Emily Balskus

List of Publications by Year
in descending order

99	8,125	66234	53109
papers	citations	42 h-index	85 g-index

126	126	126	10113
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Structural basis for an unprecedented enzymatic alkylation in cylindrocyclophane biosynthesis. ELife, 2022, 11, .	2.8	7
2	The bacterial toxin colibactin triggers prophage induction. Nature, 2022, 603, 315-320.	13.7	46
3	The Stickland Reaction Precursor trans -4-Hydroxy- <scp>l</scp> -Proline Differentially Impacts the Metabolism of Clostridioides difficile and Commensal Clostridia. MSphere, 2022, 7, e0092621.	1.3	8
4	Cysteine dependence of Lactobacillus iners is a potential therapeutic target for vaginal microbiota modulation. Nature Microbiology, 2022, 7, 434-450.	5.9	32
5	Emerging Chemical Diversity and Potential Applications of Enzymes in the DMSO Reductase Superfamily. Annual Review of Biochemistry, 2022, 91, 475-504.	5.0	6
6	Mechanistic Studies of a Skatole-Forming Glycyl Radical Enzyme Suggest Reaction Initiation via Hydrogen Atom Transfer. Journal of the American Chemical Society, 2022, 144, 11110-11119.	6.6	2
7	Deciphering Human Microbiotaâ€“Host Chemical Interactions. ACS Central Science, 2021, 7, 20-29.	5.3	19
8	Structure and assembly of the diiron cofactor in the heme-oxygenaseâ€“like domain of the N -nitrosoureaâ€“producing enzyme SznF. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	31
9	Extension of Diagnostic Fragmentation Filtering for Automated Discovery in DNA Adductomics. Analytical Chemistry, 2021, 93, 5754-5762.	3.2	11
10	Leveraging Microbial Genomes and Genomic Context for Chemical Discovery. Accounts of Chemical Research, 2021, 54, 2788-2797.	7.6	8
11	Elucidation of an anaerobic pathway for metabolism of <scp>l</scp> -carnitineâ€“derived Î³-butyrobetaine to trimethylamine in human gut bacteria. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	30
12	Distribution and diversity of dimetal-carboxylate halogenases in cyanobacteria. BMC Genomics, 2021, 22, 633.	1.2	5
13	Molecular basis of C-S bond cleavage in the glycyl radical enzyme isethionate sulfite-lyase. Cell Chemical Biology, 2021, 28, 1333-1346.e7.	2.5	11
14	The <scp>l</scp>â€Alanosine Gene Cluster Encodes a Pathway for Diazeniumdiolate Biosynthesis. ChemBioChem, 2020, 21, 1155-1160.	1.3	28
15	A Genomic Toolkit for the Mechanistic Dissection of Intractable Human Gut Bacteria. Cell Host and Microbe, 2020, 27, 1001-1013.e9.	5.1	39
16	Discovery of C C bond-forming and bond-breaking radical enzymes: enabling transformations for metabolic engineering. Current Opinion in Biotechnology, 2020, 65, 94-101.	3.3	7
17	Cholesterol Metabolism by Uncultured Human Gut Bacteria Influences Host Cholesterol Level. Cell Host and Microbe, 2020, 28, 245-257.e6.	5.1	151
18	A Peroxodiiron(III/III) Intermediate Mediating Both N-Hydroxylation Steps in Biosynthesis of the N-Nitrosourea Pharmacophore of Streptozotocin by the Multi-domain Metalloenzyme SznF. Journal of the American Chemical Society, 2020, 142, 11818-11828.	6.6	35

