Rein Ulijn

List of Publications by Year
in descending order

130 papers	11,382 citations	28274 55 h-index	29157 104 g-index
133 all docs	133 docs citations	133 times ranked	8654 citing authors

#	Article	IF	Citations
1	Design of nanostructures based on aromatic peptide amphiphiles. Chemical Society Reviews, 2014, 43, 8150-8177.	38.1	690
2	Self-assembled peptide-based hydrogels as scaffolds for anchorage-dependent cells. Biomaterials, 2009, 30, 2523-2530.	11.4	620
3	Exploring the sequence space for (tri-)peptide self-assembly to design and discover new hydrogels. Nature Chemistry, 2015, 7, 30-37.	13.6	597
4	Enzyme-assisted self-assembly under thermodynamic control. Nature Nanotechnology, 2009, 4, 19-24.	31.5	492
5	Enzyme-Triggered Self-Assembly of Peptide Hydrogels via Reversed Hydrolysis. Journal of the American Chemical Society, 2006, 128, 1070-1071.	13.7	476
6	Fmoc-Diphenylalanine Self-Assembly Mechanism Induces Apparent p<i>K</i>_a Shifts. Langmuir, 2009, 25, 9447-9453.	3.5	390
7	Biocatalytic induction of supramolecular order. Nature Chemistry, 2010, 2, 1089-1094.	13.6	324
8	Peptide Nanofibers with Dynamic Instability through Nonequilibrium Biocatalytic Assembly. Journal of the American Chemical Society, 2013, 135, 16789-16792.	13.7	275
9	Controlling Cancer Cell Fate Using Localized Biocatalytic Self-Assembly of an Aromatic Carbohydrate Amphiphile. Journal of the American Chemical Society, 2015, 137, 576-579.	13.7	260
10	Enzyme responsive materials: design strategies and future developments. Biomaterials Science, 2013, 1, 11-39.	5.4	257
11	Polymeric peptide pigments with sequence-encoded properties. Science, 2017, 356, 1064-1068.	12.6	244
12	Protease-Triggered Dispersion of Nanoparticle Assemblies. Journal of the American Chemical Society, 2007, 129, 4156-4157.	13.7	233
13	Amino-acid-encoded biocatalytic self-assembly enables the formation of transient conducting nanostructures. Nature Chemistry, 2018, 10, 696-703.	13.6	189
14	Virtual Screening for Dipeptide Aggregation: Toward Predictive Tools for Peptide Self-Assembly. Journal of Physical Chemistry Letters, 2011, 2, 2380-2384.	4.6	185
15	Dynamic peptide libraries for the discovery of supramolecular nanomaterials. Nature Nanotechnology, 2016, 11, 960-967.	31.5	181
16	Effect of Glycine Substitution on Fmocâ€“Diphenylalanine Self-Assembly and Gelation Properties. Langmuir, 2011, 27, 14438-14449.	3.5	177
17	Biocatalytic Pathway Selection in Transient Tripeptide Nanostructures. Angewandte Chemie - International Edition, 2015, 54, 8119-8123.	13.8	171
18	Peptide-Based Supramolecular Systems Chemistry. Chemical Reviews, 2021, 121, 13869-13914.	47.7	171

