Ipsita Roy

List of Publications by Year
in descending order

72 papers	3,961 citations	126907 33 h-index	118850 62 g-index
74 all docs	74 docs citations	74 times ranked	4453 citing authors

#	Article	IF	Citations
1	Polyhydroxyalkanoates: bioplastics with a green agenda. Current Opinion in Microbiology, 2010, 13, 321-326.	5.1	435
2	Polyhydroxyalkanoate (PHA)/Inorganic Phase Composites for Tissue Engineering Applications. Biomacromolecules, 2006, 7, 2249-2258.	5.4	335
3	Production of polyhydroxyalkanoates: the future green materials of choice. Journal of Chemical Technology and Biotechnology, 2010, 85, 732-743.	3.2	308
4	Comparison of nanoscale and microscale bioactive glass on the properties of P(3HB)/BioglassÂ® composites. Biomaterials, 2008, 29, 1750-1761.	11.4	305
5	Biomedical applications of polyhydroxyalkanoates, an overview of animal testing andin vivoresponses. Expert Review of Medical Devices, 2006, 3, 853-868.	2.8	221
6	Polyhydroxyalkanoates in Gram-positive bacteria: insights from the genera Bacillus and Streptomyces. Antonie Van Leeuwenhoek, 2006, 91, 1-17.	1.7	195
7	Bacterial cellulose: A smart biomaterial with diverse applications. Materials Science and Engineering Reports, 2021, 145, 100623.	31.8	120
8	Polyhydroxyalkanoates, a family of natural polymers, and their applications in drug delivery. Journal of Chemical Technology and Biotechnology, 2015, 90, 1209-1221.	3.2	108
9	Poly-3-hydroxyoctanoate P(3HO), a Medium Chain Length Polyhydroxyalkanoate Homopolymer from Pseudomonas mendocina. Biomacromolecules, 2011, 12, 2126-2136.	5.4	93
10	Composite polymer-bioceramic scaffolds with drug delivery capability for bone tissue engineering. Expert Opinion on Drug Delivery, 2013, 10, 1353-1365.	5.0	91
11	Multi-functional P(3HB) microsphere/45S5 BioglassÂ®-based composite scaffolds for bone tissue engineering. Acta Biomaterialia, 2010, 6, 2773-2786.	8.3	82
12	Natural Biomaterials for Cardiac Tissue Engineering: A Highly Biocompatible Solution. Frontiers in Cardiovascular Medicine, 2020, 7, 554597.	2.4	74
13	Controlled Delivery of Gentamicin Using Poly(3-hydroxybutyrate) Microspheres. International Journal of Molecular Sciences, 2011, 12, 4294-4314.	4.1	73
14	Fabrication and Characterization of Biodegradable Poly(3-hydroxybutyrate) Composite Containing Bioglass. Biomacromolecules, 2007, 8, 2112-2119.	5.4	72
15	Metabolite profiles of interacting mycelial fronts differ for pairings of the wood decay basidiomycete fungus, Stereum hirsutum with its competitors Coprinus micaceus and Coprinus disseminatus. Metabolomics, 2008, 4, 52-62.	3.0	63
16	Poly(3â€hydroxybutyrate) production by <i>Bacillus cereus</i> SPV using sugarcane molasses as the main carbon source. Biotechnology Journal, 2012, 7, 293-303.	3.5	59
17	Nerve tissue engineering using blends of poly(3â€hydroxyalkanoates) for peripheral nerve regeneration. Engineering in Life Sciences, 2015, 15, 612-621.	3.6	59
18	Poly(3-hydroxyoctanoate), a promising new material for cardiac tissue engineering. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, e495-e512.	2.7	50

