Martin Koller

List of Publications by Year
in descending order

93 papers	5,933 citations	53751 45 h-index	76872 74 g-index
99 all docs	99 docs citations	99 times ranked	4130 citing authors

#	Article	IF	Citations
1	Microalgae as versatile cellular factories for valued products. Algal Research, 2014, 6, 52-63.	2.4	453
2	Producing microbial polyhydroxyalkanoate (PHA) biopolyesters in a sustainable manner. New Biotechnology, 2017, 37, 24-38.	2.4	392
3	Production of Polyhydroxyalkanoates from Agricultural Waste and Surplus Materialsâ€. Biomacromolecules, 2005, 6, 561-565.	2.6	251
4	Biodegradable and Biocompatible Polyhydroxy-alkanoates (PHA): Auspicious Microbial Macromolecules for Pharmaceutical and Therapeutic Applications. Molecules, 2018, 23, 362.	1.7	206
5	Potential of Various Archae- and Eubacterial Strains as Industrial Polyhydroxyalkanoate Producers from Whey. Macromolecular Bioscience, 2007, 7, 218-226.	2.1	196
6	Polyhydroxyalkanoate production from whey by Pseudomonas hydrogenovora. Bioresource Technology, 2008, 99, 4854-4863.	4.8	178
7	Strategies for recovery and purification of poly[(<i>R</i>)â€•3â€•hydroxyalkanoates] (PHA) biopolyesters from surrounding biomass. Engineering in Life Sciences, 2013, 13, 549-562.	2.0	167
8	Involvement of polyhydroxyalkanoates in stress resistance of microbial cells: Biotechnological consequences and applications. Biotechnology Advances, 2018, 36, 856-870.	6.0	164
9	Archaeal Production of Polyhydroxyalkanoate (PHA) Co- and Terpolyesters from Biodiesel Industry-Derived By-Products. Archaea, 2013, 2013, 1-10.	2.3	140
10	A Review on Established and Emerging Fermentation Schemes for Microbial Production of Polyhydroxyalkanoate (PHA) Biopolyesters. Fermentation, 2018, 4, 30.	1.4	121
11	Continuous production of poly([R]-3-hydroxybutyrate) by Cupriavidus necator in a multistage bioreactor cascade. Applied Microbiology and Biotechnology, 2011, 91, 295-304.	1.7	110
12	Characteristics and potential of micro algal cultivation strategies: a review. Journal of Cleaner Production, 2012, 37, 377-388.	4.6	107
13	Biosynthesis of High Quality Polyhydroxyalkanoate Coâ€•and Terpolyesters for Potential Medical Application by the Archaeon <i>Haloferax mediterranei</i>. Macromolecular Symposia, 2007, 253, 33-39.	0.4	105
14	Linking ecology with economy: Insights into polyhydroxyalkanoateâ€•producing microorganisms. Engineering in Life Sciences, 2011, 11, 222-237.	2.0	101
15	Characterization of the promising poly(3-hydroxybutyrate) producing halophilic bacterium Halomonas halophila. Bioresource Technology, 2018, 256, 552-556.	4.8	94
16	A New Wave of Industrialization of PHA Biopolyesters. Bioengineering, 2022, 9, 74.	1.6	94
17	Sustainable Polymer Production. Polymer-Plastics Technology and Engineering, 2004, 43, 1779-1793.	1.9	92
18	Biodegradable latexes from animal-derived waste: Biosynthesis and characterization of mcl-PHA accumulated by Ps. citronellolis. Reactive and Functional Polymers, 2013, 73, 1391-1398.	2.0	90

