharides as Nutraceuticals. **2017**, 341-348	5

520	Cytotoxicity, Bactericidal, and Antioxidant Activity of Sodium Alginate Hydrosols Treated with Direct Electric Current. **2017**, 18,		15
519	Silk Fibroin-Alginate-Hydroxyapatite Composite Particles in Bone Tissue Engineering Applications In Vivo. **2017**, 18,		43
518	A Review of Current Research into the Biogenic Synthesis of Metal and Metal Oxide Nanoparticles via Marine Algae and Seagrasses. **2017**, 2017, 1-15		99
517	Magnesium Oxide Nanoparticles Reinforced Electrospun Alginate-Based Nanofibrous Scaffolds with Improved Physical Properties. **2017**, 2017, 1391298		34
516	Smart Carriers and Nanohealers: A Nanomedical Insight on Natural Polymers. **2017**, 10,		30
515	Optimized Preparation of Carboxymethyl Chitosan/Sodium Alginate Hemostatic Microcapsule. **2017**, 281, 012012		1
514	Production of Composite Scaffold Containing Silk Fibroin, Chitosan, and Gelatin for 3D Cell Culture and Bone Tissue Regeneration. **2017**, 23, 5311-5320		27
513	Fibers Obtained from Alginate, Chitosan and Hybrid Used in the Development of Scaffolds. **2017**, 20, 377-386		22
512	Development of sodium alginate/PVA antibacterial nanofibers by the incorporation of essential oils. **2018**, 5, 035007		45
511	In vitro characterization of 3D printed scaffolds aimed at bone tissue regeneration. **2018**, 165, 207-218		40
510	In Situ Cross-Linkable Polymer Systems and Composites for Osteochondral Regeneration. **2018**, 1058, 327-355		3
509	Synthetic Hydrogels with Covalently Incorporated Saccharides Studied for Biomedical Applications 15 Year Overview. **2018**, 58, 537-586		13
508	Vancomycin incorporated chitosan/gelatin coatings coupled with TiO-SrHAP surface modified cp-titanium for osteomyelitis treatment. *International Journal of Biological Macromolecules*, **2018**, 110, 197-205	7.9	19
507	Visible Light-Induced Hydrogelation of an Alginate Derivative and Application to Stereolithographic Bioprinting Using a Visible Light Projector and Acid Red. **2018**, 19, 672-679		47
506	Chitosan: An undisputed bio-fabrication material for tissue engineering and bio-sensing applications. *International Journal of Biological Macromolecules*, **2018**, 110, 110-123	7.9	111
505	Multifunctional Copper-Containing Carboxymethyl Chitosan/Alginate Scaffolds for Eradicating Clinical Bacterial Infection and Promoting Bone Formation. **2018**, 10, 127-138		88
504	A 3D bioprinted in situ conjugated-co-fabricated scaffold for potential bone tissue engineering applications. **2018**, 106, 1311-1321		26
503	Fabrication of Amyloid Curli Fibers-Alginate Nanocomposite Hydrogels with Enhanced Stiffness. **2018**, 4, 2100-2105		17

502	Osteochondral Tissue Engineering. **2018**,		
501	Bioactive glass sol as a dual function additive for chitosan-alginate hybrid scaffold. **2018**, 29, 395-398		10
500	Tissue Engineering Biomaterials. **2018**, 1-47		1
499	Porous stable poly(lactic acid)/ethyl cellulose/hydroxyapatite composite scaffolds prepared by a combined method for bone regeneration. **2018**, 180, 104-111		75
498	Sugar-based gene delivery systems: Current knowledge and new perspectives. **2018**, 181, 1180-1193		26
497	Alginic acid: A mild and renewable bifunctional heterogeneous biopolymeric organocatalyst for efficient and facile synthesis of polyhydroquinolines. *International Journal of Biological Macromolecules*, **2018**, 108, 1273-1280	7.9	33
496	Chemical Functionalization of Polysaccharides-Towards Biocompatible Hydrogels for Biomedical Applications. **2018**, 24, 1231-1240		59
495	Effects of physiological aging factor on bone tissue engineering repair based on fetal BMSCs. **2018**, 16, 324		2
494	Bone and Cartilage Tissue Engineering. **2018**, 345-345		
493	Development of a micro-tissue-mediated injectable bone tissue engineering strategy for large segmental bone defect treatment. **2018**, 9, 331		15
492	Current development of biodegradable polymeric materials for biomedical applications. **2018**, 12, 3117-3145		352
491	Hydroxyapatite from Cuttlefish Bone: Isolation, Characterizations, and Applications. **2018**, 23, 383-393		21
490	Drug-Loaded Halloysite Nanotube-Reinforced Electrospun Alginate-Based Nanofibrous Scaffolds with Sustained Antimicrobial Protection. **2018**, 10, 33913-33922		43
489	Calcium Chloride Modified Alginate Microparticles Formulated by the Spray Drying Process: A Strategy to Prolong the Release of Freely Soluble Drugs. **2018**, 11,		28
488	The three dimensional cues-integrated-biomaterial potentiates differentiation of human mesenchymal stem cells. **2018**, 202, 488-496		18
487	Combinatorial Screening of Nanoclay-Reinforced Hydrogels: A Glimpse of the "Holy Grail" in Orthopedic Stem Cell Therapy?. **2018**, 10, 34924-34941		36
486	Novel In Situ Gelling Hydrogels Loaded with Recombinant Collagen Peptide Microspheres as a Slow-Release System Induce Ectopic Bone Formation. **2018**, 7, e1800507		7
485	Bioglass-Incorporated Methacrylated Gelatin Cryogel for Regeneration of Bone Defects. **2018**, 10,		36

484	3D porous poly(Ɛ-caprolactone)/58S bioactive glass-sodium alginate/gelatin hybrid scaffolds prepared by a modified melt molding method for bone tissue engineering. **2018**, 160, 1-8		33
483	Development of 3D scaffolds using nanochitosan/silk-fibroin/hyaluronic acid biomaterials for tissue engineering applications. *International Journal of Biological Macromolecules*, **2018**, 120, 876-885	7.9	25
482	Injectable composite of calcium alginate hydrogel and Adipose-derived Stem Cells to remediate bone defect. **2018**, 423, 012182		1
481	Enhanced antibacterial activity, mechanical and physical properties of alginate/hydroxyapatite bionanocomposite film. *International Journal of Biological Macromolecules*, **2018**, 116, 786-792	7.9	43
480	Nanocomposite scaffolds for tissue engineering; properties, preparation and applications. **2018**, 701-735		14
479	Polymeric gels for tissue engineering applications. **2018**, 305-330		
478	3D printing of poly(Ɛ-caprolactone)/poly(D,L-lactide-co-glycolide)/hydroxyapatite composite constructs for bone tissue engineering. **2018**, 33, 1972-1986		38
477	Grafting Derivate From Alginate. **2018**, 115-173		1
476	Injectable hydrogels: a new paradigm for osteochondral tissue engineering. **2018**, 6, 5499-5529		51
475	Polymer Gels. **2018**,		2
474	New alginate-pullulan-bioactive glass composites with copper oxide for bone tissue regeneration trials. **2018**, 12, 2112-2121		11
473	Drug delivery systems based on nonimmunogenic biopolymers. **2018**, 317-344		8
472	Dicalcium Phosphate Coated with Graphene Synergistically Increases Osteogenic Differentiation In Vitro. **2018**, 8, 13		12
471	PHBV wet-spun scaffold coated with ELR-REDV improves vascularization for bone tissue engineering. **2018**, 13, 055010		14
470	Formation of Branched and Chained Alginate Microfibers Using Theta-Glass Capillaries. **2018**, 9,		6
469	Novel hybrid material based on Mg2+ and SiO44- co-substituted nano-hydroxyapatite, alginate and chondroitin sulphate for potential use in biomaterials engineering. **2018**, 44, 18551-18559		15
468	Competitive Biological Activities of Chitosan and Its Derivatives: Antimicrobial, Antioxidant, Anticancer, and Anti-Inflammatory Activities. **2018**, 2018, 1-13		73
467	Bioactive polysaccharides from natural resources including Chinese medicinal herbs on tissue repair. **2018**, 13, 7		57