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19	Chemical Modification of Bacterial Cellulose for the Development of an Antibacterial Wound Dressing. Frontiers in Bioengineering and Biotechnology, 2020, 8, 557885.	4.1	48
20	Nanofibrous poly(3-hydroxybutyrate)/poly(3-hydroxyoctanoate) scaffolds provide a functional microenvironment for cartilage repair. Journal of Biomaterials Applications, 2016, 31, 77-91.	2.4	47
21	Binary polyhydroxyalkanoate systems for soft tissue engineering. Acta Biomaterialia, 2018, 71, 225-234.	8.3	47
22	Unidirectional neuronal cell growth and differentiation on aligned polyhydroxyalkanoate blend microfibres with varying diameters. Journal of Tissue Engineering and Regenerative Medicine, 2019, 13, 1581-1594.	2.7	46
23	Dual production of biopolymers from bacteria. Carbohydrate Polymers, 2015, 126, 47-51.	10.2	44
24	In Vivo Tracking and ¹H/¹⁹F Magnetic Resonance Imaging of Biodegradable Polyhydroxyalkanoate/Polycaprolactone Blend Scaffolds Seeded with Labeled Cardiac Stem Cells. ACS Applied Materials & Interfaces, 2018, 10, 25056-25068.	8.0	44
25	Highlights on Advancing Frontiers in Tissue Engineering. Tissue Engineering - Part B: Reviews, 2022, 28, 633-664.	4.8	44
26	Biosynthesis and characterization of a novel, biocompatible medium chain length polyhydroxyalkanoate by Pseudomonas mendocina CH50 using coconut oil as the carbon source. Journal of Materials Science: Materials in Medicine, 2018, 29, 179.	3.6	43
27	Making Nonwoven Fibrous Poly(Îµâ€caprolactone) Constructs for Antimicrobial and Tissue Engineering Applications by Pressurized Melt Gyration. Macromolecular Materials and Engineering, 2016, 301, 922-934.	3.6	42
28	Electrosprayed Chitin Nanofibril/Electrospun Polyhydroxyalkanoate Fiber Mesh as Functional Nonwoven for Skin Application. Journal of Functional Biomaterials, 2020, 11, 62.	4.4	42
29	Agro-Industrial Waste Materials as Substrates for the Production of Poly(3-Hydroxybutyric Acid). Journal of Biomaterials and Nanobiotechnology, 2014, 05, 229-240.	0.5	42
30	Production of a novel medium chain length poly(3â€hydroxyalkanoate) using unprocessed biodiesel waste and its evaluation as a tissue engineering scaffold. Microbial Biotechnology, 2017, 10, 1384-1399.	4.2	40
31	<i>In vitro</i> production of polyhydroxyalkanoates: achievements and applications. Journal of Chemical Technology and Biotechnology, 2010, 85, 760-767.	3.2	39
32	Composite scaffolds for cartilage tissue engineering based on natural polymers of bacterial origin, thermoplastic poly(3â€hydroxybutyrate) and microâ€fibrillated bacterial cellulose. Polymer International, 2016, 65, 780-791.	3.1	38
33	Polyhydroxyalkanoates and their advances for biomedical applications. Trends in Molecular Medicine, 2022, 28, 331-342.	6.7	35
34	Novel poly(3â€hydroxybutyrate) composite films containing bioactive glass nanoparticles for wound healing applications. Polymer International, 2016, 65, 661-674.	3.1	34
35	Esterase-Cleavable 2D Assemblies of Magnetic Iron Oxide Nanocubes: Exploiting Enzymatic Polymer Disassembling To Improve Magnetic Hyperthermia Heat Losses. Chemistry of Materials, 2019, 31, 5450-5463.	6.7	34
36	Biodegradable Polymeric Micro/Nano-Structures with Intrinsic Antifouling/Antimicrobial Properties: Relevance in Damaged Skin and Other Biomedical Applications. Journal of Functional Biomaterials, 2020, 11, 60.	4.4	30

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37	Synthesis of graft copolymers based on hyaluronan and poly(3-hydroxyalkanoates). Carbohydrate Polymers, 2017, 171, 220-228.	10.2	27
38	Harnessing Polyhydroxyalkanoates and Pressurized Gyration for Hard and Soft Tissue Engineering. ACS Applied Materials & Interfaces, 2021, 13, 32624-32639.	8.0	27
39	Biomedical Applications of Bacteria-Derived Polymers. Polymers, 2021, 13, 1081.	4.5	25
40	Novel Biodegradable and Biocompatible Poly(3â€hydroxyoctanoate)/Bacterial Cellulose Composites. Advanced Engineering Materials, 2012, 14, B330.	3.5	24
41	Tuning core hydrophobicity of spherical polymeric nanoconstructs for docetaxel delivery. Polymer International, 2016, 65, 741-746.	3.1	22
42	Highly elastomeric poly(3-hydroxyoctanoate) based natural polymer composite for enhanced keratinocyte regeneration. International Journal of Polymeric Materials and Polymeric Biomaterials, 2017, 66, 326-335.	3.4	22
43	Green Composites of Poly(3-hydroxybutyrate) Containing Graphene Nanoplatelets with Desirable Electrical Conductivity and Oxygen Barrier Properties. ACS Omega, 2019, 4, 19746-19755.	3.5	22
44	Bacterial cellulose: Biosynthesis, production, and applications. Advances in Microbial Physiology, 2020, 77, 89-138.	2.4	22
45	The homopolymer poly(3â€hydroxyoctanoate) as a matrix material for soft tissue engineering. Journal of Applied Polymer Science, 2011, 122, 3606-3617.	2.6	20
46	Antimicrobial Materials with Lime Oil and a Poly(3-hydroxyalkanoate) Produced via Valorisation of Sugar Cane Molasses. Journal of Functional Biomaterials, 2020, 11, 24.	4.4	20
47	Uncovering the Magnetic Particle Imaging and Magnetic Resonance Imaging Features of Iron Oxide Nanocube Clusters. Nanomaterials, 2021, 11, 62.	4.1	17
48	Activated Polyhydroxyalkanoate Meshes Prevent Bacterial Adhesion and Biofilm Development in Regenerative Medicine Applications. Frontiers in Bioengineering and Biotechnology, 2020, 8, 442.	4.1	16
49	Preclinical study of peripheral nerve regeneration using nerve guidance conduits based on polyhydroxyalkanaotes. Bioengineering and Translational Medicine, 2021, 6, e10223.	7.1	16
50	Modulation of neuronal cell affinity of composite scaffolds based on polyhydroxyalkanoates and bioactive glasses. Biomedical Materials (Bristol), 2020, 15, 045024.	3.3	15
51	Aspirin-loaded P(3HO)/P(3HB) blend films: potential materials for biodegradable drug-eluting stents. Bioinspired, Biomimetic and Nanobiomaterials, 2013, 2, 141-153.	0.9	13
52	Functionalized tricalcium phosphate and poly(3-hydroxyoctanoate) derived composite scaffolds as platforms for the controlled release of diclofenac. Ceramics International, 2021, 47, 3876-3883.	4.8	13
53	Immunomodulatory Activity of Electrospun Polyhydroxyalkanoate Fiber Scaffolds Incorporating Olive Leaf Extract. Applied Sciences (Switzerland), 2021, 11, 4006.	2.5	13
54	Antibacterial Composite Materials Based on the Combination of Polyhydroxyalkanoates With Selenium and Strontium Co-substituted Hydroxyapatite for Bone Regeneration. Frontiers in Bioengineering and Biotechnology, 2021, 9, 647007.	4.1	12