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19	Novel unexpected functions of PHA granules. Applied Microbiology and Biotechnology, 2020, 104, 4795-4810.	1.7	84
20	Polyhydroxyalkanoate Biosynthesis at the Edge of Water Activity-Haloarchaea as Biopolyester Factories. Bioengineering, 2019, 6, 34.	1.6	81
21	Biopolymer from industrial residues: Life cycle assessment of poly(hydroxyalkanoates) from whey. Resources, Conservation and Recycling, 2013, 73, 64-71.	5.3	80
22	Recycling of Waste Streams of the Biotechnological Poly(hydroxyalkanoate) Production by<i>Haloferax mediterranei</i>on Whey. International Journal of Polymer Science, 2015, 2015, 1-8.	1.2	80
23	Production of polyhydroxyalkanoates on waste frying oil employing selected Halomonas strains. Bioresource Technology, 2019, 292, 122028.	4.8	77
24	Novel Description of mcl-PHA Biosynthesis by Pseudomonas chlororaphis from Animal-Derived Waste. Journal of Biotechnology, 2013, 165, 45-51.	1.9	75
25	Techno-economic feasibility of waste biorefinery: Using slaughtering waste streams as starting material for biopolyester production. Waste Management, 2017, 67, 73-85.	3.7	74
26	PHA granules help bacterial cells to preserve cell integrity when exposed to sudden osmotic imbalances. New Biotechnology, 2019, 49, 129-136.	2.4	72
27	Microbial PHA Production from Waste Raw Materials. Microbiology Monographs, 2010, , 85-119.	0.3	68
28	High production of poly(3-hydroxybutyrate) from a wild<i>Bacillus megaterium</i>Bolivian strain. Journal of Applied Microbiology, 2013, 114, 1378-1387.	1.4	68
29	Archaea Biotechnology. Biotechnology Advances, 2021, 47, 107668.	6.0	68
30	Biotechnological production of poly(3-hydroxybutyrate) withWautersia eutrophaby application of green grass juice and silage juice as additional complex substrates. Biocatalysis and Biotransformation, 2005, 23, 329-337.	1.1	67
31	Designing packaging materials with viscoelastic and gas barrier properties by optimized processing of poly(3-hydroxybutyrate-co-3-hydroxyvalerate) with lignin. Reactive and Functional Polymers, 2015, 94, 25-34.	2.0	66
32	Light scattering on PHA granules protects bacterial cells against the harmful effects of UV radiation. Applied Microbiology and Biotechnology, 2018, 102, 1923-1931.	1.7	66
33	Process optimization for efficient biomediated PHA production from animal-based waste streams. Clean Technologies and Environmental Policy, 2012, 14, 495-503.	2.1	65
34	Advanced approaches to produce polyhydroxyalkanoate (PHA) biopolyesters in a sustainable and economic fashion. The EuroBiotech Journal, 2018, 2, 89-103.	0.5	63
35	Mathematical modeling of poly[(R)-3-hydroxyalkanoate] synthesis by Cupriavidus necator DSM 545 on substrates stemming from biodiesel production. Bioresource Technology, 2013, 133, 482-494.	4.8	56
36	Established and advanced approaches for recovery of microbial polyhydroxyalkanoate (PHA) biopolyesters from surrounding microbial biomass. The EuroBiotech Journal, 2020, 4, 113-126.	0.5	56

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37	Extraction of short-chain-length poly-[(R)-hydroxyalkanoates] (scl-PHA) by the â€œanti-solventâ€•acetone under elevated temperature and pressure. Biotechnology Letters, 2013, 35, 1023-1028.	1.1	54
38	Production of polyhydroxyalkanoates (PHA) by a thermophilic strain of Schlegelella thermodepolymerans from xylose rich substrates. Bioresource Technology, 2020, 315, 123885.	4.8	52
39	Potential and Prospects of Continuous Polyhydroxyalkanoate (PHA) Production. Bioengineering, 2015, 2, 94-121.	1.6	51
40	Influence of glycerol on poly(3-hydroxybutyrate) production by Cupriavidus necator and Burkholderia sacchari. Biochemical Engineering Journal, 2015, 94, 50-57.	1.8	49
41	Polyhydroxyalkanoates â€“ Linking Properties, Applications and End-of-life Options. Chemical and Biochemical Engineering Quarterly, 2020, 34, 115-129.	0.5	49
42	Advances in Polyhydroxyalkanoate (PHA) Production. Bioengineering, 2017, 4, 88.	1.6	48
43	Techniques for tracing PHAâ€producing organisms and for qualitative and quantitative analysis of intraâ€•and extracellular PHA. Engineering in Life Sciences, 2015, 15, 558-581.	2.0	47
44	Study on the Production and Re-use of Poly(3-hydroxybutyrate-co-3- hydroxyvalerate) and Extracellular Polysaccharide by the Archaeon Haloferax mediterranei Strain DSM 1411. Chemical and Biochemical Engineering Quarterly, 2015, 29, 87-98.	0.5	46
45	Mathematical Modelling as a Tool for Optimized PHA Production. Chemical and Biochemical Engineering Quarterly, 2015, 29, 183-220.	0.5	46
46	Cyanobacterial Polyhydroxyalkanoate Production: Status Quo and Quo Vadis?. Current Biotechnology, 2016, 4, 464-480.	0.2	46
47	Polyhydroxyalkanoates synthesis by halophiles and thermophiles: towards sustainable production of microbial bioplastics. Biotechnology Advances, 2022, 58, 107906.	6.0	46
48	Fed-Batch Synthesis of Poly(3-Hydroxybutyrate) and Poly(3-Hydroxybutyrate-co-4-Hydroxybutyrate) from Sucrose and 4-Hydroxybutyrate Precursors by Burkholderia sacchari Strain DSM 17165. Bioengineering, 2017, 4, 36.	1.6	45
49	Biomass Extraction Using Non-Chlorinated Solvents for Biocompatibility Improvement of Polyhydroxyalkanoates. Polymers, 2018, 10, 731.	2.0	45
50	Biomediated production of structurally diverse poly(hydroxyalkanoates) from surplus streams of the animal processing industry. Polimery, 2015, 60, 298-308.	0.4	44
51	Effect of surface modification of beech wood flour on mechanical and thermal properties of poly (3-hydroxybutyrate)/wood flour composites. Holzforschung, 2009, 63, 565-570.	0.9	43
52	Comparison of ecological footprint for biobased PHA production from animal residues utilizing different energy resources. Clean Technologies and Environmental Policy, 2013, 15, 525-536.	2.1	43
53	Polyhydroxyalkanoate (PHA) Biosynthesis from Whey Lactose. Macromolecular Symposia, 2008, 272, 87-92.	0.4	42
54	The underexplored role of diverse stress factors in microbial biopolymer synthesis. Bioresource Technology, 2021, 326, 124767.	4.8	42