466	Osteostimulation scaffolds of stem cells: BMP-7-derived peptide-decorated alginate porous scaffolds promote the aggregation and osteo-differentiation of human mesenchymal stem cells. **2018**, 109, e23223		9
465	Matrix Vesicles-Containing Microreactors as Support for Bonelike Osteoblasts to Enhance Biomineralization. **2018**, 10, 30180-30190		15
464	Synthesis and photo-thermal property of alginate/gold nanorod composite spheres. **2018**, 382, 022008		
463	Bone tissue engineering: Scaffold preparation using chitosan and other biomaterials with different design and fabrication techniques. *International Journal of Biological Macromolecules*, **2018**, 119, 1228-1239	7.9	131
462	Poly(Ecaprolactone)/Hydroxyapatite 3D Honeycomb Scaffolds for a Cellular Microenvironment Adapted to Maxillofacial Bone Reconstruction. **2018**, 4, 3317-3326		32
461	Current Applications in Food Preservation Based on Marine Biopolymers. **2018**, 609-650		2
460	Alginate/Hydroxyapatite-Based Nanocomposite Scaffolds for Bone Tissue Engineering Improve Dental Pulp Biomineralization and Differentiation. **2018**, 2018, 9643721		33
459	The Role of Polymer Additives in Enhancing the Response of Calcium Phosphate Cement. **2018**, 345-379		1
458	pH-responsive polymeric nanoassemblies encapsulated into alginate beads: morphological characterization and swelling studies. **2018**, 25, 1		1
457	Electrospun polycaprolactone scaffolds for tissue engineering: a review. **2019**, 68, 527-539		43
456	Hydrogels in Regenerative Medicine. **2019**, 627-650		4
455	Biomineralization and Bone Regeneration. **2019**, 853-866		3
454	Soft-Nanoparticle Functionalization of Natural Hydrogels for Tissue Engineering Applications. **2019**, 8, e1900506		62
453	Biomaterials for bone tissue engineering scaffolds: a review.. **2019**, 9, 26252-26262		232
452	Chemical Modification of Alginate for Controlled Oral Drug Delivery. **2019**, 67, 10481-10488		33
451	Optimization of calcium alginate beads production by electrospray using response surface methodology. **2019**, 6, 095412		1
450	Alginate-bioactive glass containing Zn and Mg composite scaffolds for bone tissue engineering. *International Journal of Biological Macromolecules*, **2019**, 137, 1256-1267	7.9	38
449	Co-encapsulation of enzyme and tricyanofuran hydrazone into alginate microcapsules incorporated onto cotton fabric as a biosensor for colorimetric recognition of urea. **2019**, 142, 199-206		41

448	Composites Containing Marine Biomaterials for Bone Tissue Repair. **2019**, 357-382	2
447	The effect of chelation of sodium alginate with osteogenic ions, calcium, zinc, and strontium. **2019**, 34, 573-584	15
446	Oral Bone Tissue Engineering: Advanced Biomaterials for Cell Adhesion, Proliferation and Differentiation. **2019**, 12,	13
445	Optimization of electrospray fabrication of stem cell-embedded alginate-gelatin microspheres and their assembly in 3D-printed poly(□caprolactone) scaffold for cartilage tissue engineering. **2019**, 18, 128-141	28
444	Alginate Gel Reinforcement with Chitin Nanowhiskers Modulates Rheological Properties and Drug Release Profile. **2019**, 9,	22
443	Biopolymers as bone substitutes: a review. **2019**, 7, 3961-3983	60
442	Hybrid cellulose nanocrystal/alginate/gelatin scaffold with improved mechanical properties and guided wound healing.. **2019**, 9, 22966-22979	38
441	Microbial exopolisaccharides for biomedical applications. **2019**, 165-219	2
440	Alginate: Pharmaceutical and Medical Applications. **2019**, 649-691	4
439	Adaptation and Viability of Graphene-Based Materials in Clinical Improvement. **2019**, 79-98	
438	Recent advances in functional nanostructured materials for bone-related diseases. **2019**, 7, 509-527	15
437	Preparation of Chitosan/Poly(Vinyl Alcohol) Nanocomposite Films Incorporated with Oxidized Carbon Nano-Onions (Multi-Layer Fullerenes) for Tissue-Engineering Applications. **2019**, 9,	17
436	Green and Sustainable Encapsulation of Guava Leaf Extracts (Psidium guajava L.) into Alginate/Starch Microcapsules for Multifunctional Finish over Cotton Gauze. **2019**, 7, 18612-18623	36
435	Biodegradable polymer nanocomposites for tissue engineering: synthetic strategies and related applications. **2019**, 157-198	1
434	Bioprinting Technologies in Tissue Engineering. **2020**, 171, 279-319	10
433	A Semisolid Electrolyte for Flexible Zn-Ion Batteries. **2019**, 2, 6904-6910	37
432	Egg-White-/Eggshell-Based Biomimetic Hybrid Hydrogels for Bone Regeneration. **2019**, 5, 5384-5391	25
431	Icariin-loaded porous scaffolds for bone regeneration through the regulation of the coupling process of osteogenesis and osteoclastic activity. **2019**, 14, 6019-6033	14

430	Coralline algal calcification: A morphological and process-based understanding. **2019**, 14, e0221396	22
429	Multifactor Optimization for Development of Biocompatible and Biodegradable Feed Stock Filament of Fused Deposition Modeling. **2019**, 100, 205-216	3
428	Osteogenic differentiation of BMSCs in collagen-based 3D scaffolds. **2019**, 43, 1980-1986	1
427	Surfactant-assisted-water-exposed versus surfactant-aqueous-solution-exposed electrospinning of novel super hydrophilic Polycaprolactone-based fibers: Cell culture studies. **2019**, 107, 1204-1212	1
426	Encapsulated explant in novel low shear perfusion bioreactor improve cell isolation, expansion and colony forming unit. **2019**, 20, 25-34	5
425	Graphene oxide and montmorillonite enriched natural polymeric scaffold for bone tissue engineering. **2019**, 45, 15609-15619	22
424	Fabrication and characterization of biopolymer fibers for 3D oriented microvascular structures. **2019**, 29, 083003	5
423	Biocompatible injectable polysaccharide materials for drug delivery. **2019**, 127-154	2
422	Scaffolds for gingival tissues. **2019**, 521-543	
421	Polydopamine-Assisted Anchor of Chitosan onto Porous Composite Scaffolds for Accelerating Bone Regeneration. **2019**, 5, 2998-3006	17
420	Dual delivery of encapsulated BM-MSCs and BMP-2 improves osteogenic differentiation and new bone formation. **2019**, 107, 2282-2295	10
419	Advances in Halloysite Nanotubes-Polysaccharide Nanocomposite Preparation and Applications. **2019**, 11,	22
418	One-step preparation of multifunctional alginate microspheres loaded with in situ-formed gold nanostars as a photothermal agent. **2019**, 3, 2018-2024	8
417	Stimulus-Responsive Hydrogel for Ophthalmic Drug Delivery. **2019**, 19, e1900001	21
416	Follistatin Effects in Migration, Vascularization, and Osteogenesis and Bone Repair. **2019**, 7, 38	8
415	Preparation and properties of dopamine-modified alginate/chitosan-hydroxyapatite scaffolds with gradient structure for bone tissue engineering. **2019**, 107, 1615-1627	14
414	Fabrication and characterization of hydroxyapatite/sodium alginate/chitosan composite microspheres for drug delivery and bone tissue engineering. **2019**, 100, 576-583	57
413	Influence of the geometry of nanostructured hydroxyapatite and alginate composites in the initial phase of bone repair1. **2019**, 34, e201900203	3

412	Biopolymers for Biomedical and Pharmaceutical Applications: Recent Advances and Overview of Alginate Electrospinning. **2019**, 9,	88
411	Composite materials based on hydroxyapatite embedded in biopolymer matrices: ways of synthesis and application. **2019**, 403-440	
410	Nutraceutical Potential of Seaweed Polysaccharides: Structure, Bioactivity, Safety, and Toxicity. **2019**, 18, 817-831	115
409	Development of bacterial cellulose/alginate/chitosan composites incorporating copper (II) sulfate as an antibacterial wound dressing. **2019**, 51, 662-671	46
408	Injectable Alginate-Peptide Composite Hydrogel as a Scaffold for Bone Tissue Regeneration. **2019**, 9,	52
407	Biofabrication Techniques for Ceramics and Composite Bone Scaffolds. **2019**, 17-37	4
406	In vitro evaluation of barium titanate nanoparticle/alginate 3D scaffold for osteogenic human stem cell differentiation. **2019**, 14, 035011	9
405	Natural polymers for bone repair. **2019**, 199-232	5
404	Plant-derived resorbable polymers in tissue engineering. **2019**, 19-40	3
403	Angiogenesis-promoted bone repair with silicate-shelled hydrogel fiber scaffolds. **2019**, 7, 5221-5231	21
402	Preliminary Characterization of Hydrogel Composite Alginate/PVA/r-GO as an Injectable Materials for Medical Applications. **2019**, 964, 161-167	0
401	Nanomaterials for Regenerative Medicine. **2019**,	1
400	Novel Aptamer-Functionalized Nanoparticles Enhances Bone Defect Repair By Improving Stem Cell Recruitment. **2019**, 14, 8707-8724	15
399	PLA-Collagen Composite Scaffold Fabrication by Vacuum Pressure Impregnation. **2019**, 25, 742-747	5
398	Sustainable Nanostructural Materials for Tissue Engineering. **2019**, 75-100	
397	Biomaterials for stem cell engineering and biomanufacturing. **2019**, 4, 366-379	45
396	Chitosan based polymer/bioglass composites for tissue engineering applications. **2019**, 96, 955-967	59
395	Fabrication of Nanofibrous PVA/Alginate-Sulfate Substrates for Growth Factor Delivery. **2019**, 107, 403-413	36

