Jeffrey D Hartgerink

List of Publications by Year
in descending order

110 papers	15,352 citations	25014 57 h-index	30894 102 g-index
112 all docs	112 docs citations	112 times ranked	13963 citing authors

#	Article	IF	Citations
1	Self-Assembly and Mineralization of Peptide-Amphiphile Nanofibers. Science, 2001, 294, 1684-1688.	6.0	3,460
2	Peptide-amphiphile nanofibers: A versatile scaffold for the preparation of self-assembling materials. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 5133-5138.	3.3	1,170
3	Self-Assembly of Peptideâ˘'Amphiphile Nanofibers:Â The Roles of Hydrogen Bonding and Amphiphilic Packing. Journal of the American Chemical Society, 2006, 128, 7291-7298.	6.6	606
4	Self-Assembling Peptide Nanotubes. Journal of the American Chemical Society, 1996, 118, 43-50.	6.6	593
5	Multi-hierarchical self-assembly of a collagen mimetic peptide from triple helix to nanofibre and hydrogel. Nature Chemistry, 2011, 3, 821-828.	6.6	559
6	Self-Assembly Combining Two Bioactive Peptide-Amphiphile Molecules into Nanofibers by Electrostatic Attraction. Journal of the American Chemical Society, 2003, 125, 7146-7147.	6.6	439
7	Gold Nanoparticles Can Induce the Formation of Protein-based Aggregates at Physiological pH. Nano Letters, 2009, 9, 666-671.	4.5	352
8	Self-Assembly of Multidomain Peptides:â€‰ Balancing Molecular Frustration Controls Conformation and Nanostructure. Journal of the American Chemical Society, 2007, 129, 12468-12472.	6.6	322
9	Self-Assembling Multidomain Peptide Hydrogels: Designed Susceptibility to Enzymatic Cleavage Allows Enhanced Cell Migration and Spreading. Journal of the American Chemical Society, 2010, 132, 3217-3223.	6.6	310
10	Self-assembling peptide amphiphile nanofiber matrices for cell entrapment. Acta Biomaterialia, 2005, 1, 387-397.	4.1	285
11	Peptide Nanotubes and Beyond. Chemistry - A European Journal, 1998, 4, 1367-1372.	1.7	247
12	Dentin Conditioning Codetermines Cell Fate in Regenerative Endodontics. Journal of Endodontics, 2011, 37, 1536-1541.	1.4	244
13	A Customized Self-Assembling Peptide Hydrogel for Dental Pulp Tissue Engineering. Tissue Engineering - Part A, 2012, 18, 176-184.	1.6	233
14	Self-Assembly of Multidomain Peptides: Sequence Variation Allows Control over Cross-Linking and Viscoelasticity. Biomacromolecules, 2009, 10, 2694-2698.	2.6	227
15	Self-Assembling Multidomain Peptide Nanofibers for Delivery of Bioactive Molecules and Tissue Regeneration. Accounts of Chemical Research, 2017, 50, 714-722.	7.6	212
16	Oriented Self-Assembly of Cyclic Peptide Nanotubes in Lipid Membranes. Journal of the American Chemical Society, 1998, 120, 4417-4424.	6.6	208
17	Enzyme-Mediated Degradation of Peptide-Amphiphile Nanofiber Networks. Advanced Materials, 2005, 17, 2612-2617.	11.1	178
18	Injectable Multidomain Peptide Nanofiber Hydrogel as a Delivery Agent for Stem Cell Secretome. Biomacromolecules, 2011, 12, 1651-1657.	2.6	174

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19	Peptide-Mediated Formation of Single-Wall Carbon Nanotube Composites. Nano Letters, 2006, 6, 40-44.	4.5	173
20	Scaffolds for Dental Pulp Tissue Engineering. Advances in Dental Research, 2011, 23, 333-339.	3.6	169
21	Self-Assembling Peptide Amphiphile Nanofibers as a Scaffold for Dental Stem Cells. Tissue Engineering - Part A, 2008, 14, 2051-2058.	1.6	167
22	Self-Assembly of Î±-Helical Coiled Coil Nanofibers. Journal of the American Chemical Society, 2008, 130, 13691-13695.	6.6	163
23	Synthetic collagen mimics: self-assembly of homotrimers, heterotrimers and higher order structures. Chemical Society Reviews, 2010, 39, 3510.	18.7	161
24	STINGel: Controlled release of a cyclic dinucleotide for enhanced cancer immunotherapy. Biomaterials, 2018, 163, 67-75.	5.7	158
25	Peptide Amphiphile Nanofibers Template and Catalyze Silica Nanotube Formation. Langmuir, 2007, 23, 5033-5038.	1.6	155
26	Self-Assembled Heterotrimeric Collagen Triple Helices Directed through Electrostatic Interactions. Journal of the American Chemical Society, 2007, 129, 2683-2690.	6.6	148
27	Highly Angiogenic Peptide Nanofibers. ACS Nano, 2015, 9, 860-868.	7.3	140
28	A Nanostructured Synthetic Collagen Mimic for Hemostasis. Biomacromolecules, 2014, 15, 1484-1490.	2.6	131
29	Aromatic Amino Acids Providing Characteristic Motifs in the Raman and SERS Spectroscopy of Peptides. Journal of Physical Chemistry B, 2008, 112, 9158-9164.	1.2	130
30	Advances in immunotherapy delivery from implantable and injectable biomaterials. Acta Biomaterialia, 2019, 88, 15-31.	4.1	127
31	Synthesis of Collagen-like Peptide Polymers by Native Chemical Ligation. Macromolecules, 2005, 38, 7555-7561.	2.2	119
32	Drug-Triggered and Cross-Linked Self-Assembling Nanofibrous Hydrogels. Journal of the American Chemical Society, 2015, 137, 4823-4830.	6.6	116
33	Self-assembling multidomain peptides tailor biological responses through biphasic release. Biomaterials, 2015, 52, 71-78.	5.7	102
34	Nanofibers and Lyotropic Liquid Crystals from a Class of Selfâ€Assembling Î²â€Peptides. Angewandte Chemie - International Edition, 2008, 47, 1241-1244.	7.2	96
35	Enzymatic Cross-Linking of a Nanofibrous Peptide Hydrogel. Biomacromolecules, 2011, 12, 82-87.	2.6	95
36	Treatment of hind limb ischemia using angiogenic peptide nanofibers. Biomaterials, 2016, 98, 113-119.	5.7	94