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19	Discovery of a Cyclic Choline Analog That Inhibits Anaerobic Choline Metabolism by Human Gut Bacteria. ACS Medicinal Chemistry Letters, 2020, 11, 1980-1985.	1.3	13
20	A widely distributed metalloenzyme class enables gut microbial metabolism of host- and diet-derived catechols. ELife, 2020, 9, .	2.8	40
21	Molecular basis for catabolism of the abundant metabolite trans-4-hydroxy-L-proline by a microbial glycyl radical enzyme. ELife, 2020, 9, .	2.8	16
22	Reactivity of an Unusual Amidase May Explain Colibactinâ€™s DNA Cross-Linking Activity. Journal of the American Chemical Society, 2019, 141, 11489-11496.	6.6	46
23	Trimethylamine N-Oxide Binds and Activates PERK to Promote Metabolic Dysfunction. Cell Metabolism, 2019, 30, 1141-1151.e5.	7.2	215
24	The mysteries of macrocyclic colibactins. Nature Chemistry, 2019, 11, 867-869.	6.6	3
25	Metabolic functions of the human gut microbiota: the role of metalloenzymes. Natural Product Reports, 2019, 36, 593-625.	5.2	59
26	Biocatalytic Friedelâ€“Crafts Alkylation Using a Promiscuous Biosynthetic Enzyme. Angewandte Chemie - International Edition, 2019, 58, 3151-3155.	7.2	37
27	Chemistry, bioactivity and biosynthesis of cyanobacterial alkylresorcinols. Natural Product Reports, 2019, 36, 1437-1461.	5.2	45
28	Biocatalytic Friedelâ€“Crafts Alkylation Using a Promiscuous Biosynthetic Enzyme. Angewandte Chemie, 2019, 131, 3183-3187.	1.6	25
29	A glycyl radical enzyme enables hydrogen sulfide production by the human intestinal bacterium Bilophila wadsworthia. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 3171-3176.	3.3	118
30	Discovery and inhibition of an interspecies gut bacterial pathway for Levodopa metabolism. Science, 2019, 364, .	6.0	431
31	In Vitro Characterization of the Colibactin-Activating Peptidase ClbP Enables Development of a Fluorogenic Activity Probe. ACS Chemical Biology, 2019, 14, 1097-1101.	1.6	10
32	An N-nitrosating metalloenzyme constructs the pharmacophore of streptozotocin. Nature, 2019, 566, 94-99.	13.7	108
33	The human gut bacterial genotoxin colibactin alkylates DNA. Science, 2019, 363, .	6.0	389
34	Structure-Guided Identification of a Small Molecule That Inhibits Anaerobic Choline Metabolism by Human Gut Bacteria. Journal of the American Chemical Society, 2019, 141, 33-37.	6.6	39
35	Gut bacterial phospholipase Ds support disease-associated metabolism by generating choline. Nature Microbiology, 2019, 4, 155-163.	5.9	65
36	Engineering chemical interactions in microbial communities. Chemical Society Reviews, 2018, 47, 1705-1729.	18.7	25

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37	Deciphering Human Gut Microbiotaâ€“Nutrient Interactions: A Role for Biochemistry. Biochemistry, 2018, 57, 2567-2577.	1.2	19
38	Gut Microbiota: Rational Manipulation of Gut Bacterial Metalloenzymes Provides Insights into Dysbiosis and Inflammation. Biochemistry, 2018, 57, 2291-2293.	1.2	3
39	Anaerobic 4-hydroxyproline utilization: Discovery of a new glycyl radical enzyme in the human gut microbiome uncovers a widespread microbial metabolic activity. Gut Microbes, 2018, 9, 1-16.	4.3	30
40	The Human Microbiome. ACS Infectious Diseases, 2018, 4, 1-2.	1.8	5
41	Discovery of small molecule protease inhibitors by investigating a widespread human gut bacterial biosynthetic pathway. Tetrahedron, 2018, 74, 3215-3230.	1.0	9
42	Characterization of 1,2-Propanediol Dehydratases Reveals Distinct Mechanisms for B₁₂-Dependent and Glycyl Radical Enzymes. Biochemistry, 2018, 57, 3222-3226.	1.2	35
43	Announcement of 2019 Keystone Symposia Conference: â€œMicrobiome: Chemical Mechanisms and Biological Consequencesâ€. MSystems, 2018, 3, .	1.7	0
44	Discovering radical-dependent enzymes in the human gut microbiota. Current Opinion in Chemical Biology, 2018, 47, 86-93.	2.8	10
45	Glutamic acid is a carrier for hydrazine during the biosyntheses of fosfazinomycin and kinamycin. Nature Communications, 2018, 9, 3687.	5.8	54
46	Discovery of a Diazo-Forming Enzyme in Cremeomycin Biosynthesis. Journal of Organic Chemistry, 2018, 83, 7539-7546.	1.7	52
47	Purification and Characterization of the Choline Trimethylamine-Lyase (CutC)-Activating Protein CutD. Methods in Enzymology, 2018, 606, 73-94.	0.4	8
48	Discovery and characterization of a prevalent human gut bacterial enzyme sufficient for the inactivation of a family of plant toxins. ELife, 2018, 7, .	2.8	93
49	The Human Microbiota, Infectious Disease, and Global Health: Challenges and Opportunities. ACS Infectious Diseases, 2018, 4, 14-26.	1.8	34
50	Anaerobic 4â€Hydroxyproline Metabolism by a Widespread Microbial Glycyl Radical Enzyme. FASEB Journal, 2018, 32, 534.16.	0.2	0
51	A prominent glycyl radical enzyme in human gut microbiomes metabolizes trans -4-hydroxy-<scp>l</scp> -proline. Science, 2017, 355, .	6.0	126
52	Production of Stealthin C Involves an Sâ€“N-Type Smiles Rearrangement. Journal of the American Chemical Society, 2017, 139, 2864-2867.	6.6	24
53	Natural product discovery from the human microbiome. Journal of Biological Chemistry, 2017, 292, 8546-8552.	1.6	66
54	Chemical transformation of xenobiotics by the human gut microbiota. Science, 2017, 356, .	6.0	657