394	pH-Thermosensitive hydrogel based on polyvinyl alcohol/sodium alginate/N-isopropyl acrylamide composite for treating re-infected wounds. *International Journal of Biological Macromolecules*, **2019**, 124, 1016-1024	7.9	63
393	Hydroxyapatite Nanoparticle Coating on Polymer for Constructing Effective Biointeractive Interfaces. **2019**, 2019, 1-23		160
392	Regeneration of Osteochondral Defects Using Developmentally Inspired Cartilaginous Templates. **2019**, 25, 159-171		10
391	Biodegradable polymer matrix nanocomposites for bone tissue engineering. **2019**, 1-37		19
390	Hybrid polymer biomaterials for bone tissue regeneration. **2019**, 13, 189-201		43
389	Lithospermi radix extract-containing bilayer nanofiber scaffold for promoting wound healing in a rat model. **2019**, 96, 850-858		21
388	An in vivo comparative study of the gelatin microtissue-based bottom-up strategy and top-down strategy in bone tissue engineering application. **2019**, 107, 678-688		10
387	Nanoengineered biomaterials for bone/dental regeneration. **2019**, 13-38		3
386	A facile synthesis of poly (methyl methacrylate) grafted alginate@Cys-bentonite copolymer hybrid nanocomposite for sequestration of heavy metals. **2019**, 8, 82-92		18
385	Novel dual responsive alginate-based magnetic nanogels for onco-theranostics. **2019**, 204, 32-41		51
384	Application of alginate microbeads as a carrier of bone morphogenetic protein-2 for bone regeneration. **2019**, 107, 286-294		9
383	Preparation and characterization of electrospun polylactic acid/sodium alginate/orange oyster shell composite nanofiber for biomedical application. **2020**, 56, 533-543		26
382	Alginate Based Scaffolds for Cartilage Tissue Engineering: A Review. **2020**, 69, 230-247		81
381	A polymer scaffold with drug-sustained release and antibacterial activity. **2020**, 69, 398-405		5
380	In situ gelling alginate-pectin blend particles loaded with Ac2-26: A new weapon to improve wound care armamentarium. **2020**, 227, 115305		24
379	Recent advances in the application of mesoporous silica-based nanomaterials for bone tissue engineering. **2020**, 107, 110267		84
378	Effect of Mold Geometry on Pore Size in Freeze-Cast Chitosan-Alginate Scaffolds for Tissue Engineering. **2020**, 48, 1090-1102		8
377	Dual-crosslinked alginate/carboxymethyl chitosan hydrogel containing in situ synthesized calcium phosphate particles for drug delivery application. **2020**, 241, 122354		14

376	Bone regeneration response in an experimental long bone defect orthotopically implanted with alginate-pullulan-glass-ceramic composite scaffolds. **2020**, 108, 1129-1140		8
375	Biocompatible compositions based on chitosan and copolymer (lactide□titanium oxide) for engineering of tissue substitutes for wound healing. **2020**, 77, 5083-5101		3
374	Glycogen as a Building Block for Advanced Biological Materials. **2020**, 32, e1904625		21
373	Enzymatically gellable gelatin improves nano-hydroxyapatite-alginate microcapsule characteristics for modular bone tissue formation. **2020**, 108, 340-350		7
372	Improvement of rBMSCs Responses to Poly(propylene carbonate) Based Biomaterial through Incorporation of Nanolaponite and Surface Treatment Using Sodium Hydroxide. **2020**, 6, 329-339		3
371	Bone regeneration with hydroxyapatite-based biomaterials. **2020**, 3, 521-544		26
370	Alginate-Based Electrospun Membranes Containing ZnO Nanoparticles as Potential Wound Healing Patches: Biological, Mechanical, and Physicochemical Characterization. **2020**, 12, 3371-3381		60
369	A high-throughput approach to compare the biocompatibility of candidate bioink formulations. **2020**, 17, e00068		6
368	Effect of an ionic liquid on the physicochemical properties of chitosan/poly(vinyl alcohol) mixtures. *International Journal of Biological Macromolecules*, **2020**, 147, 1156-1163	7.9	6
367	The Construction and Application of Three-Dimensional Biomaterials. **2020**, 4, e1900238		8
366	Fabrication of efficient alginate composite beads embedded with N-doped carbon dots and their application for enhanced rare earth elements adsorption from aqueous solutions. **2020**, 562, 224-234		27
365	Common biocompatible polymeric materials for tissue engineering and regenerative medicine. **2020**, 242, 122528		29
364	3D printing applications in bone tissue engineering. **2020**, 11, S118-S124		78
363	Mechanically improved porous hydrogels with polysaccharides via polyelectrolyte complexation for bone tissue engineering. *International Journal of Biological Macromolecules*, **2020**, 144, 160-169	7.9	21
362	Biopolymeric nanocomposite scaffolds for bone tissue engineering applications □A review. **2020**, 55, 101452		52
361	Silk fibroin/sodium alginate composite porous materials with controllable degradation. *International Journal of Biological Macromolecules*, **2020**, 150, 1314-1322	7.9	18
360	Dynamic viscoelasticity and magnetorheological property of magnetic hydrogels. **2020**, 498, 166140		5
359	Fabrication of alginate microspheres for drug delivery: A review. *International Journal of Biological Macromolecules*, **2020**, 153, 1035-1046	7.9	90

358	Chemically Modified Natural Polymer-Based Theranostic Nanomedicines: Are They the Golden Gate toward a Clinical Approach against Cancer?. **2020**, 6, 134-166		17
357	In-Situ Synthesis of a Novel Bioresorbable Sodium Alginate/Hydroxyapatite□Calcium Pyrophosphate Nanocomposite as Bone Replacement. **2020**, 30, 1769-1775		6
356	Marine Seaweed Polysaccharides-Based Engineered Cues for the Modern Biomedical Sector. **2019**, 18,		37
355	Polysaccharide-Based In Situ Self-Healing Hydrogels for Tissue Engineering Applications. **2020**, 12,		14
354	Alginate hydrogel-polyvinyl alcohol/silk fibroin/magnesium hydroxide nanorods: A novel scaffold with biological and antibacterial activity and improved mechanical properties. *International Journal of Biological Macromolecules*, **2020**, 162, 1959-1971	7.9	32
353	Effect of Clay Nanofillers on the Mechanical and Water Vapor Permeability Properties of Xylan-Alginate Films. **2020**, 12,		14
352	Evaluation of the osteogenic potential of rat adipose-derived stem cells with different polycaprolactone/alginate-based nanofibrous scaffolds: an study. **2020**, 7, 14		1
351	Recent advances in formulating electrospun nanofiber membranes: Delivering active phytoconstituents. **2020**, 60, 102038		10
350	In vitro and in vivo study of naturally derived alginate/hydroxyapatite bio composite scaffolds. *International Journal of Biological Macromolecules*, **2020**, 165, 1346-1360	7.9	12
349	Microfluidics for Medical Additive Manufacturing. **2020**, 6, 1244-1257		19
348	Innovative Human Three-Dimensional Tissue-Engineered Models as an Alternative to Animal Testing. **2020**, 7,		27
347	Microbial Exopolysaccharides as Drug Carriers. **2020**, 12,		7
346	Advanced Polymer-Based Drug Delivery Strategies for Meniscal Regeneration. **2021**, 27, 266-293		3
345	Biomimetic TiO-chitosan/sodium alginate blended nanocomposite scaffolds for tissue engineering applications. **2020**, 110, 110710		43
344	Alginate/human elastin-like polypeptide composite films with antioxidant properties for potential wound healing application. *International Journal of Biological Macromolecules*, **2020**, 164, 586-596	7.9	13
343	Bioactive nanoceramics. **2020**, 233-257		
342	Progress in Modern Marine Biomaterials Research. **2020**, 18,		32
341	A tailored polylactic acid/polycaprolactone biodegradable and bioactive 3D porous scaffold containing gelatin nanofibers and Taurine for bone regeneration. **2020**, 10, 13366		27

