

# Runhui Liu

## List of Publications by Year in descending order

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76  
papers

3,435  
citations

147566

31  
h-index

149479

56  
g-index

80  
all docs

80  
docs citations

80  
times ranked

2777  
citing authors

#	ARTICLE	IF	CITATIONS
1	Versatile Antibacterial Materials: An Emerging Arsenal for Combatting Bacterial Pathogens. <i>Advanced Functional Materials</i> , 2018, 28, 1802140.	7.8	372
2	Tuning the Biological Activity Profile of Antibacterial Polymers via Subunit Substitution Pattern. <i>Journal of the American Chemical Society</i> , 2014, 136, 4410-4418.	6.6	175
3	Poly(2-oxazoline)-Based Functional Peptide Mimics: Eradicating MRSA Infections and Persisters while Alleviating Antimicrobial Resistance. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 6412-6419.	7.2	162
4	Lithium hexamethyldisilazide initiated superfast ring opening polymerization of alpha-amino acid N-carboxyanhydrides. <i>Nature Communications</i> , 2018, 9, 5297.	5.8	136
5	Impact of Antifouling PEG Layer on the Performance of Functional Peptides in Regulating Cell Behaviors. <i>Journal of the American Chemical Society</i> , 2019, 141, 16772-16780.	6.6	133
6	Nylon-3 Polymers with Selective Antifungal Activity. <i>Journal of the American Chemical Society</i> , 2013, 135, 5270-5273.	6.6	127
7	Nylon-3 Polymers Active against Drug-Resistant <i>Candida albicans</i> Biofilms. <i>Journal of the American Chemical Society</i> , 2015, 137, 2183-2186.	6.6	123
8	Surface Modified with a Host Defense Peptide-Mimicking $\beta$ -Peptide Polymer Kills Bacteria on Contact with High Efficacy. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 15395-15400.	4.0	117
9	Dealing with the Foreign-Body Response to Implanted Biomaterials: Strategies and Applications of New Materials. <i>Advanced Functional Materials</i> , 2021, 31, 2007226.	7.8	114
10	Structure-Activity Relationships among Antifungal Nylon-3 Polymers: Identification of Materials Active against Drug-Resistant Strains of <i>Candida albicans</i> . <i>Journal of the American Chemical Society</i> , 2014, 136, 4333-4342.	6.6	113
11	Ternary Nylon-3 Copolymers as Host-Defense Peptide Mimics: Beyond Hydrophobic and Cationic Subunits. <i>Journal of the American Chemical Society</i> , 2014, 136, 14530-14535.	6.6	108
12	Addressing MRSA infection and antibacterial resistance with peptoid polymers. <i>Nature Communications</i> , 2021, 12, 5898.	5.8	97
13	Therapeutic strategies against bacterial biofilms. <i>Fundamental Research</i> , 2021, 1, 193-212.	1.6	84
14	Host defense peptide mimicking poly- $\beta$ -peptides with fast, potent and broad spectrum antibacterial activities. <i>Biomaterials Science</i> , 2019, 7, 2144-2151.	2.6	83
15	Practical Preparation of Infection-Resistant Biomedical Surfaces from Antimicrobial $\beta$ -Peptide Polymers. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 18907-18913.	4.0	77
16	Synthetic Polymers Active against <i>Clostridium difficile</i> Vegetative Cell Growth and Spore Outgrowth. <i>Journal of the American Chemical Society</i> , 2014, 136, 14498-14504.	6.6	62
17	Silk-Inspired $\beta$ -Peptide Materials Resist Fouling and the Foreign-Body Response. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 9586-9593.	7.2	56
18	Secondary Amine Pendant $\beta$ -Peptide Polymers Displaying Potent Antibacterial Activity and Promising Therapeutic Potential in Treating MRSA-Induced Wound Infections and Keratitis. <i>Journal of the American Chemical Society</i> , 2022, 144, 1690-1699.	6.6	56

