Martin Koller

List of Publications by Year
in descending order

93 papers	5,933 citations	53660 45 h-index	76769 74 g-index
99 all docs	99 docs citations	99 times ranked	4130 citing authors

#	Article	IF	Citations
1	Polyhydroxyalkanoates synthesis by halophiles and thermophiles: towards sustainable production of microbial bioplastics. Biotechnology Advances, 2022, 58, 107906.	6.0	46
2	A New Wave of Industrialization of PHA Biopolyesters. Bioengineering, 2022, 9, 74.	1.6	94
3	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
4	Biotechnological production of polyhydroxyalkanoates from glycerol: A review. Biocatalysis and Agricultural Biotechnology, 2022, 42, 102333.	1.5	10
5	Polyhydroxyalkanoate (PHA) Biopolyesters - Emerging and Major Products of Industrial Biotechnology. The EuroBiotech Journal, 2022, 6, 49-60.	0.5	10
6	Combination of Hypotonic Lysis and Application of Detergent for Isolation of Polyhydroxyalkanoates from Extremophiles. Polymers, 2022, 14, 1761.	2.0	6
7	Archaea Biotechnology. Biotechnology Advances, 2021, 47, 107668.	6.0	68
8	Production, properties, and processing of microbial polyhydroxyalkanoate (PHA) biopolyesters. , 2021, , 3-55.		4
9	A brief overview of global biotechnology. Biotechnology and Biotechnological Equipment, 2021, 35, S5-S14.	0.5	14
10	The underexplored role of diverse stress factors in microbial biopolymer synthesis. Bioresource Technology, 2021, 326, 124767.	4.8	42
11	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
12	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
13	Production of polyhydroxyalkanoates (PHA) by a thermophilic strain of Schlegelella thermodepolymerans from xylose rich substrates. Bioresource Technology, 2020, 315, 123885.	4.8	52
14	â€œBioplastics from microalgaeâ€â€”Polyhydroxyalkanoate production by cyanobacteria. , 2020, , 597-645.		7
15	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
16	Advances in Polyhydroxyalkanoate (PHA) Production, Volume 2. Bioengineering, 2020, 7, 24.	1.6	16
17	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
18	Novel unexpected functions of PHA granules. Applied Microbiology and Biotechnology, 2020, 104, 4795-4810.	1.7	84

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19	Polyhydroxyalkanoates â€“ Linking Properties, Applications and End-of-life Options. Chemical and Biochemical Engineering Quarterly, 2020, 34, 115-129.	0.5	49
20	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
21	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
22	Production of polyhydroxyalkanoates on waste frying oil employing selected Halomonas strains. Bioresource Technology, 2019, 292, 122028.	4.8	77
23	Polyhydroxyalkanoate Biosynthesis at the Edge of Water Activity-Haloarchaea as Biopolyester Factories. Bioengineering, 2019, 6, 34.	1.6	81
24	What keeps polyhydroxyalkanoates in bacterial cells amorphous? A derivation from stress exposure experiments. Applied Microbiology and Biotechnology, 2019, 103, 1905-1917.	1.7	29
25	PHA granules help bacterial cells to preserve cell integrity when exposed to sudden osmotic imbalances. New Biotechnology, 2019, 49, 129-136.	2.4	72
26	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
27	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
28	Characterization of the promising poly(3-hydroxybutyrate) producing halophilic bacterium Halomonas halophila. Bioresource Technology, 2018, 256, 552-556.	4.8	94
29	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
30	Involvement of polyhydroxyalkanoates in stress resistance of microbial cells: Biotechnological consequences and applications. Biotechnology Advances, 2018, 36, 856-870.	6.0	164
31	Advanced approaches to produce polyhydroxyalkanoate (PHA) biopolyesters in a sustainable and economic fashion. The EuroBiotech Journal, 2018, 2, 89-103.	0.5	63
32	Biomass Extraction Using Non-Chlorinated Solvents for Biocompatibility Improvement of Polyhydroxyalkanoates. Polymers, 2018, 10, 731.	2.0	45
33	A Review on Established and Emerging Fermentation Schemes for Microbial Production of Polyhydroxyalkanoate (PHA) Biopolyesters. Fermentation, 2018, 4, 30.	1.4	121
34	Biodegradable and Biocompatible Polyhydroxy-alkanoates (PHA): Auspicious Microbial Macromolecules for Pharmaceutical and Therapeutic Applications. Molecules, 2018, 23, 362.	1.7	206
35	Producing microbial polyhydroxyalkanoate (PHA) biopolyesters in a sustainable manner. New Biotechnology, 2017, 37, 24-38.	2.4	392
36	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