340	Physical Cues in the Microenvironment Regulate Stemness-Dependent Homing of Breast Cancer Cells. **2020**, 12,		1
339	Exquisite design of injectable Hydrogels in Cartilage Repair. **2020**, 10, 9843-9864		21
338	Organophosphorus compounds biodegradation by novel bacterial isolates and their potential application in bioremediation of contaminated water. **2020**, 317, 124003		9
337	Nanosheets-incorporated bio-composites containing natural and synthetic polymers/ceramics for bone tissue engineering. *International Journal of Biological Macromolecules*, **2020**, 164, 1960-1972	7.9	17
336	Multicomponent polysaccharide alginate-based bioinks. **2020**, 8, 8171-8188		39
335	Alginate-based interpenetrating polymer networks for sustained drug release. **2020**, 101-128		7
334	Alginate-based scaffolds for drug delivery in tissue engineering. **2020**, 359-386		5
333	Cell-loaded injectable gelatin/alginate/LAPONITE® nanocomposite hydrogel promotes bone healing in a critical-size rat calvarial defect model.. **2020**, 10, 25652-25661		18
332	Porous chitosan/ZnO-doped bioglass composites as carriers of bioactive peptides. **2020**, 17, 2807-2816		2
331	Injectable hydrogel scaffold from natural biomaterials - An overview of recent studies. **2020**,		0
330	Marine Biomaterial Treasure and Biomedical Sciences. **2020**, 1209-1229		2
329	Biomimetic cues from poly(lactic-co-glycolic acid)/hydroxyapatite nano-fibrous scaffolds drive osteogenic commitment in human mesenchymal stem cells in the absence of osteogenic factor supplements. **2020**, 8, 5677-5689		5
328	Bioinspired Organic–Inorganic Hybrid Magnesium Oxychloride Cement via Chitosan and Tartaric Acid. **2020**, 8, 18841-18852		4
327	Stem Cell-Friendly Scaffold Biomaterials: Applications for Bone Tissue Engineering and Regenerative Medicine. **2020**, 8, 598607		20
326	Fabrication of nanochitosan incorporated polypyrrole/alginate conducting scaffold for neural tissue engineering. **2020**, 10, 22012		13
325	A Review of Bioactive Glass/Natural Polymer Composites: State of the Art. **2020**, 13,		34
324	Injectable hydrogels based on gellan gum promotes in situ mineralization and potential osteogenesis. **2020**, 141, 110091		3
323	Alginate and alginate composites for biomedical applications. **2021**, 16, 280-306		66

322	Environmentally benign production of cupric oxide nanoparticles and various utilizations of their polymeric hybrids in different technologies. **2020**, 419, 213378	42
321	Injectable Functional Biomaterials for Minimally Invasive Surgery. **2020**, 9, e2000349	28
320	Polypyrrole-Incorporated Conducting Constructs for Tissue Engineering Applications: A Review. **2020**, 2, 101-119	19
319	Alginate Formulations: Current Developments in the Race for Hydrogel-Based Cardiac Regeneration. **2020**, 8, 414	27
318	Comparative study on the influence of the content and functionalization of alginate matrices on K-562 cell viability and differentiation. **2020**, 35, 1249-1261	2
317	Natural Polymeric Scaffolds in Bone Regeneration. **2020**, 8, 474	73
316	Effect of magnetic particles adding into nanostructured hydroxyapatite–alginate composites for orthopedics. **2020**, 57, 557-569	4
315	Physical and Chemical Methods for Increasing the Hydrophilicity of the Surface of Aliphatic Polyesters for Tissue-Engineered Constructs. **2020**, 11, 739-743	
314	Cytoprotective and cytofunctional effect of polyanionic polysaccharide alginate and gelatin microspheres on rat cardiac cells. *International Journal of Biological Macromolecules*, **2020**, 161, 969-976 7.9	6
313	Alginate-Based Hydrogels in Regenerative Medicine. **2020**,	7
312	Orthopedic implants and devices for bone fractures and defects: Past, present and perspective. **2020**, 1, 6-18	15
311	Matrix-Based Bone Regenerative Engineering. **2020**, 135-148	2
310	Seaweed polysaccharides as sustainable building blocks for biomaterials in tissue engineering. **2020** , 543-587	4
309	Polymer- and Hybrid-Based Biomaterials for Interstitial, Connective, Vascular, Nerve, Visceral and Musculoskeletal Tissue Engineering. **2020**, 12,	34
308	A Current Overview of Scaffold-Based Bone Regeneration Strategies with Dental Stem Cells. **2020**, 1288, 61-85	10
307	Polymer scaffolds as drug delivery systems. **2020**, 129, 109621	77
306	Application of Artificial Intelligence in Modern Healthcare System. **2020**,	12
305	Advanced Technologies for the Extraction of Marine Brown Algal Polysaccharides. **2020**, 18,	71

304	Nanocomposite Films of Chitosan-Grafted Carbon Nano-Onions for Biomedical Applications. **2020**, 25,		7
303	Engineered multicomponent electrospun nanocomposite scaffolds comprising polyurethane loaded with ghee and propolis for bone tissue repair. **2020**, 152808372090880		2
302	Thermodynamic Characterization of Sodium Alginate by Inverse Gas Chromatography. **2020**, 65, 1795-1801		11
301	Microspheres containing biosynthesized silver nanoparticles with alginate-nano hydroxyapatite for biomedical applications. **2020**, 31, 2025-2043		8
300	Alginate-based bionanocomposites. **2020**, 173-205		
299	Marine Algae Polysaccharides as Basis for Wound Dressings, Drug Delivery, and Tissue Engineering: A Review. **2020**, 8, 481		31
298	Growth Factors, Carrier Materials, and Bone Repair. **2020**, 262, 121-156		1
297	Integration of Human Umbilical Cord Mesenchymal Stem Cells-Derived Exosomes with Hydroxyapatite-Embedded Hyaluronic Acid-Alginate Hydrogel for Bone Regeneration. **2020**, 6, 1590-1602		40
296	Electrospun Alginate Nanofibers Toward Various Applications: A Review. **2020**, 13,		37
295	3D printing of hydrogels: Rational design strategies and emerging biomedical applications. **2020**, 140, 100543		241
294	Controlled Release of 5-Fluorouracil from Alginate Hydrogels by Cold HMDSO Plasma Surface Engineering. **2020**, 5, 2168-2178		6
293	Current trends in marine algae polysaccharides: The digestive tract, microbial catabolism, and prebiotic potential. *International Journal of Biological Macromolecules*, **2020**, 151, 344-354	7.9	69
292	The Injectable Woven Bone-Like Hydrogel to Perform Alveolar Ridge Preservation With Adapted Remodeling Performance After Tooth Extraction. **2020**, 8, 119		4
291	Nanocomposite Gel as Injectable Therapeutic Scaffold: Microstructural Aspects and Bioactive Properties. **2020**, 12, 7840-7853		3
290	Advanced Biomaterials and Processing Methods for Liver Regeneration: State-of-the-Art and Future Trends. **2020**, 9, e1901435		21
289	Enhancement of carbonate apatite scaffold properties with surface treatment and alginate and gelatine coating. **2020**, 27, 831-842		2
288	Design of an Adhesive Film-Based Microfluidic Device for Alginate Hydrogel-Based Cell Encapsulation. **2020**, 48, 1103-1111		10
287	Recent Advances in Natural Gum-Based Biomaterials for Tissue Engineering and Regenerative Medicine: A Review. **2020**, 12,		67

286	Poly(3-hydroxybutyrate)/hydroxyapatite/alginate scaffolds seeded with mesenchymal stem cells enhance the regeneration of critical-sized bone defect. **2020**, 114, 110991		25
285	Skeletal tissue engineering. **2020**, 1007-1021		
284	Carbohydrate and protein based biopolymeric nanoparticles: Current status and biotechnological applications. *International Journal of Biological Macromolecules*, **2020**, 154, 390-412	7.9	52
283	Alginate-based electrospun core/shell nanofibers containing dexpanthenol: A good candidate for wound dressing. **2020**, 57, 101708		19
282	Supercritical carbon dioxide techniques for processing microbial exopolysaccharides used in biomedical applications. **2020**, 112, 110940		18
281	Recovery of Encapsulated Adult Neural Progenitor Cells from Microfluidic-Spun Hydrogel Fibers Enhances Proliferation and Neuronal Differentiation. **2020**, 5, 7910-7918		9
280	Natural and Synthetic Polymers for Bone Scaffolds Optimization. **2020**, 12,		84
279	Development of colorimetric cotton swab using molecular switching hydrazone probe in calcium alginate. **2020**, 1216, 128301		25
278	Biomaterials- and Microfluidics-Based Tissue Engineered 3D Models. **2020**,		2
277	Biomaterials and Microfluidics for Liver Models. **2020**, 1230, 65-86		2
276	Incorporation of alginate-hyaluronic acid microbeads in injectable calcium phosphate cement for improved bone regeneration. **2020**, 272, 127830		10
275	Golden seaweed tides from beach inundations as a valuable sustainable fuel resource: Fast pyrolysis characteristics, product distribution and pathway study on Sargassum horneri based on model compounds. **2020**, 48, 101888		11
274	Gelatin-based nanofibrous electrically conductive scaffolds for tissue engineering applications. **2021**, 70, 693-702		7
273	Past, present and future development of microspheres for bone tissue regeneration: a review. **2021**, 36, 364-374		4
272	Bioactive and Biodegradable Polymer-Based Composites. **2021**, 674-700		1
271	Nanocellulose-enriched hydrocolloid-based hydrogels designed using a Ca2+ free strategy based on citric acid. **2021**, 197, 109200		13
270	Dietary 25-hydroxycholecalciferol supplementation improves performance, immunity, antioxidant status, intestinal morphology, and bone quality in weaned piglets. **2021**, 101, 2592-2600		2
269	Natural and Synthetic Biopolymers in Drug Delivery and Tissue Engineering. **2021**, 265-356		