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19	Dual mechanism Î²-amino acid polymers promoting cell adhesion. <i>Nature Communications</i> , 2021, 12, 562.	5.8	54
20	Manganese dioxide nanozyme for reactive oxygen therapy of bacterial infection and wound healing. <i>Biomaterials Science</i> , 2021, 9, 5965-5976.	2.6	52
21	Water-insensitive Synthesis of Poly(Î²-peptides) with Defined Architecture. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 7240-7244.	7.2	50
22	Correlating antimicrobial activity and model membrane leakage induced by nylon-3 polymers and detergents. <i>Soft Matter</i> , 2015, 11, 6840-6851.	1.2	48
23	Interplay among Subunit Identity, Subunit Proportion, Chain Length, and Stereochemistry in the Activity Profile of Sequence-Random Peptide Mixtures. <i>Journal of the American Chemical Society</i> , 2013, 135, 11748-11751.	6.6	47
24	Single-Cell, Time-Resolved Antimicrobial Effects of a Highly Cationic, Random Nylon-3 Copolymer on Live <i>Escherichia coli</i> . <i>ACS Chemical Biology</i> , 2016, 11, 113-120.	1.6	44
25	Effects of Cyclic vs Acyclic Hydrophobic Subunits on the Chemical Structure and Biological Properties of Nylon-3 Copolymers. <i>ACS Macro Letters</i> , 2013, 2, 753-756.	2.3	40
26	Polymer Chain Length Effects on Fibroblast Attachment on Nylon-3-Modified Surfaces. <i>Biomacromolecules</i> , 2012, 13, 1100-1105.	2.6	39
27	Host Defense Peptide Mimicking Peptide Polymer Exerting Fast, Broad Spectrum, and Potent Activities toward Clinically Isolated Multidrug-Resistant Bacteria. <i>ACS Infectious Diseases</i> , 2020, 6, 479-488.	1.8	39
28	Peptide polymer displaying potent activity against clinically isolated multidrug resistant <i>Pseudomonas aeruginosa</i> in vitro and in vivo. <i>Biomaterials Science</i> , 2020, 8, 739-745.	2.6	39
29	Short Guanidinium-Functionalized Poly(2-oxazoline)s Displaying Potent Therapeutic Efficacy on Drug-Resistant Fungal Infections. <i>Angewandte Chemie - International Edition</i> , 2022, 61, e202200778.	7.2	37
30	Nylon-3 Polymers That Enable Selective Culture of Endothelial Cells. <i>Journal of the American Chemical Society</i> , 2013, 135, 16296-16299.	6.6	35
31	Effective and biocompatible antibacterial surfaces via facile synthesis and surface modification of peptide polymers. <i>Bioactive Materials</i> , 2021, 6, 4531-4541.	8.6	34
32	Alpha-beta chimeric polypeptide molecular brushes display potent activity against superbugs-methicillin resistant <i>Staphylococcus aureus</i> . <i>Science China Materials</i> , 2019, 62, 604-610.	3.5	33
33	Bio-inspired poly-DL-serine materials resist the foreign-body response. <i>Nature Communications</i> , 2021, 12, 5327.	5.8	33
34	Superfast and Water-insensitive Polymerization on Î±-Amino Acid N-Carboxyanhydrides to Prepare Polypeptides Using Tetraalkylammonium Carboxylate as the Initiator. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 26063-26071.	7.2	33
35	Breaking or following the membrane-targeting mechanism: Exploring the antibacterial mechanism of host defense peptide mimicking poly(2-oxazoline)s. <i>Journal of Materials Science and Technology</i> , 2020, 59, 220-226.	5.6	30
36	Structural design and antimicrobial properties of polypeptides and saccharide-polypeptide conjugates. <i>Journal of Materials Chemistry B</i> , 2020, 8, 9173-9196.	2.9	27