#	Article	IF	Citations
19	Peptideâ€Based Molecular Hydrogels as Supramolecular Protein Mimics. Chemistry - A European Journal, 2017, 23, 981-993.	3.3	147
20	Exploiting Enzymatic (Reversed) Hydrolysis in Directed Selfâ€Assembly of Peptide Nanostructures. Small, 2008, 4, 279-287.	10.0	145
21	An investigation of the conductivity of peptide nanotube networks prepared by enzyme-triggered self-assembly. Nanoscale, 2010, 2, 960.	5.6	139
22	MMP-9 triggered self-assembly of doxorubicin nanofiber depots halts tumor growth. Biomaterials, 2016, 98, 192-202.	11.4	131
23	Switchable Hydrolase Based on Reversible Formation of Supramolecular Catalytic Site Using a Selfâ€Assembling Peptide. Angewandte Chemie - International Edition, 2017, 56, 14511-14515.	13.8	131
24	Biocatalytic Selfâ€Assembly of Supramolecular Chargeâ€Transfer Nanostructures Based on nâ€Type Semiconductorâ€Appended Peptides. Angewandte Chemie - International Edition, 2014, 53, 5882-5887.	13.8	129
25	Assessing the Utility of Infrared Spectroscopy as a Structural Diagnostic Tool for Î²-Sheets in Self-Assembling Aromatic Peptide Amphiphiles. Langmuir, 2013, 29, 9510-9515.	3.5	128
26	Stable Emulsions Formed by Self-Assembly of Interfacial Networks of Dipeptide Derivatives. ACS Nano, 2014, 8, 7005-7013.	14.6	127
27	Enzyme-responsive hydrogel particles for the controlled release of proteins: designing peptide actuators to match payload. Soft Matter, 2008, 4, 821.	2.7	120
28	Guiding principles for peptide nanotechnology through directed discovery. Chemical Society Reviews, 2018, 47, 3737-3758.	38.1	116
29	Aromatic peptide amphiphiles: significance of the Fmoc moiety. Chemical Communications, 2013, 49, 10587.	4.1	112
30	Peptide and protein based materials in 2010: from design and structure to function and application. Chemical Society Reviews, 2010, 39, 3349.	38.1	111
31	Switchable Hydrolase Based on Reversible Formation of Supramolecular Catalytic Site Using a Selfâ€Assembling Peptide. Angewandte Chemie, 2017, 129, 14703-14707.	2.0	109
32	Dramatic Specificâ€ion Effect in Supramolecular Hydrogels. Chemistry - A European Journal, 2012, 18, 11723-11731.	3.3	106
33	Enzymatic Catalyzed Synthesis and Triggered Gelation of Ionic Peptides. Langmuir, 2010, 26, 11297-11303.	3.5	93
34	Dynamic Surfaces for the Study of Mesenchymal Stem Cell Growth through Adhesion Regulation. ACS Nano, 2016, 10, 6667-6679.	14.6	93
35	Insights into the Coassembly of Hydrogelators and Surfactants Based on Aromatic Peptide Amphiphiles. Biomacromolecules, 2014, 15, 1171-1184.	5.4	91
36	Micelle to fibre biocatalytic supramolecular transformation of an aromatic peptide amphiphile. Chemical Communications, 2011, 47, 728-730.	4.1	90

#	Article	IF	Citations
37	Differential Self-Assembly and Tunable Emission of Aromatic Peptide <i>Bola</i>-Amphiphiles Containing Perylene Bisimide in Polar Solvents Including Water. Langmuir, 2014, 30, 7576-7584.	3.5	86
38	Exploiting CH-Ï€ interactions in supramolecular hydrogels of aromatic carbohydrate amphiphiles. Chemical Science, 2011, 2, 1349.	7.4	84
39	MMP-9 triggered micelle-to-fibre transitions for slow release of doxorubicin. Biomaterials Science, 2015, 3, 246-249.	5.4	83
40	Sequence/structure relationships in aromatic dipeptide hydrogels formed under thermodynamic control by enzyme-assisted self-assembly. Soft Matter, 2012, 8, 5595.	2.7	82
41	Conducting Nanofibers and Organogels Derived from the Self-Assembly of Tetrathiafulvalene-Appended Dipeptides. Langmuir, 2014, 30, 12429-12437.	3.5	82
42	Supramolecular Fibers in Gels Can Be at Thermodynamic Equilibrium: A Simple Packing Model Reveals Preferential Fibril Formation <i>versus</i> Crystallization. ACS Nano, 2016, 10, 2661-2668.	14.6	79
43	Discovery of energy transfer nanostructures using gelation-driven dynamic combinatorial libraries. Chemical Science, 2013, 4, 3699.	7.4	78
44	Cooperative Self-Assembly of Peptide Gelators and Proteins. Biomacromolecules, 2013, 14, 4368-4376.	5.4	76
45	Insight into the esterase like activity demonstrated by an imidazole appended self-assembling hydrogelator. Chemical Communications, 2015, 51, 13213-13216.	4.1	74
46	Tripeptide Emulsifiers. Advanced Materials, 2016, 28, 1381-1386.	21.0	73
47	Antimicrobial properties of enzymatically triggered self-assembling aromatic peptide amphiphiles. Biomaterials Science, 2013, 1, 1138.	5.4	65
48	Biocatalytic Selfâ€Assembly Cascades. Angewandte Chemie - International Edition, 2017, 56, 6828-6832.	13.8	65
49	Dynamic covalent chemistry in aid of peptide self-assembly. Current Opinion in Biotechnology, 2010, 21, 401-411.	6.6	64
50	Mechanosensitive peptidegelation: mode of agitation controls mechanical properties and nano-scale morphology. Soft Matter, 2011, 7, 1732-1740.	2.7	63
51	Enzymeâ€Activated Surfactants for Dispersion of Carbon Nanotubes. Small, 2009, 5, 587-590.	10.0	62
52	Biocatalytic self-assembly of 2D peptide-based nanostructures. Soft Matter, 2011, 7, 10032.	2.7	60
53	Mesenchymal Stem Cell Fate: Applying Biomaterials for Control of Stem Cell Behavior. Frontiers in Bioengineering and Biotechnology, 2016, 4, 38.	4.1	60
54	Minimalistic supramolecular proteoglycan mimics by co-assembly of aromatic peptide and carbohydrate amphiphiles. Chemical Science, 2019, 10, 2385-2390.	7.4	60