268	Encapsulation of Rhodopseudomonas palustris KTSSR54 using beads from alginate/starch blends. **2021**, 138, 50084	7
267	Hydroxyapatite/sodium alginate coatings electrophoretically deposited on titanium substrates: microstructure and properties. **2021**, 540, 148353	13
266	Tissue Adhesives: From Research to Clinical Translation. **2021**, 36, 101049-101049	19
265	Injectable dextran-fluorenylmethoxycarbonyl phenylalanine composite hydrogels with improved mechanical properties. **2021**, 70, 222-229	5
264	Stimuli-Responsive Polysaccharide Hydrogels for Biomedical Applications: a Review. **2021**, 7, 91-114	22
263	Biomimetic strategies for fabricating musculoskeletal tissue scaffolds: a review. **2021**, 112, 1211-1229	2
262	Biocomposites for the fabrication of artificial organs. **2021**, 301-328	
261	Alginate/Bioactive Glass Beads: Synthesis, Morphological and Compositional Changes Caused by SBF Immersion Method. **2021**, 24,	0
260	A survey on applications of additive manufacturing techniques in tissue engineering. **2021**, 45, 8036-8040	2
259	Alginate-based hydrogels for tissue engineering. **2021**, 59-69	
258	Nanomaterials: An Introduction. **2021**, 1-27	6
257	Design, characterization and mechanical properties of new Na+, CO32□apatite/alginate/C60 fullerene hybrid biocomposites. **2021**, 58, 422-429	2
256	Polysaccharides from Marine Algae in Modern Technologies of Regenerative Medicine. **2021**, 47, 1-9	0
255	Review of the Structure of Chitosan in the Context of Other Sugar-Based Polymers. **2021**, 23-74	
254	study of alginate-gelatin scaffolds incorporated with silica NPs as injectable, biodegradable hydrogels.. **2021**, 11, 16688-16697	9
253	Strategies for Bone Regeneration: From Graft to Tissue Engineering. **2021**, 22,	17
252	Muscle tissue engineering □A materials perspective. **2021**, 249-274	
251	A Bibliometric Analysis of the Global Trend of Using Alginate, Gelatine, and Hydroxyapatite for Bone Tissue Regeneration Applications. **2021**, 13,	1

250	Biological behavior of magnesium-substituted hydroxyapatite during bone repair. **2021**, 81, 53-61		4
249	Nitrogen-doped hierarchically porous carbon spheres for low concentration CO2 capture. **2021**, 53, 168-174		10
248	Hydroxyapatite sonosensitization of ultrasound-triggered, thermally responsive hydrogels: An on-demand delivery system for bone repair applications. **2021**, 109, 1622-1633		1
247	Bioactive Polymeric Materials for the Advancement of Regenerative Medicine. **2021**, 12,		7
246	How does counter-cation substitution influence inter- and intramolecular hydrogen bonding and electrospinnability of alginates. *International Journal of Biological Macromolecules*, **2021**, 171, 234-241	7.9	2
245	Three-Dimensional Printing of Hydroxyapatite Composites for Biomedical Application. **2021**, 11, 353		11
244	Assessment of viability of wharton's jelly mesenchymal stem cells encapsulated in alginate scaffold by WST-8 assay kit. **2021**, 9, 42-47		1
243	Biomaterial-based osteoimmunomodulatory strategies via the TLR4-NF-B signaling pathway: A review. **2021**, 22, 100969		5
242	Coaxial Alginate Hydrogels: From Self-Assembled 3D Cellular Constructs to Long-Term Storage. **2021**, 22,		2
241	Mg,Si-Co-Substituted Hydroxyapatite/Alginate Composite Beads Loaded with Raloxifene for Potential Use in Bone Tissue Regeneration. **2021**, 22,		2
240	Mechanical Stabilization of Alginate Hydrogel Fiber and 3D Constructs by Mussel-Inspired Catechol Modification. **2021**, 13,		1
239	Encapsulation and release of As pidasept peptides in polysaccharide formulation for oral application. **2021**, 158, 105687		5
238	Alginate-based adsorbents for removal of metal ions and radionuclides from aqueous solutions: A review. *International Journal of Biological Macromolecules*, **2021**, 174, 216-228	7.9	30
237	Modified Alginate-Based Hydrogel as a Carrier of the CB2 Agonist JWH133 for Bone Engineering. **2021**, 6, 6861-6870		4
236	Bioactive glass-biopolymers-gold nanoparticle based composites for tissue engineering applications. **2021**, 123, 112006		4
235	Skeletal microenvironment system utilising bovine bone scaffold co-cultured with human osteoblasts and osteoclast-like cells. **2021**, 22, 680		1
234	Effects of fibrous collagen/CDHA/hUCS biocomposites on bone tissue regeneration. *International Journal of Biological Macromolecules*, **2021**, 176, 479-489	7.9	2
233	Digital Experiments in Higher Education A How to and How It Went for an Interactive Experiment Lecture on Dental Materials. **2021**, 11, 190		1

232	Hydrogel-integrated 3D-printed poly(lactic acid) scaffolds for bone tissue engineering. **2021**, 36, 3833		
231	Green Synthesis of Silica and Silicon Nanoparticles and Their Biomedical and Catalytic Applications. **2021**, 1-56		4
230	The Effect of Using Micro-Clustered Water as a Polymer Medium. **2021**, 22,		1
229	Preparation of bioactive aerogel material based on sodium alginate and chitosan for controlled release of levomycetin. **2021**, 32, 3474-3482		4
228	Polysaccharide Chemistry in Drug Delivery, Endocrinology, and Vaccines. **2021**, 27, 8437-8451		2
227	Marine Polysaccharides: Properties and Applications. **2021**, 37-60		2
226	Recent Trends in the Development of Bone Regenerative Biomaterials. **2021**, 9, 665813		13
225	Fabrication and properties of alginate-hydroxyapatite biocomposites as efficient biomaterials for bone regeneration. **2021**, 151, 110444		4
224	Preparation of Alginate-Based Biomaterials and Their Applications in Biomedicine. **2021**, 19,		43
223	3D printed step-gradient composite hydrogels for directed migration and osteogenic differentiation of human bone marrow-derived mesenchymal stem cells.		
222	Low-temperature inductively coupled plasma as a method to promote biomineralization on 3D printed poly(lactic acid) scaffolds. **2021**, 56, 14717-14728		1
221	Diatoms with Invaluable Applications in Nanotechnology, Biotechnology, and Biomedicine: Recent Advances. **2021**, 7, 3053-3068		28
220	Current natural bioactive materials in bone and tooth regeneration in dentistry: a comprehensive overview. **2021**, 13, 2078-2078		5
219	Collagen-Alginate Composite Hydrogel: Application in Tissue Engineering and Biomedical Sciences. **2021**, 13,		7
218	Engineering Polysaccharides for Tissue Repair and Regeneration. **2021**, 21, e2100141		3
217	Impact of Surface Topography, Chemistry and Properties on the Adhesion of Sodium Alginate Coatings Electrophoretically Deposited on Titanium Biomaterials. **2021**, 52, 4454-4467		1
216	Chitosan-based blends for biomedical applications. *International Journal of Biological Macromolecules*, **2021**, 183, 1818-1850	7.9	25
215	Naturally Occurring Polyelectrolytes and Their Use for the Development of Complex-Based Mucoadhesive Drug Delivery Systems: An Overview. **2021**, 13,		5

214	Step-Gradient Composite Hydrogels for Local Drug Delivery and Directed Cell Migration. **2021**, 1, 2000114	
213	Meniscal Regenerative Scaffolds Based on Biopolymers and Polymers: Recent Status and Applications. **2021**, 9, 661802	7
212	The Application of 3D-Printing and Nanotechnology for the Targeted Treatment of Osteosarcoma. **2021**, 8,	1
211	Biopolymers/Ceramic-Based Nanocomposite Scaffolds for Drug Delivery in Bone Tissue Engineering. **2022**, 337-376	
210	Alginate-Based Composite and Its Biomedical Applications.	0
209	Biocompatibility Study of Electrospun Nanocomposite Membranes Based on Chitosan/Polyvinyl Alcohol/Oxidized Carbon Nano-Onions. **2021**, 26,	1
208	Alginate microgels as delivery vehicles for cell-based therapies in tissue engineering and regenerative medicine. **2021**, 266, 118128	12
207	Natural Polymeric Scaffolds for Tissue Engineering Applications. **2021**, 32, 2144-2194	12
206	Additive Manufacturing of 3D Aerogels and Porous Scaffolds: A Review. 2103410	16
205	Hydroxyapatite-biopolymers-ZnO composite with sustained Ceftriaxone release as a drainage system for treatment of purulent cavities. **2021**, 266, 118137	0
204	Recent achievements in sodium alginate-based nanoparticles for targeted drug delivery. 1	2
203	Preparation and characterization of dexamethasone loaded sodium alginate-graphene oxide microspheres for bone tissue engineering. **2021**, 64, 102624	5
202	Algae-derived materials for tissue engineering and regenerative medicine applications: current trends and future perspectives. 1	3
201	Critical Review of Biodegradable and Bioactive Polymer Composites for Bone Tissue Engineering and Drug Delivery Applications. **2021**, 13,	35
200	A quantitative analysis of cell bridging kinetics on a scaffold using computer vision algorithms. **2021**, 136, 429-440	3
199	Development of bioactive sodium alginate/sulfonated polyether ether ketone/hydroxyapatite nanocomposites: Synthesis and in-vitro studies. **2021**, 267, 118236	5
198	Alginate/TiO2@LDH microspheres: A promising bioactive scaffold with cytocompatibility and antibacterial activity. **2021**,	1
197	Porous Composite Granules with Potential Function of Bone Substitute and Simvastatin Releasing System: A Preliminary Study. **2021**, 14,	1