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55	Designing Hydrophobically Modified Polysaccharide Derivatives for Highly Efficient Enzyme Immobilization. Biomacromolecules, 2015, 16, 2403-2411.	2.6	39
56	Switching from petro-plastics to microbial polyhydroxyalkanoates (PHA): the biotechnological escape route of choice out of the plastic predicament?. The EuroBiotech Journal, 2019, 3, 32-44.	0.5	39
57	Mathematical modelling and process optimization of a continuous 5-stage bioreactor cascade for production of poly[-(R)-3-hydroxybutyrate] by Cupriavidus necator. Bioprocess and Biosystems Engineering, 2013, 36, 1235-1250.	1.7	38
58	Liquefied Wood as Inexpensive Precursor-Feedstock for Bio-Mediated Incorporation of (R)-3-Hydroxyvalerate into Polyhydroxyalkanoates. Materials, 2015, 8, 6543-6557.	1.3	37
59	Five-step continuous production of PHB analyzed by elementary flux, modes, yield space analysis and high structured metabolic model. Biochemical Engineering Journal, 2013, 79, 57-70.	1.8	35
60	Poly[(R)-3-hydroxybutyrate] production under different salinity conditions by a novel Bacillus megaterium strain. New Biotechnology, 2016, 33, 73-77.	2.4	35
61	Footprint area analysis of binary imaged Cupriavidus necator cells to study PHB production at balanced, transient, and limited growth conditions in a cascade process. Applied Microbiology and Biotechnology, 2016, 100, 10065-10080.	1.7	34
62	A viable antibiotic strategy against microbial contamination in biotechnological production of polyhydroxyalkanoates from surplus whey. Biomass and Bioenergy, 2011, 35, 748-753.	2.9	33
63	Biosynthesis and characterization of polyhydroxyalkanoates in the polysaccharide-degrading marine bacterium Saccharophagus degradans ATCC 43961. Journal of Industrial Microbiology and Biotechnology, 2008, 35, 629-633.	1.4	32
64	Novel precursors for production of 3-hydroxyvalerate-containing poly[(<i>R</i>)-hydroxyalkanoate]s. Biocatalysis and Biotransformation, 2014, 32, 161-167.	1.1	29
65	What keeps polyhydroxyalkanoates in bacterial cells amorphous? A derivation from stress exposure experiments. Applied Microbiology and Biotechnology, 2019, 103, 1905-1917.	1.7	29
66	Monitoring the kinetics of biocatalytic removal of the endocrine disrupting compound 17Î±-ethinylestradiol from differently polluted wastewater bodies. Journal of Environmental Chemical Engineering, 2017, 5, 1920-1926.	3.3	26
67	Study of metabolic network of <i>Cupriavidus necator</i> DSM 545 growing on glycerol by applying elementary flux modes and yield space analysis. Journal of Industrial Microbiology and Biotechnology, 2014, 41, 913-930.	1.4	24
68	Adaptation of Cupriavidus necator to levulinic acid for enhanced production of P(3HB-co-3HV) copolyesters. Biochemical Engineering Journal, 2019, 151, 107350.	1.8	24
69	Assessment of formal and low structured kinetic modeling of polyhydroxyalkanoate synthesis from complex substrates. Bioprocess and Biosystems Engineering, 2006, 29, 367-377.	1.7	23
70	Introducing the Newly Isolated Bacterium Aneurinibacillus sp. H1 as an Auspicious Thermophilic Producer of Various Polyhydroxyalkanoates (PHA) Copolymersâ€“1. Isolation and Characterization of the Bacterium. Polymers, 2020, 12, 1235.	2.0	23
71	Application of osmotic challenge for enrichment of microbial consortia in polyhydroxyalkanoates producing thermophilic and thermotolerant bacteria and their subsequent isolation. International Journal of Biological Macromolecules, 2020, 144, 698-704.	3.6	22
72	Evaluation of mesophilic Burkholderia sacchari, thermophilic Schlegelella thermodepolymerans and halophilic Halomonas halophila for polyhydroxyalkanoates production on model media mimicking lignocellulose hydrolysates. Bioresource Technology, 2021, 325, 124704.	4.8	21