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37	Special Issue of New Biotechnology: â€œBiopolymers Eu Symposiumâ€• New Biotechnology, 2017, 37, 1.	2.4	0
38	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
39	Advances in Polyhydroxyalkanoate (PHA) Production. Bioengineering, 2017, 4, 88.	1.6	48
40	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
41	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
42	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
43	Poly[(R)-3-hydroxybutyrate] production under different salinity conditions by a novel Bacillus megaterium strain. New Biotechnology, 2016, 33, 73-77.	2.4	35
44	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
45	Cyanobacterial Polyhydroxyalkanoate Production: Status Quo and Quo Vadis?. Current Biotechnology, 2016, 4, 464-480.	0.2	46
46	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
47	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
48	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
49	Potential and Prospects of Continuous Polyhydroxyalkanoate (PHA) Production. Bioengineering, 2015, 2, 94-121.	1.6	51
50	Liquefied Wood as Inexpensive Precursor-Feedstock for Bio-Mediated Incorporation of (R)-3-Hydroxyvalerate into Polyhydroxyalkanoates. Materials, 2015, 8, 6543-6557.	1.3	37
51	Mathematical Modelling as a Tool for Optimized PHA Production. Chemical and Biochemical Engineering Quarterly, 2015, 29, 183-220.	0.5	46
52	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
53	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
54	Designing Hydrophobically Modified Polysaccharide Derivatives for Highly Efficient Enzyme Immobilization. Biomacromolecules, 2015, 16, 2403-2411.	2.6	39

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55	Microalgae for Sustainable Energy Production?. , 2015, , 471-484.		0
56	Design of Closed Photobioreactors for Algal Cultivation. , 2015, , 133-186.		10
57	Influence of glycerol on poly(3-hydroxybutyrate) production by Cupriavidus necator and Burkholderia sacchari. Biochemical Engineering Journal, 2015, 94, 50-57.	1.8	49
58	Biomediated production of structurally diverse poly(hydroxyalkanoates) from surplus streams of the animal processing industry. Polimery, 2015, 60, 298-308.	0.4	44
59	Novel precursors for production of 3-hydroxyvalerate-containing poly[(<i>R</i>)-hydroxyalkanoate]s. Biocatalysis and Biotransformation, 2014, 32, 161-167.	1.1	29
60	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
61	Microalgae as versatile cellular factories for valued products. Algal Research, 2014, 6, 52-63.	2.4	453
62	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
63	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
64	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
65	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
66	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
67	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
68	Biopolymer from industrial residues: Life cycle assessment of poly(hydroxyalkanoates) from whey. Resources, Conservation and Recycling, 2013, 73, 64-71.	5.3	80
69	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
70	Novel Description of mcl-PHA Biosynthesis by Pseudomonas chlororaphis from Animal-Derived Waste. Journal of Biotechnology, 2013, 165, 45-51.	1.9	75
71	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
72	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

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73	Archaeal Production of Polyhydroxyalkanoate (PHA) Co- and Terpolyesters from Biodiesel Industry-Derived By-Products. Archaea, 2013, 2013, 1-10.	2.3	140
74	Polyhydroxyalkanoates: a sustainable solution for industrial polymer production from surplus materials. New Biotechnology, 2012, 29, S54.	2.4	0
75	Characteristics and potential of micro algal cultivation strategies: a review. Journal of Cleaner Production, 2012, 37, 377-388.	4.6	107
76	Process optimization for efficient biomediated PHA production from animal-based waste streams. Clean Technologies and Environmental Policy, 2012, 14, 495-503.	2.1	65
77	Linking ecology with economy: Insights into polyhydroxyalkanoateâ€producing microorganisms. Engineering in Life Sciences, 2011, 11, 222-237.	2.0	101
78	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
79	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
80	Microbial PHA Production from Waste Raw Materials. Microbiology Monographs, 2010, , 85-119.	0.3	68
81	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
82	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
83	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
84	Polyhydroxyalkanoate production from whey by Pseudomonas hydrogenovora. Bioresource Technology, 2008, 99, 4854-4863.	4.8	178
85	Polyhydroxyalkanoate (PHA) Biosynthesis from Whey Lactose. Macromolecular Symposia, 2008, 272, 87-92.	0.4	42
86	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
87	Potential of Various Archae- and Eubacterial Strains as Industrial Polyhydroxyalkanoate Producers from Whey. Macromolecular Bioscience, 2007, 7, 218-226.	2.1	196
88	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
89	Production of Plastics from Waste Derived from Agrofood Industry. , 2006, , 119-135.		1
90	Production of Polyhydroxyalkanoates from Agricultural Waste and Surplus Materialsâ€. Biomacromolecules, 2005, 6, 561-565.	2.6	251

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91	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
92	Sustainable Polymer Production. Polymer-Plastics Technology and Engineering, 2004, 43, 1779-1793.	1.9	92
93	Whey Lactose as a Raw Material for Microbial Production of Biodegradable Polyesters. , 0, , .		16