196	A Comparative Analysis of the Structure and Biological Properties of Films and Microfibrous Scaffolds Based on Silk Fibroin. **2021**, 13,		0
195	Sodium alginate/collagen/stromal cell-derived factor-1 neural scaffold loaded with BMSCs promotes neurological function recovery after traumatic brain injury. **2021**, 131, 185-197		6
194	Calcium alginate and barium alginate hydrogel filtration membrane coated on fibers for molecule/ion separation. **2021**, 270, 118761		6
193	Pectin-cellulose hydrogel, silk fibroin and magnesium hydroxide nanoparticles hybrid nanocomposites for biomedical applications. *International Journal of Biological Macromolecules*, **2021**, 192, 7-15	7.9	7
192	Dietary supplementation with 25-hydroxycholecalciferol and phytase in growing-finishing pigs: II. Effects on intestinal antioxidant status, immunity and bone quality. **2021**, 280, 115065		0
191	Effect of low concentrations of SiO nanoparticles on the physical and chemical properties of sodium alginate-based films. **2021**, 269, 118286		15
190	Alginate modification via click chemistry for biomedical applications. **2021**, 270, 118360		13
189	The role of natural polymers in bone tissue engineering. **2021**, 338, 571-582		19
188	Collagen-based biomaterials for bone tissue engineering. **2021**, 210, 110049		14
187	MicroRNA-126 from stem cell extracellular vesicles encapsulated in a tri-layer hydrogel scaffold promotes bladder angiogenesis by activating CXCR4/SDF-1 pathway. **2021**, 425, 131624		0
186	The design and green nanofabrication of noble hydrogel systems with encapsulation of doped bioactive hydroxyapatite toward sustained drug delivery. **2021**, 343, 117598		1
185	Water vapor sorption and permeability of sustainable alginate/collagen/SiO2 composite films. **2021** , 152, 112261		11
184	Development and application of fish scale wastes as versatile natural biomaterials. **2022**, 428, 131102		9
183	Composite hydrogels of pectin and alginate. **2021**, 507-533		
182	Chitosan-based bionanocomposites in bone tissue engineering. **2021**, 225-242		
181	Evaluation of Demineralized Bone Matrix Particles Delivered by Alginate Hydrogel for a Bone Graft Substitute: An Animal Experimental Study. **2021**, 27, e928617		0
180	Nanosystems Comprising Biocompatible Polymers for the Delivery of Photoactive Compounds in Biomedical Applications. **2021**, 253-287		
179	Biomedical applications of biopolymer-based (nano)materials. **2021**, 189-332		1

178	Applications of oxidized alginate in regenerative medicine. **2021**, 9, 2785-2801	7
177	A Review on Biodegradable Polymeric Materials for Bone Tissue Engineering (BTE) Applications. **2021**,	
176	Chapter 7:Injectable Biopolymer Hydrogels for Regenerative Medicine. **2021**, 155-200	1
175	Alginate: Pharmaceutical and Medical Applications. **2019**, 649-691	1
174	Biocomposite Scaffolds Derived from Renewable Resources for Bone Tissue Repair. 439-485	1
173	Recent Advances in Host□Guest Self-Assembled Cyclodextrin Carriers: Implications for Responsive Drug Delivery and Biomedical Engineering. **2020**, 30, 1909049	116
172	Nanomaterials for Regenerative Medicine. **2019**, 1-45	3
171	Calcium Phosphate Biomaterials for Bone Tissue Engineering: Properties and Relevance in Bone Repair. **2020**, 535-555	2
170	3D Bioprinting of Tissue Models with Customized Bioinks. **2020**, 1249, 67-84	5
169	Porous PVA/SA/HA hydrogels fabricated by dual-crosslinking method for bone tissue engineering. **2020**, 31, 816-831	12
168	Composite Sponges for in Situ Alveolar Bone Regeneration Following Tooth Extraction. **2017**, 131, 580-584	2
167	Additive manufacturing of PLA-based scaffolds intended for bone regeneration and strategies to improve their biological properties. **2020**, 20, 571-599	22
166	Combined Porogen Leaching and Emulsion Templating to produce Bone Tissue Engineering Scaffolds. **2020**, 6, 265	11
165	Sulfated Polysaccharides from Macroalgae for Bone Tissue Regeneration. **2019**, 25, 1200-1209	11
164	Recent Advances in the Use of Algal Polysaccharides for Skin Wound Healing. **2019**, 25, 1236-1248	10
163	Evaluation of hMSCs Response to Sodium Alginate / Bioactive Glass Composite Paste: Effect of CaO/PO, Sodium Alginate Concentration and P/L Ratios. **2019**, 14, 196-210	0
162	An update on the Application of Nanotechnology in Bone Tissue Engineering. **2016**, 10, 836-848	16
161	Hydroxyapatite from Fish for Bone Tissue Engineering: A Promising Approach. **2018**, 7, 80-90	23

160	3D bioprinted alginate-based biomaterials for bone tissue engineering. **2020**, 4, 175-179		1
159	Alginate matrices for protein delivery - a short review. **2018**, 67, S319-S334		17
158	The Use of Alginate Hydrogels for the Culture of Mesenchymal Stem Cells (MSCs): In Vitro and In Vivo Paradigms.		3
157	Recent Advances in Hydrogels and Stem Cells. **2021**, 589-618		0
156	Bioceramics-Based Biomaterials for Bone Tissue Engineering. **2021**, 573-587		0
155	Robotic Electrospinning Actuated by Non-Circular Joint Continuum Manipulator for Endoluminal Therapy. **2021**,		
154	Biodegradable Nanostructured Nerve Conductors: Electrical Properties And Adsorption Kinetic Models. **2021**,		
153	Chitosan Covalently Functionalized with Peptides Mapped on Vitronectin and BMP-2 for Bone Tissue Engineering. **2021**, 11,		2
152	CollagenBioceramic Smart Composites. **2015**, 1-25		
151	In Vitro and In Vivo Evaluation of Composite Scaffolds for Bone Tissue Engineering. **2015**, 1-22		
150	Smart Biomaterials in Tissue-Engineering Applications. **2016**, 125-150		
149	Synthesis and characterization of copper-loaded hydroxyapatite-alginate microspheres. **2017**, 8, 400-409		1
148	Polysaccharide-Based Polymer Gels. **2018**, 147-229		0
147	Collagen and nano-hydroxyapatite interactions in alginate-based microcapsule provide an appropriate osteogenic microenvironment for modular bone tissue formation. **2022**, 277, 118807		7
146	Injectable eggshell-derived hydroxyapatite-incorporated fibroin-alginate composite hydrogel for bone tissue engineering. *International Journal of Biological Macromolecules*, **2021**, 193, 799-808	7.9	4
145	Fabrication and evaluation of homogeneous alginate/polyacrylamide□chitosan□gelatin composite hydrogel scaffolds based on the interpenetrating networks for tissue engineering.		2
144	Biomimetic Mechanically Strong One-Dimensional Hydroxyapatite/Poly(d,l-lactide) Composite Inducing Formation of Anisotropic Collagen Matrix. **2021**,		2
143	Physical Properties, Chemical Analysis, and Evaluation of Antimicrobial Response of New Polylactide/Alginate/Copper Composite Materials. **2020**, 18,		4