#	Article	IF	Citations
55	Cooperative, ion-sensitive co-assembly of tripeptide hydrogels. Chemical Communications, 2017, 53, 9562-9565.	4.1	57
56	Biocatalytic Pathway Selection in Transient Tripeptide Nanostructures. Angewandte Chemie, 2015, 127, 8237-8241.	2.0	56
57	Metastable hydrogels from aromatic dipeptides. Chemical Communications, 2016, 52, 13889-13892.	4.1	55
58	Evolving nanomaterials using enzyme-driven dynamic peptide libraries (eDPL). Faraday Discussions, 2009, 143, 293.	3.2	54
59	Biofabricating Multifunctional Soft Matter with Enzymes and Stimuliâ€Responsive Materials. Advanced Functional Materials, 2012, 22, 3004-3012.	14.9	54
60	Biocatalytically Triggered Coâ€Assembly of Twoâ€Component Core/Shell Nanofibers. Small, 2014, 10, 973-979.	10.0	54
61	Discovery of Catalytic Phages by Biocatalytic Self-Assembly. Journal of the American Chemical Society, 2014, 136, 15893-15896.	13.7	53
62	Transient supramolecular reconfiguration of peptide nanostructures using ultrasound. Materials Horizons, 2015, 2, 198-202.	12.2	53
63	Tunable Gas Sensing Gels by Cooperative Assembly. Advanced Functional Materials, 2017, 27, 1700803.	14.9	50
64	Biocatalytic amide condensation and gelation controlled by light. Chemical Communications, 2014, 50, 5462-5464.	4.1	49
65	Short Peptides in Minimalistic Biocatalyst Design. Biocatalysis, 2015, 1, 67-81.	2.3	49
66	Differential supramolecular organisation of Fmoc-dipeptides with hydrophilic terminal amino acid residues by biocatalytic self-assembly. Soft Matter, 2012, 8, 11565.	2.7	48
67	Biocatalytic Self-Assembly on Magnetic Nanoparticles. ACS Applied Materials & Interfaces, 2018, 10, 3069-3075.	8.0	44
68	Mechanistic insights of evaporation-induced actuation in supramolecular crystals. Nature Materials, 2021, 20, 403-409.	27.5	44
69	Phosphatase/temperature responsive poly(2-isopropyl-2-oxazoline). Polymer Chemistry, 2011, 2, 306-308.	3.9	42
70	Reversible Electroaddressing of Selfâ€assembling Aminoâ€Acid Conjugates. Advanced Functional Materials, 2011, 21, 1575-1580.	14.9	42
71	Sequence Adaptive Peptideâ€"Polysaccharide Nanostructures by Biocatalytic Self-Assembly. Biomacromolecules, 2015, 16, 3473-3479.	5.4	42
72	Peptide and protein nanotechnology into the 2020s: beyond biology. Chemical Society Reviews, 2018, 47, 3391-3394.	38.1	42