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37	Peptide Polymer-Embedded Cement Acting as an Effective Treatment of MRSA-Infected Chronic Osteomyelitis. <i>Advanced Functional Materials</i> , 2022, 32, 2107942.	7.8	27
38	A sandcastle worm-inspired strategy to functionalize wet hydrogels. <i>Nature Communications</i> , 2021, 12, 6331.	5.8	27
39	Heterochiral $\beta$ -Peptide Polymers Combating Multidrug-Resistant Cancers Effectively without Inducing Drug Resistance. <i>Journal of the American Chemical Society</i> , 2022, 144, 7283-7294.	6.6	26
40	Screening Nylon-3 Polymers, a New Class of Cationic Amphiphiles, for siRNA Delivery. <i>Molecular Pharmaceutics</i> , 2015, 12, 362-374.	2.3	25
41	Host Defense Peptide-Mimicking Amphiphilic $\beta$ -Peptide Polymer (Bu:DM) Exhibiting Anti-Biofilm, Immunomodulatory, and <i>In Vivo</i> Anti-Infective Activity. <i>Journal of Medicinal Chemistry</i> , 2020, 63, 12921-12928.	2.9	25
42	The impact of antifouling layers in fabricating bioactive surfaces. <i>Acta Biomaterialia</i> , 2021, 126, 45-62.	4.1	25
43	An alpha/beta chimeric peptide molecular brush for eradicating MRSA biofilms and persister cells to mitigate antimicrobial resistance. <i>Biomaterials Science</i> , 2020, 8, 6883-6889.	2.6	23
44	Peptide-Mimicking Poly(2-oxazoline)s Displaying Potent Antimicrobial Properties. <i>ChemMedChem</i> , 2021, 16, 309-315.	1.6	22
45	Dual functional $\beta$ -peptide polymer-modified resin beads for bacterial killing and endotoxin adsorption. <i>BMC Materials</i> , 2019, 1, .	6.8	20
46	Alkali-metal hexamethyldisilazide initiated polymerization on alpha-amino acid N-substituted N-carboxyanhydrides for facile polypeptoid synthesis. <i>Chinese Chemical Letters</i> , 2021, 32, 1675-1678.	4.8	20
47	Light-Cross-linked Ene Diyne Small-Molecule Micelle-Based Drug-Delivery System. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 8896-8903.	4.0	19
48	Microbial Metabolite Inspired $\beta$ -Peptide Polymers Displaying Potent and Selective Antifungal Activity. <i>Advanced Science</i> , 2022, 9, e2104871.	5.6	19
49	An Effective Strategy to Develop Potent and Selective Antifungal Agents from Cell Penetrating Peptides in Tackling Drug-Resistant Invasive Fungal Infections. <i>Journal of Medicinal Chemistry</i> , 2022, 65, 7296-7311.	2.9	19
50	The Impact of Nylon-3 Copolymer Composition on the Efficiency of siRNA Delivery to Glioblastoma Cells. <i>Nanomaterials</i> , 2019, 9, 986.	1.9	18
51	Introduction to Antibacterial Biomaterials. <i>Biomaterials Science</i> , 2020, 8, 6812-6813.	2.6	18
52	Using <i>In Vivo</i> Assessment on Host Defense Peptide Mimicking Polymer-Modified Surfaces for Combating Implant Infections. <i>ACS Applied Bio Materials</i> , 2021, 4, 3811-3829.	2.3	16
53	Efficient synthesis of amino acid polymers for protein stabilization. <i>Biomaterials Science</i> , 2019, 7, 3675-3682.	2.6	15
54	Synthesis of poly- $\beta$ -peptides with tunable sequence via the copolymerization on N-carboxyanhydride and N-thiocarboxyanhydride. <i>IScience</i> , 2021, 24, 103124.	1.9	15