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73	In silico optimization and low structured kinetic model of poly[(R)-3-hydroxybutyrate] synthesis by Cupriavidus necator DSM 545 by fed-batch cultivation on glycerol. Journal of Biotechnology, 2013, 168, 625-635.	1.9	16
74	Advances in Polyhydroxyalkanoate (PHA) Production, Volume 2. Bioengineering, 2020, 7, 24.	1.6	16
75	Whey Lactose as a Raw Material for Microbial Production of Biodegradable Polyesters. , 0, , .		16
76	Introducing the Newly Isolated Bacterium Aneurinibacillus sp. H1 as an Auspicious Thermophilic Producer of Various Polyhydroxyalkanoates (PHA) Copolymersâ€"2. Material Study on the Produced Copolymers. Polymers, 2020, 12, 1298.	2.0	15
77	A brief overview of global biotechnology. Biotechnology and Biotechnological Equipment, 2021, 35, S5-S14.	0.5	14
78	Comparing Chemical and Enzymatic Hydrolysis of Whey Lactose to Generate Feedstocks for Haloarchaeal Poly(3-hydroxybutyrate-co-3- hydroxyvalerate) Biosynthesis. International Journal of Pharmaceutical Sciences Research, 2016, 3, .	0.3	11
79	Sustainable Embedding of the Bioplastic Poly-(3-Hydroxybutyrate) into the Sugarcane Industry: Principles of a Future-Oriented Technology in Brazil. Handbook of Environmental Chemistry, 2009, , 81-96.	0.2	10
80	Design of Closed Photobioreactors for Algal Cultivation. , 2015, , 133-186.		10
81	Formal- and high-structured kinetic process modelling and footprint area analysis of binary imaged cells: Tools to understand and optimize multistage-continuous PHA biosynthesis. The EuroBiotech Journal, 2017, 1, 203-211.	0.5	10
82	Biotechnological production of polyhydroxyalkanoates from glycerol: A review. Biocatalysis and Agricultural Biotechnology, 2022, 42, 102333.	1.5	10
83	Polyhydroxyalkanoate (PHA) Biopolyesters - Emerging and Major Products of Industrial Biotechnology. The EuroBiotech Journal, 2022, 6, 49-60.	0.5	10
84	Application of whey retentate as complex nitrogen source for growth of the polyhydroxyalkanoate producer <i>Hydrogenophaga pseudoflava</i> strain DSM1023. The EuroBiotech Journal, 2019, 3, 78-89.	0.5	9
85	â€œBioplastics from microalgaeâ€â€"Polyhydroxyalkanoate production by cyanobacteria. , 2020, , 597-645.		7
86	Recent advances in elementary flux modes and yield space analysis as useful tools in metabolic network studies. World Journal of Microbiology and Biotechnology, 2015, 31, 1315-1328.	1.7	6
87	The role of polyhydroxyalkanoates in adaptation of Cupriavidus necator to osmotic pressure and high concentration of copper ions. International Journal of Biological Macromolecules, 2022, 206, 977-989.	3.6	6
88	Combination of Hypotonic Lysis and Application of Detergent for Isolation of Polyhydroxyalkanoates from Extremophiles. Polymers, 2022, 14, 1761.	2.0	6
89	Production, properties, and processing of microbial polyhydroxyalkanoate (PHA) biopolyesters. , 2021, , 3-55.		4
90	Production of Plastics from Waste Derived from Agrofood Industry. , 2006, , 119-135.		1

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91	Polyhydroxyalkanoates: a sustainable solution for industrial polymer production from surplus materials. New Biotechnology, 2012, 29, S54.	2.4	0
92	Microalgae for Sustainable Energy Production?. , 2015, , 471-484.		0
93	Special Issue of New Biotechnology: â€œBiopolymers Eu Symposiumâ€• New Biotechnology, 2017, 37, 1.	2.4	0