#	Article	IF	Citations
73	Carbohydrate amphiphiles for supramolecular biomaterials: Design, self-assembly, and applications. CheM, 2021, 7, 2943-2964.	11.7	42
74	Locking an oxidation-sensitive dynamic peptide system in the gel state. Chemical Communications, 2010, 46, 3481.	4.1	40
75	Extracellular matrix formation in self-assembled minimalistic bioactive hydrogels based on aromatic peptide amphiphiles. Journal of Tissue Engineering, 2014, 5, 204173141453159.	5.5	40
76	Dynamic Peptide Library for the Discovery of Charge Transfer Hydrogels. ACS Applied Materials & Interfaces, 2015, 7, 25946-25954.	8.0	40
77	Biocatalytic Self-Assembly Using Reversible and Irreversible Enzyme Immobilization. ACS Applied Materials & Interfaces, 2017, 9, 3266-3271.	8.0	40
78	Protonâ€Conductive Melaninâ€Like Fibers through Enzymatic Oxidation of a Selfâ€Assembling Peptide. Advanced Materials, 2020, 32, e2003511.	21.0	38
79	Catalyst: Can Systems Chemistry Unravel the Mysteries of the Chemical Origins of Life?. CheM, 2019, 5, 1917-1920.	11.7	37
80	Characterisation of amino acid modified cellulose surfaces using ToF-SIMS and XPS. Cellulose, 2010, 17, 747-756.	4.9	35
81	Customizing Morphology, Size, and Response Kinetics of Matrix Metalloproteinase-Responsive Nanostructures by Systematic Peptide Design. ACS Nano, 2019, 13, 1555-1562.	14.6	34
82	Tuning Supramolecular Structure and Functions of Peptide <i>bola</i>-Amphiphile by Solvent Evaporationâ€“Dissolution. ACS Applied Materials & Interfaces, 2017, 9, 21390-21396.	8.0	32
83	Tunable Supramolecular Gel Properties by Varying Thermal History. Chemistry - A European Journal, 2019, 25, 7881-7887.	3.3	32
84	Poly(vinylamine) microgels: pH-responsive particles with high primary amine contents. Soft Matter, 2013, 9, 3920.	2.7	31
85	Tuneable Fmocâ€“Pheâ€“(4-X)â€“Pheâ€“NH2 nanostructures by variable electronic substitution. Chemical Communications, 2014, 50, 10630-10633.	4.1	31
86	Using experimental and computational energy equilibration to understand hierarchical self-assembly of Fmoc-dipeptide amphiphiles. Soft Matter, 2016, 12, 8307-8315.	2.7	31
87	Mechanistic insights into phosphatase triggered self-assembly including enhancement of biocatalytic conversion rate. Soft Matter, 2013, 9, 9430.	2.7	30
88	Comparison of methods for thermolysin-catalyzed peptide synthesis including a novel more active catalyst. Biotechnology and Bioengineering, 2000, 69, 633-638.	3.3	28
89	Biocatalytic Self-Assembly of Tripeptide Gels and Emulsions. Langmuir, 2017, 33, 4986-4995.	3.5	26
90	Biocatalytic Selfâ€Assembly Cascades. Angewandte Chemie, 2017, 129, 6932-6936.	2.0	26

#	Article	IF	Citations
91	Selfâ€Assembly Propensity Dictates Lifetimes in Transient Naphthalimideâ€“Dipeptide Nanofibers. Chemistry - A European Journal, 2020, 26, 8372-8376.	3.3	25
92	Enzymatically activated emulsions stabilised by interfacial nanofibre networks. Soft Matter, 2016, 12, 2623-2631.	2.7	23
93	Energy landscaping in supramolecular materials. Current Opinion in Structural Biology, 2018, 51, 9-18.	5.7	23
94	Computational prediction of tripeptide-dipeptide co-assembly. Molecular Physics, 2019, 117, 1151-1163.	1.7	22
95	Melaninâ€Inspired Chromophoric Microparticles Composed of Polymeric Peptide Pigments. Angewandte Chemie - International Edition, 2021, 60, 7564-7569.	13.8	22
96	Phosphatase responsive peptide surfaces. Journal of Materials Chemistry, 2012, 22, 12229.	6.7	21
97	Inhibiting cancer metabolism by aromatic carbohydrate amphiphiles that act as antagonists of the glucose transporter GLUT1. Chemical Science, 2020, 11, 3737-3744.	7.4	21
98	Pathway-dependent gold nanoparticle formation by biocatalytic self-assembly. Nanoscale, 2017, 9, 12330-12334.	5.6	20
99	Order/Disorder in Protein and Peptideâ€Based Biomaterials. Israel Journal of Chemistry, 2020, 60, 1129-1140.	2.3	20
100	Selfâ€Complementary Zwitterionic Peptides Direct Nanoparticle Assembly and Enable Enzymatic Selection of Endocytic Pathways. Advanced Materials, 2022, 34, e2104962.	21.0	20
101	Solvent selection for solid-to-solid synthesis. Biotechnology and Bioengineering, 2002, 80, 509-515.	3.3	19
102	Visible-light photooxidation in water by ¹O₂-generating supramolecular hydrogels. Chemical Science, 2020, 11, 4239-4245.	7.4	19
103	CHARMM force field parameterization protocol for self-assembling peptide amphiphiles: the Fmoc moiety. Physical Chemistry Chemical Physics, 2016, 18, 4659-4667.	2.8	17
104	Raman optical activity of an achiral element in a chiral environment. Journal of Raman Spectroscopy, 2009, 40, 1093-1095.	2.5	16
105	Sub-10 nm Resolution Patterning of Pockets for Enzyme Immobilization with Independent Density and Quasi-3D Topography Control. ACS Applied Materials & Interfaces, 2019, 11, 41780-41790.	8.0	15
106	Comparison of Methods for Surface Modification of Barium Titanate Nanoparticles for Aqueous Dispersibility: Toward Biomedical Utilization of Perovskite Oxides. ACS Applied Materials & Interfaces, 2020, 12, 51135-51147.	8.0	15
107	Molecular dynamics simulations reveal disruptive self-assembly in dynamic peptide libraries. Organic and Biomolecular Chemistry, 2017, 15, 6541-6547.	2.8	15
108	Interfacing biodegradable molecular hydrogels with liquid crystals. Soft Matter, 2013, 9, 1188-1193.	2.7	14