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55	Quaternized Polysaccharide-Based Cationic Micelles as a Macromolecular Approach to Eradicate Multidrug-Resistant Bacterial Infections while Mitigating Antimicrobial Resistance. <i>Small</i> , 2022, 18, e2104885.	5.2	15
56	Poly(2-Oxazoline)-Based Functional Peptide Mimics: Eradicating MRSA Infections and Persisters while Alleviating Antimicrobial Resistance. <i>Angewandte Chemie</i> , 2020, 132, 6474-6481.	1.6	14
57	The membrane-targeting mechanism of host defense peptides inspiring the design of polypeptide-conjugated gold nanoparticles exhibiting effective antibacterial activity against methicillin-resistant <i>Staphylococcus aureus</i> . <i>Journal of Materials Chemistry B</i> , 2021, 9, 5092-5101.	2.9	10
58	Biodegradable peptide polymers as alternatives to antibiotics used in aquaculture. <i>Biomaterials Science</i> , 2022, 10, 4193-4207.	2.6	10
59	In vitro and in vivo evaluation of implantable bacterial-killing coatings based on host defense peptides and their synthetic mimics. <i>Journal of Materials Science and Technology</i> , 2021, 91, 90-104.	5.6	9
60	Hidden complexity in membrane permeabilization behavior of antimicrobial polycations. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 1475-1488.	1.3	8
61	Facile synthesis of polypeptoids bearing bulky sidechains <i>via</i> urea accelerated ring-opening polymerization of $\alpha$ -amino acid $N$ -substituted $N$ -carboxyanhydrides. <i>Polymer Chemistry</i> , 2022, 13, 420-426.	1.9	8
62	Controllable Polymerization of $N$ -Substituted $\alpha$ -Alanine $N$ -Thiocarboxyanhydrides for Convenient Synthesis of Functional Poly( $\alpha$ -peptoid)s. <i>CCS Chemistry</i> , 2023, 5, 994-1004.	4.6	8
63	Silk-Inspired $\alpha$ -Peptide Materials Resist Fouling and the Foreign-Body Response. <i>Angewandte Chemie</i> , 2020, 132, 9673-9680.	1.6	7
64	Cationic Homopolymers Inhibit Spore and Vegetative Cell Growth of <i>Clostridioides difficile</i> . <i>ACS Infectious Diseases</i> , 2021, 7, 1236-1247.	1.8	7
65	Interplay of Fusion, Leakage, and Electrostatic Lipid Clustering: Membrane Perturbations by a Hydrophobic Antimicrobial Polycation. <i>Langmuir</i> , 2022, 38, 2379-2391.	1.6	6
66	Antifouling zwitterionic poly- $\alpha$ -peptides. <i>Applied Materials Today</i> , 2022, 27, 101511.	2.3	6
67	Superfast and Water-Insensitive Polymerization on $\alpha$ -Amino Acid $N$ -Carboxyanhydrides to Prepare Polypeptides Using Tetraalkylammonium Carboxylate as the Initiator. <i>Angewandte Chemie</i> , 2021, 133, 26267-26275.	1.6	5
68	Statistic Copolymers Working as Growth Factor-Binding Mimics of Fibronectin. <i>Advanced Science</i> , 2022, 9, e2200775.	5.6	5
69	Controlled copolymerization of $\alpha$ -NCAs and $\alpha$ -NNTAs for preparing peptide/peptoid hybrid polymers with adjustable proteolysis. <i>Polymer Chemistry</i> , 2022, 13, 388-394.	1.9	4
70	Amphipathic poly- $\alpha$ -peptides for intracellular protein delivery. <i>Chemical Communications</i> , 2022, 58, 4320-4323.	2.2	4
71	Host defense peptide mimicking cyclic peptoid polymers exerting strong activity against drug-resistant bacteria. <i>Biomaterials Science</i> , 2022, 10, 4515-4524.	2.6	4
72	Water-Insensitive Synthesis of Poly- $\alpha$ -Peptides with Defined Architecture. <i>Angewandte Chemie</i> , 2020, 132, 7307-7311.	1.6	3

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73	Foreignâ€Body Responses: Dealing with the Foreignâ€Body Response to Implanted Biomaterials: Strategies and Applications of New Materials (Adv. Funct. Mater. 6/2021). Advanced Functional Materials, 2021, 31, 2170040.	7.8	3
74	Short Guanidiniumâ€Functionalized Poly(2â€Oxazoline)s Displaying Potent Therapeutic Efficacy on Drugâ€Resistant Fungal Infections. Angewandte Chemie, 2022, 134, .	1.6	3
75	Innentitelbild: Poly(2â€Oxazoline)â€Based Functional Peptide Mimics: Eradicating MRSA Infections and Persists while Alleviating Antimicrobial Resistance (Angew. Chem. 16/2020). Angewandte Chemie, 2020, 132, 6354-6354.	1.6	2
76	Facile one-pot synthesis of 2-oxazoline. Tetrahedron Letters, 2022, 91, 153637.	0.7	2