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55	Heteroatomâ€“Heteroatom Bond Formation in Natural Product Biosynthesis. Chemical Reviews, 2017, 117, 5784-5863.	23.0	131
56	Metabolic, Epigenetic, and Transgenerational Effects of Gut Bacterial Choline Consumption. Cell Host and Microbe, 2017, 22, 279-290.e7.	5.1	144
57	Colibactin assembly line enzymes use S-adenosylmethionine to build a cyclopropane ring. Nature Chemical Biology, 2017, 13, 1063-1065.	3.9	57
58	A new strategy for aromatic ring alkylation in cylindrocyclophane biosynthesis. Nature Chemical Biology, 2017, 13, 916-921.	3.9	71
59	Interfacing Biocompatible Reactions with Engineered Escherichia coli. Methods in Molecular Biology, 2017, 1586, 409-421.	0.4	0
60	Chemical discovery in the microbial world. FASEB Journal, 2017, 31, 258.2.	0.2	0
61	Designer Micelles Accelerate Flux Through Engineered Metabolism in E. coli and Support Biocompatible Chemistry. Angewandte Chemie - International Edition, 2016, 55, 6023-6027.	7.2	60
62	Designer Micelles Accelerate Flux Through Engineered Metabolism in E. coli and Support Biocompatible Chemistry. Angewandte Chemie, 2016, 128, 6127-6131.	1.6	22
63	The Plot Thickens: Diet Microbe Interactions May Modulate Thrombosis Risk. Cell Metabolism, 2016, 23, 573-575.	7.2	9
64	Molecular Basis of Câ€“N Bond Cleavage by the Glycyl Radical Enzyme Choline Trimethylamine-Lyase. Cell Chemical Biology, 2016, 23, 1206-1216.	2.5	54
65	Addressing Infectious Disease Challenges by Investigating Microbiomes. ACS Infectious Diseases, 2016, 2, 453-455.	1.8	2
66	Characterization of Polyketide Synthase Machinery from the pks Island Facilitates Isolation of a Candidate Precolibactin. ACS Chemical Biology, 2016, 11, 1287-1295.	1.6	56
67	Exploring and Understanding the Biochemical Diversity of the Human Microbiota. Cell Chemical Biology, 2016, 23, 18-30.	2.5	115
68	The Cremeomycin Biosynthetic Gene Cluster Encodes a Pathway for Diazo Formation. ChemBioChem, 2015, 16, 2172-2175.	1.3	34
69	Biosynthesisâ€Assisted Structural Elucidation of the Bartolosides, Chlorinated Aromatic Glycolipids from Cyanobacteria. Angewandte Chemie - International Edition, 2015, 54, 11063-11067.	7.2	43
70	Interfacing Microbial Styrene Production with a Biocompatible Cyclopropanation Reaction. Angewandte Chemie, 2015, 127, 7212-7215.	1.6	26
71	Shedding light on sunscreen biosynthesis in zebrafish. ELife, 2015, 4, .	2.8	5
72	Using non-enzymatic chemistry to influence microbial metabolism. Current Opinion in Chemical Biology, 2015, 25, 71-79.	2.8	28