142	Applications of tailored polysaccharides in orthopedics. **2020**, 259-286	0
141	Collagen-based biocomposites inspired by bone hierarchical structures for advanced bone regeneration: ongoing research and perspectives. **2021**,	5
140	Alginate-Based Interpenetrating Network Carriers for Biomedical Applications. **2020**, 79-118	1
139	Titanium coating: introducing an antibacterial and bioactive chitosan-alginate film on titanium by spin coating. **2020**, 65, 621-630	1
138	Sustainable Packaging Films Composed of Sodium Alginate and Hydrolyzed Collagen: Preparation and Characterization. **2021**, 14, 2336	8
137	Natural Products and Nanopharmaceuticals. **2021**, 113-154	
136	Effects of BMP-2 compound with fibrin on osteoporotic vertebral fracture healing in rats. **2021**, 21, 149-156	
135	Bone tissue engineering. **2022**, 587-644	0
134	Biological macromolecules as nutraceuticals. **2022**, 97-138	0
133	Bone Scaffolds: An Incorporation of Biomaterials, Cells, and Biofactors. **2021**,	4
132	Piezoelectric materials and systems for tissue engineering and implantable energy harvesting devices for biomedical applications. 1-51	4
131	Injectable Organic-Inorganic Biocomposites for Bone Tissue Regeneration - A Mini Review. 903, 52-59	
130	Development of alginate-chitosan composite scaffold incorporation of bacterial cellulose for bone tissue engineering. 1-12	1
129	Alginate-Based Smart Materials and Their Application: Recent Advances and Perspectives. **2021**, 380, 3	6
128	Injectable and biodegradable double-network nanocomposite hydrogel with regulable sol-gel transition process and mechanical properties. **2022**, 106, 107452	3
127	Hydro- and aerogels from ethanolic potato and whey protein solutions: Influence of temperature and ethanol concentration on viscoelastic properties, protein interactions, and microstructure. **2022**, 125, 107424	2
126	Polyols and polyurethanes from renewable sources: past, present, and future Part 2: plant-derived materials. **2022**, 19, 361	3
125	Application of biomaterials and tissue engineering in bladder regeneration.. **2022**, 8853282211048574	2

124	Synthesis of cell-laden alginate microgels with tunable compositions based on microfluidic pico-injection technique.	
123	Recent Advances in Synthetic and Natural Biomaterials-Based Therapy for Bone Defects.. **2022**, e2100383	3
122	Carbon dioxide fixation and phycoremediation by algae-based technologies for biofuels and biomaterials. **2022**, 253-277	
121	Dynamic process enhancement on chitosan/gelatin/nano-hydroxyapatite-bone derived multilayer scaffold for osteochondral tissue repair.. **2022**, 112662	2
120	Current Advances in the Roles of Doped Bioactive Metal in Biodegradable Polymer Composite Scaffolds for Bone Repair: A Mini Review. 2101510	1
119	Advances in 3D printing of composite scaffolds for the repairment of bone tissue associated defects.. **2022**, e3234	2
118	Bone tissue engineering: Anionic polysaccharides as promising scaffolds.. **2022**, 283, 119142	6
117	Natural and Synthetic Biopolymeric Biomaterials for Bone Tissue Engineering Applications. **2022**,	1
116	Emerging Biopolymer-Based Bioadhesives.. **2021**, e2100340	5
115	Bioplastics for Tissue Engineering Applications. **2022**,	
114	evidence of oncofetal antigen and TLR-9 agonist co-delivery by alginate nanovaccines for liver cancer immunotherapy.. **2022**,	1
113	Alginate: A Promising Biopolymer in Drug Delivery System. **2022**, 61-95	1
112	Gums for Tissue Engineering Applications. **2022**, 997-1024	
111	Preparation and characterization of injectable gelatin/alginate/chondroitin sulfate/□calcium sulfate hemihydrate composite paste for bone repair application.. **2022**, 8853282211073231	
110	Bacterial Polyglucuronic Acid/Alginate/Carbon Nanofibers Hydrogel Nanocomposite as a Potential Scaffold for Bone Tissue Engineering.. **2022**, 15,	1
109	Advantages of nanoscale bioactive glass as inorganic filler in alginate hydrogels for drug delivery and biofabrication. **2022**, 2, 33-53	0
108	Effective Immobilization of Monomeric Methylene Blue on Hydroxyapatite Nanoparticles by Controlling Inorganic-Organic Interfacial Interactions.. **2022**,	0
107	From Biomedical Applications of Alginate towards CVD Implications Linked to COVID-19.. **2022**, 15,	3

106	Biomimetic development of chitosan and sodium alginate-based nanocomposites contains zirconia for tissue engineering applications.. **2022**,		0
105	Biocompatible Films of Calcium Alginate Inactivate Enveloped Viruses Such as SARS-CoV-2.. **2022**, 14,		3
104	Harnessing the potential of dialdehyde alginate-xanthan gum hydrogels as niche bioscaffolds for tissue engineering.. *International Journal of Biological Macromolecules*, **2022**, 207, 493-506	7.9	1
103	Electroactive calcium-alginate/polycaprolactone/reduced graphene oxide nanohybrid hydrogels for skeletal muscle tissue engineering.. **2022**, 214, 112455		3
102	Sodium alginate coating on biodegradable high-purity magnesium with a hydroxide/silane transition layer for corrosion retardation. **2022**, 642, 128647		0
101	Alginate@polydopamine@SiO microcapsules with controlled porosity for whole-cell based enantioselective biosynthesis of (S)-1-phenylethanol.. **2022**, 214, 112454		0
100	Novel 3D porous aerogels engineered at nano scale from cellulose nano fibers and curcumin: An effective treatment for chronic wounds.. **2022**, 287, 119338		1
99	Bone-like hydroxyapatite anchored on alginate microspheres for bone regeneration.. **2022**, 287, 119330		1
98	Biopolymer-Based Scaffolds for Bone and Tissue Engineering. **2022**, 33-61		
97	Advanced Strategies for 3D Bioprinting of Tissue and Organ Analogs Using Alginate Hydrogel Bioinks.. **2021**, 19,		2
96	Advancements in nucleic acids-based techniques for bone regeneration. **2021**, e2100570		0
95	Marine Biopolymers: Applications in Food Packaging. **2021**, 9, 2245		2
94	Injectable adipose-derived stem cells-embedded alginate-gelatin microspheres prepared by electrospray for cartilage tissue regeneration.. **2022**, 33, 174-185		0
93	Data_Sheet_1.docx. **2019**,		
92	Table_1.DOCX. **2020**,		
91	Alginate-Based Hydrogels and Tubes, as Biological Macromolecule-Based Platforms for Peripheral Nerve Tissue Engineering: A Review.. **2022**, 50, 628		1
90	Marine Biomaterials as Carrier of Drugs/Biomolecules for Management of Bone Disorders. **2022**, 271-305		
89	Application of three-dimensional bioprinting technology in orthopedics. **2022**, 8, 8		

88	Tissue Engineering Applications of Marine-Based Materials. **2022**, 205-254	1
87	Improved 3D Printing and Cell Biology Characterization of Inorganic-Filler Containing Alginate-Based Composites for Bone Regeneration: Particle Shape and Effective Surface Area Are the Dominant Factors for Printing Performance.. **2022**, 23,	0
86	Marine Biomaterials for Pharmaceutical Applications: A Review. **2022**, 08,	
85	2D Polymer Nanonets: Controllable Constructions and Functional Applications.. **2022**, e2200250	0
84	Effect of crosslinking, hydroxyapatite addition, and fiber alignment to stimulate human mesenchymal stem cells osteoinduction in polycaprolactone-based electrospun scaffolds.	
83	Role of nanostructured materials in hard tissue engineering.. **2022**, 304, 102682	0
82	Stem Cell-Laden Hydrogel-Based 3D Bioprinting for Bone and Cartilage Tissue Engineering. **2022**, 10,	0
81	Scaffold Production and Bone Tissue Healing Using Electrospinning: Trends and Gap of Knowledge.	0
80	A Review of Recent Advances in Natural Polymer-Based Scaffolds for Musculoskeletal Tissue Engineering. **2022**, 14, 2097	3
79	A Critical Review of Additive Manufacturing Techniques and Associated Biomaterials Used in Bone Tissue Engineering. **2022**, 14, 2117	5
78	Characteristics of Marine Biomaterials and Their Applications in Biomedicine. **2022**, 20, 372	2
77	Structures, Properties and Applications of Alginates. **2022**, 20, 364	5
76	Application of polysaccharide-based biopolymers as supports in photocatalytic treatment of water and wastewater: a review.	0
75	Hybrid composite based on chitosan matrix mineralized by polyphasic calcium orthophosphates with enhanced bioactivity and protein adsorption capacity. **2022**, 31, 103696	
74	3D-Printing Assisted SF-SA Based MgP Hybrid Hydrogel Scaffold for Bone Tissue Engineering. **2022**, 9,	
73	Hydrogel-based scaffolds for bone and cartilage tissue engineering and regeneration. **2022**, 105313	1
72	Alginate in Usage Biomedical Areas.	
71	Bioink Formulation and Machine Learning-Empowered Bioprinting Optimization. 10,	0