#	Article	IF	Citations
109	Fmocâ€Dipeptide/Porphyrin Molar Ratio Dictates Energy Transfer Efficiency in Nanostructures Produced by Biocatalytic Coâ€Assembly. Chemistry - A European Journal, 2019, 25, 11847-11851.	3.3	14
110	Expanding the Conformational Landscape of Minimalistic Tripeptides by Their <i>O</i>-Glycosylation. Journal of the American Chemical Society, 2021, 143, 19703-19710.	13.7	14
111	High-throughput protein nanopatterning. Faraday Discussions, 2019, 219, 33-43.	3.2	13
112	In Situ, Noncovalent Labeling and Stimulated Emission Depletion-Based Super-Resolution Imaging of Supramolecular Peptide Nanostructures. ACS Nano, 2020, 14, 15056-15063.	14.6	13
113	Unbiased Discovery of Dynamic Peptideâ€ATP Complexes. ChemSystemsChem, 2019, 1, 7-11.	2.6	12
114	Charge complementary enzymatic reconfigurable polymeric nanostructures. Soft Matter, 2012, 8, 5127.	2.7	11
115	Tripeptide-Stabilized Oil-in-Water Nanoemulsion of an Oleic Acidsâ€“Platinum(II) Conjugate as an Anticancer Nanomedicine. Bioconjugate Chemistry, 2018, 29, 2514-2519.	3.6	11
116	Analysis of enzyme-responsive peptide surfaces by Raman spectroscopy. Chemical Communications, 2016, 52, 4698-4701.	4.1	9
117	Spontaneous Aminolytic Cyclization and Selfâ€Assembly of Dipeptide Methyl Esters in Water. ChemSystemsChem, 2020, 2, e2000013.	2.6	9
118	Aromatic carbohydrate amphiphile disrupts cancer spheroids and prevents relapse. Nanoscale, 2020, 12, 19088-19092.	5.6	8
119	The Impact of Tyrosine Iodination on the Aggregation and Cleavage Kinetics of MMP-9-Responsive Peptide Sequences. ACS Biomaterials Science and Engineering, 2022, 8, 579-587.	5.2	8
120	Discovery of phosphotyrosine-binding oligopeptides with supramolecular target selectivity. Chemical Science, 2021, 13, 210-217.	7.4	7
121	A Systematic Study on the Self-Assembly Behaviour of Multi Component Fmoc-Amino Acid-Poly(oxazoline) Systems. Polymers, 2012, 4, 1399-1415.	4.5	5
122	Elucidation of the structure of supramolecular polymorphs in peptide nanofibres using Raman spectroscopy. Journal of Raman Spectroscopy, 2021, 52, 1108-1114.	2.5	3
123	Hydrogel Nanomaterials for Cancer Diagnosis and Therapy. , 2018, , 170-183.		3
124	Melaninâ€Inspired Chromophoric Microparticles Composed of Polymeric Peptide Pigments. Angewandte Chemie, 2021, 133, 7642-7647.	2.0	2
125	Self-Assembly: Biocatalytic Self-Assembly of Nanostructured Peptide Microparticles using Droplet Microfluidics (Small 2/2014). Small, 2014, 10, 284-284.	10.0	1
126	Biocatalysis: Biocatalytically Triggered Co-Assembly of Two-Component Core/Shell Nanofibers (Small) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	10.0	1

#	Article	IF	Citations
127	Frontispiece: Peptideâ€Based Molecular Hydrogels as Supramolecular Protein Mimics. Chemistry - A European Journal, 2017, 23, .	3.3	1
128	Combinatorial Discovery and Validation of Heptapeptides with UTP Binding Induced Structure. ChemSystemsChem, 2021, 3, e2000025.	2.6	1
129	Switchable surfactants: Small 5/2009. Small, 2009, 5, NA-NA.	10.0	0
130	Liquid Crystals: Tunable Gas Sensing Gels by Cooperative Assembly (Adv. Funct. Mater. 27/2017). Advanced Functional Materials, 2017, 27, .	14.9	0