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73	Assembly line termination in cylindrocyclophane biosynthesis: discovery of an editing type II thioesterase domain in a type I polyketide synthase. Chemical Science, 2015, 6, 3816-3822.	3.7	29
74	Interfacing Microbial Styrene Production with a Biocompatible Cyclopropanation Reaction. Angewandte Chemie - International Edition, 2015, 54, 7106-7109.	7.2	75
75	Isolation of a Metabolite from the pks Island Provides Insights into Colibactin Biosynthesis and Activity. Organic Letters, 2015, 17, 1545-1548.	2.4	61
76	Colibactin: understanding an elusive gut bacterial genotoxin. Natural Product Reports, 2015, 32, 1534-1540.	5.2	87
77	Minimum Information about a Biosynthetic Gene cluster. Nature Chemical Biology, 2015, 11, 625-631.	3.9	715
78	Characterization and Detection of a Widely Distributed Gene Cluster That Predicts Anaerobic Choline Utilization by Human Gut Bacteria. MBio, 2015, 6, .	1.8	173
79	Radical Chemistry in the Human Gut: Discovery of Choline Trimethylamineâ€Lyase. FASEB Journal, 2015, 29, 575.15.	0.2	0
80	Mechanistic insight into digoxin inactivation byEggerthella lentaaugments our understanding of its pharmacokinetics. Gut Microbes, 2014, 5, 233-238.	4.3	139
81	Lomaiviticin Biosynthesis Employs a New Strategy for Starter Unit Generation. Organic Letters, 2014, 16, 640-643.	2.4	27
82	Sponge symbionts play defense. Nature Chemical Biology, 2014, 10, 611-612.	3.9	5
83	Characterization of Choline Trimethylamine-Lyase Expands the Chemistry of Glycyl Radical Enzymes. ACS Chemical Biology, 2014, 9, 1408-1413.	1.6	103
84	A Biocompatible Alkene Hydrogenation Merges Organic Synthesis with Microbial Metabolism. Angewandte Chemie - International Edition, 2014, 53, 7785-7788.	7.2	64
85	Opportunities for merging chemical and biological synthesis. Current Opinion in Biotechnology, 2014, 30, 1-8.	3.3	77
86	Discovery of the lomaiviticin biosynthetic gene cluster in Salinispora pacifica. Tetrahedron, 2014, 70, 4156-4164.	1.0	55
87	Predicting and Manipulating Cardiac Drug Inactivation by the Human Gut Bacterium Eggerthella lenta. Science, 2013, 341, 295-298.	6.0	536
88	Rescuing Auxotrophic Microorganisms with Nonenzymatic Chemistry. Angewandte Chemie - International Edition, 2013, 52, 11800-11803.	7.2	32
89	A Prodrug Resistance Mechanism Is Involved in Colibactin Biosynthesis and Cytotoxicity. Journal of the American Chemical Society, 2013, 135, 3359-3362.	6.6	158
90	Using Chemical Knowledge to Uncover New Biological Function: Discovery of the Cylindrocyclophane Biosynthetic Pathway. Synlett, 2013, 24, 1464-1470.	1.0	10

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91	Microbial conversion of choline to trimethylamine requires a glycyl radical enzyme. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 21307-21312.	3.3	534
92	Cylindrocyclophane Biosynthesis Involves Functionalization of an Unactivated Carbon Center. Journal of the American Chemical Society, 2012, 134, 18518-18521.	6.6	67
93	The biosynthesis of cyanobacterial sunscreen scytonemin in intertidal microbial mat communities. FEMS Microbiology Ecology, 2011, 77, 322-332.	1.3	64
94	The Genetic and Molecular Basis for Sunscreen Biosynthesis in Cyanobacteria. Science, 2010, 329, 1653-1656.	6.0	315
95	An Enzymatic Cyclopentyl[b]indole Formation Involved in Scytonemin Biosynthesis. Journal of the American Chemical Society, 2009, 131, 14648-14649.	6.6	79
96	Structural Analysis of Spiro Î²-Lactone Proteasome Inhibitors. Journal of the American Chemical Society, 2008, 130, 14981-14983.	6.6	40
97	Investigating the Initial Steps in the Biosynthesis of Cyanobacterial Sunscreen Scytonemin. Journal of the American Chemical Society, 2008, 130, 15260-15261.	6.6	123
98	Asymmetric Catalysis of the Transannular Diels-Alder Reaction. Science, 2007, 317, 1736-1740.	6.0	100
99	Î±,Î²-Unsaturated Î²-Silyl Imide Substrates for Catalytic, Enantioselective Conjugate Additions:â€‰ A Total Synthesis of (+)-Lactacystin and the Discovery of a New Proteasome Inhibitor. Journal of the American Chemical Society, 2006, 128, 6810-6812.	6.6	140