70	Strontium doped bioglass incorporated hydrogel-based scaffold for amplified bone tissue regeneration. **2022**, 12,		2
69	Smart/stimuli-responsive hydrogels: State-of-the-art platforms for bone tissue engineering. **2022**, 101560		5
68	Nanomaterials-Based Combinatorial Therapy as a Strategy to Combat Antibiotic Resistance. **2022**, 11, 794		0
67	Algae-based alginate biomaterial: Production and applications. **2022**, 37-66		0
66	Synthesis of Antibacterial Hybrid Hydroxyapatite/Collagen/Polysaccharide Bioactive Membranes and Their Effect on Osteoblast Culture. **2022**, 23, 7277		1
65	Synthesis of vildagliptin loaded acrylamide-g-psyllium/alginate-based core-shell nanoparticles for diabetes treatment. *International Journal of Biological Macromolecules*, **2022**,	7.9	0
64	Advances in Organ-on-a-Chip Materials and Devices.		5
63	Silk Hydrogel for Tissue Engineering: A Review. **2022**, 23, 467-477		
62	A multidisciplinary perspective on the latest trends in artificial cartilage fabrication to mimic real tissue. **2022**, 29, 101603		0
61	Enhanced bone regeneration via PHA scaffolds coated with polydopamine-captured BMP2. **2022**, 10, 6214-6227		1
60	Characterization of a nanocomposite scaffold and assessment of its osteogenic influence in a rabbit mandibular bone defect model. **2022**,		
59	Sunflower Oilcake as a Potential Source for the Development of Edible Membranes. **2022**, 12, 789		
58	Fabrication of multifunctional alginate microspheres containing hydroxyapatite powder for simultaneous cell and drug delivery. 10,		
57	Additive Manufacturing of Biomaterials□Design Principles and Their Implementation. **2022**, 15, 5457		2
56	Active Neutralizing Mats for Corrosive Chemical Storage. **2022**, 8, 489		
55	Alginate-Based Bio-Composites and Their Potential Applications. **2022**, 13, 117		3
54	Bioprinting/Biofabrication with Alginate/Gelatin-Based Bioinks. **2022**, 1-10		
53	Revisable and high-strength wheel-spun alginate/graphene oxide based fibrous rods towards a flexible and biodegradable rib internal fixation system. **2022**, 219, 1308-1318		0

52	Applicability of alginate-based composite microspheres loaded with aqueous extract of Stevia rebaudiana Bertoni leaves in food and pharmaceutical products. **2022**, 50, 101970	1
51	Flow-driven synthesis of calcium phosphate-calcium alginate hybrid chemical gardens.	1
50	Smart biomaterials and their potential applications in tissue engineering. **2022**, 10, 6859-6895	0
49	Drug-Containing Layered Double Hydroxide/Alginate Dispersions for Tissue Engineering. **2022**, 6, 70	0
48	Fucoidan-Incorporated Composite Scaffold Stimulates Osteogenic Differentiation of Mesenchymal Stem Cells for Bone Tissue Engineering. **2022**, 20, 589	0
47	Rapid and mass manufacturing of soft hydrogel microstructures for cell patterns assisted by 3D printing.	1
46	Bioactivity and Mechanical Properties Characterization of Bioactive Glass Incorporated with Graphene Oxide.	1
45	Cell-Laden Composite Hydrogel Bioinks with Human Bone Allograft Particles to Enhance Stem Cell Osteogenesis. **2022**, 14, 3788	1
44	Biomimetic chitosan with biocomposite nanomaterials for bone tissue repair and regeneration. 13, 1051-1067	1
43	Antibacterial and osteoconductive polycaprolactone/polylactic acid/nano-hydroxyapatite/Cu@ZIF-8 GBR membrane with asymmetric porous structure. **2022**,	0
42	How does the structure of pullulan alginate composites change in the biological environment?. **2022**, 57, 19050-19067	1
41	Cell wall organic matrix composition and biomineralization across reef-building coralline algae under global change.	0
40	Therapies Based on Adipose-Derived Stem Cells for Lower Urinary Tract Dysfunction: A Narrative Review. **2022**, 14, 2229	0
39	Design and properties of alginate/gelatin/cellulose nanocrystals interpenetrating polymer network composite hydrogels based on in situ cross-linking.	0
38	Bioprinted living tissue constructs with layer-specific, growth factor-loaded microspheres for improved enthesis healing of a rotator cuff. **2022**,	1
37	Brasenia-inspired hydrogel with sustained and sequential release of BMP and WNT activators for improved bone regeneration. **2022**, 107965	0
36	The recent advancement in the chitosan hybrid-based scaffolds for cardiac regeneration after myocardial infarction. **2023**, 300, 120266	1
35	Bioactive glass-based organic/inorganic hybrids: an analysis of the current trends in polymer design and selection.	0

34	Antimicrobial gum based hydrogels as adsorbents for the removal of organic and inorganic pollutants. **2023**, 51, 103377	1
33	Design, characterization and evaluation of the homogeneous oxidized sodium alginate/polyacrylamide-gelatin composite hydrogels constructed via the interpenetrating network technology.	0
32	3D bio-printed endometrial construct restores the full-thickness morphology and fertility of injured uterine endometrium. **2022**,	0
31	Comparative Study of Physicochemical Properties of Alginate Composite Hydrogels Prepared by the Physical Blending and Electrostatic Assembly Methods. **2022**, 8, 799	0
30	Preparation and properties of homogeneous oxidized sodium alginate/silica/polyacrylamide gelatin composite hydrogel based on interpenetrating network technology.	1
29	Advances in Algin and Alginate-Hybrid Materials for Drug Delivery and Tissue Engineering. **2023**, 21, 14	1
28	A Review on the Role of Wollastonite Biomaterial in Bone Tissue Engineering. **2022**, 2022, 1-15	1
27	Full physicochemical and biocompatibility characterization of a supercritical CO2 sterilized nano-hydroxyapatite/chitosan biodegradable scaffold for periodontal bone regeneration. **2023**, 213280	0
26	Dietary 25-hydroxycholecalciferol modulates gut microbiota and improves the growth, meat quality, and antioxidant status of growing-finishing pigs. 13,	0
25	Polysaccharides for Biodegradable Packaging Materials: Past, Present, and Future (Brief Review). **2023**, 15, 451	1
24	Biology of Ceramic Bone Substitutes. **2023**, 29-52	0
23	Alginate-based biomaterial-mediated regulation of macrophages in bone tissue engineering. **2023**, 230, 123246	0
22	Preparation of gum tragacanth/poly (vinyl alcohol)/halloysite hydrogel using electron beam irradiation with potential for bone tissue engineering. **2023**, 305, 120548	0
21	Recent advances and development of blended sodium alginate wastewater management. **2023**, 315-330	0
20	Alginate Based Micelle in Biomedical Applications. **2023**, 155-177	0
19	Design and testing of nanobiomaterials for orthopedic implants. **2023**, 227-271	0
18	Bacterial Cellulose-Based Materials as Dressings for Wound Healing. **2023**, 15, 424	0
17	3D Printed Alginate Hydrogels with Stiffness-Gradient Structure in a Carbomer Supporting Bath by Controlled Ca2+ Diffusion.	0

16	Fabrication and investigation of physicochemical and biological properties of 3D printed sodium alginate-chitosan blend polyelectrolyte complex scaffold for bone tissue engineering application.	1
15	Polysaccharides-Calcium Phosphates Composite Beads as Bone Substitutes for Fractures Repair and Regeneration. **2023**, 15, 1509	0
14	Controlled release of kaempferol from porous scaffolds augments in-vitro osteogenesis in human osteoblasts. **2023**, 83, 104396	0
13	Fabrication and characterization of silver-substituted bioactiveglass incorporated with sodium alginate and graphene oxide. **2023**, 301, 127716	0
12	In-vitro simulation of modified-alginate ester as sustained release delivery system for curcumin. **2023**, 1283, 135307	1
11	Minimally invasive bone augmentation through subperiosteal injectable hydroxylapatite/laponite/alginate nanocomposite hydrogels. **2023**, 231, 123232	0
10	Advances in Bone Grafting Technology. **2023**, 1-16	0
9	Calcium Phosphate Loaded Biopolymer Composites A Comprehensive Review on the Most Recent Progress and Promising Trends. **2023**, 13, 360	0
8	Recent progress in polymeric biomaterials and their potential applications in skin regeneration and wound care management. **2023**, 82, 104319	0
7	Development of a three-dimensional in vitro blood-brain barrier using the chitosan-alginate polyelectrolyte complex as the extracellular matrix. 088391152311570	0
6	Alginate-Based Biomaterials in Tissue Engineering and Regenerative Medicine. **2023**, 21, 189	0
5	Zinc and Strontium-Substituted Bioactive Glass Nanoparticle/Alginate Composites Scaffold for Bone Regeneration. **2023**, 24, 6150	0
4	Advances in Bone Grafting Technology. **2023**, 1-16	0
3	Diatoms in Biomedicines and Nanomedicines. **2023**, 195-210	0
2	A 3D-Printed Biomaterial Scaffold Reinforced with Inorganic Fillers for Bone Tissue Engineering: In Vitro Assessment and In Vivo Animal Studies. **2023**, 24, 7611	0
1	Facile one-step synthesis of CuZn-HDS/alginate hydrogel beads for highly efficient and selective removal of methyl orange. **2023**, 670, 131561	0