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55	P(3HB) Based Magnetic Nanocomposites: Smart Materials for Bone Tissue Engineering. Journal of Nanomaterials, 2016, 2016, 1-14.	2.7	11
56	Physicochemical and Biological Characterisation of Diclofenac Oligomeric Poly(3-hydroxyoctanoate) Hybrids as Î²-TCP Ceramics Modifiers for Bone Tissue Regeneration. International Journal of Molecular Sciences, 2020, 21, 9452.	4.1	11
57	Silver Nanoparticle-Coated Polyhydroxyalkanoate Based Electrospun Fibers for Wound Dressing Applications. Materials, 2021, 14, 4907.	2.9	11
58	Bioresorbable and Mechanically Optimized Nerve Guidance Conduit Based on a Naturally Derived Medium Chain Length Polyhydroxyalkanoate and Poly(Îµ-Caprolactone) Blend. ACS Biomaterials Science and Engineering, 2021, 7, 672-689.	5.2	11
59	A strategy for dual biopolymer production of P(3HB) and Î³-PGA. Journal of Chemical Technology and Biotechnology, 2017, 92, 1548-1557.	3.2	10
60	Toward a Closed Loop, Integrated Biocompatible Biopolymer Wound Dressing Patch for Detection and Prevention of Chronic Wound Infections. Frontiers in Bioengineering and Biotechnology, 2020, 8, 1039.	4.1	9
61	Comparison of the Influence of 45S5 and Cu-Containing 45S5 Bioactive Glass (BG) on the Biological Properties of Novel Polyhydroxyalkanoate (PHA)/BG Composites. Materials, 2020, 13, 2607.	2.9	9
62	Mussel Inspired Chemistry and Bacteria Derived Polymers for Oral Mucosal Adhesion and Drug Delivery. Frontiers in Bioengineering and Biotechnology, 2021, 9, 663764.	4.1	8
63	Graphene Nanoplatelets Render Poly(3-Hydroxybutyrate) a Suitable Scaffold to Promote Neuronal Network Development. Frontiers in Neuroscience, 2021, 15, 731198.	2.8	8
64	Cytocompatibility Evaluation of a Novel Series of PEG-Functionalized Lactide-Caprolactone Copolymer Biomaterials for Cardiovascular Applications. Frontiers in Bioengineering and Biotechnology, 2020, 8, 991.	4.1	7
65	The Influence of Tetracycline Loading on the Surface Morphology and Biocompatibility of Films Made from P(3HB) Microspheres. Advanced Engineering Materials, 2010, 12, B260.	3.5	6
66	Proteomics analysis of Bacillus licheniformis in response to oligosaccharides elicitors. Enzyme and Microbial Technology, 2014, 61-62, 61-66.	3.2	6
67	Picosecond Laser Ablation of Polyhydroxyalkanoates (PHAs): Comparative Study of Neat and Blended Material Response. Polymers, 2020, 12, 127.	4.5	6
68	Towards More Predictive, Physiological and Animal-free <i>In Vitro</i> Models: Advances in Cell and Tissue Culture 2020 Conference Proceedings. ATLA Alternatives To Laboratory Animals, 2021, 49, 93-110.	1.0	6
69	Advances in Drug Delivery. Journal of Chemical Technology and Biotechnology, 2015, 90, 1167-1168.	3.2	5
70	Controlled Delivery of Pan-PAD-Inhibitor Cl-Amidine Using Poly(3-Hydroxybutyrate) Microspheres. International Journal of Molecular Sciences, 2021, 22, 12852.	4.1	4
71	Editorial: Advanced Therapies for Cardiac Regeneration. Frontiers in Bioengineering and Biotechnology, 2021, 9, 644076.	4.1	1
72	Editorial: Combating Bacterial Infections Through Biomimetic or Bioinspired Materials Design and Enabling Technologies. Frontiers in Bioengineering and Biotechnology, 2021, 9, 818643.	4.1	0