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37	Nanofibrous peptide hydrogel elicits angiogenesis and neurogenesis without drugs, proteins, or cells. Biomaterials, 2018, 161, 154-163.	5.7	94
38	Supramolecular one-dimensional objects. Current Opinion in Solid State and Materials Science, 2001, 5, 355-361.	5.6	93
39	Surprisingly High Stability of Collagen ABC Heterotrimer:â€‰ Evaluation of Side Chain Charge Pairs. Journal of the American Chemical Society, 2007, 129, 15034-15041.	6.6	93
40	Multidomain Peptide Hydrogel Accelerates Healing of Full-Thickness Wounds in Diabetic Mice. ACS Biomaterials Science and Engineering, 2018, 4, 1386-1396.	2.6	93
41	Self-Assembly of Fiber-Forming Collagen Mimetic Peptides Controlled by Triple-Helical Nucleation. Journal of the American Chemical Society, 2014, 136, 14417-14424.	6.6	91
42	Self-Assembling Biomaterials:Âl-Lysine-Dendron-Substituted Cholesteryl-(l-lactic acid)nÌ„. Macromolecules, 2002, 35, 6101-6111.	2.2	87
43	Synthesis and in Vitro Hydroxyapatite Binding of Peptides Conjugated to Calcium-Binding Moieties. Biomacromolecules, 2007, 8, 2237-2243.	2.6	86
44	Self-Assembling Multidomain Peptide Fibers with Aromatic Cores. Biomacromolecules, 2013, 14, 1370-1378.	2.6	83
45	Chemical functionality of multidomain peptide hydrogels governs early host immune response. Biomaterials, 2020, 231, 119667.	5.7	82
46	Synthetic Collagen Heterotrimers: Structural Mimics of Wild-Type and Mutant Collagen Type I. Journal of the American Chemical Society, 2008, 130, 7509-7515.	6.6	81
47	A wireless millimetric magnetoelectric implant for the endovascular stimulation of peripheral nerves. Nature Biomedical Engineering, 2022, 6, 706-716.	11.6	80
48	Solution Structure of an ABC Collagen Heterotrimer Reveals a Single-register Helix Stabilized by Electrostatic Interactions. Journal of Biological Chemistry, 2009, 284, 26851-26859.	1.6	78
49	Peptides that non-covalently functionalize single-walled carbon nanotubes to give controlled solubility characteristics. Journal of Materials Chemistry, 2007, 17, 1909.	6.7	76
50	Fullerene-Derivatized Amino Acids: Synthesis, Characterization, Antioxidant Properties, and Solid-Phase Peptide Synthesis. Chemistry - A European Journal, 2007, 13, 2530-2545.	1.7	76
51	Biomimetic self-assembled nanofibers. Soft Matter, 2006, 2, 177.	1.2	73
52	Two-Step Self-Assembly of Liposome-Multidomain Peptide Nanofiber Hydrogel for Time-Controlled Release. Biomacromolecules, 2014, 15, 3587-3595.	2.6	71
53	Structural Insights into Charge Pair Interactions in Triple Helical Collagen-like Proteins. Journal of Biological Chemistry, 2012, 287, 8039-8047.	1.6	70
54	Self-Assembling Peptide Coatings Designed for Highly Luminescent Suspension of Single-Walled Carbon Nanotubes. Journal of the American Chemical Society, 2008, 130, 17134-17140.	6.6	69

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55	Chain-Length-Dependent Vibrational Resonances in Alkanethiol Self-Assembled Monolayers Observed on Plasmonic Nanoparticle Substrates. Nano Letters, 2006, 6, 2617-2621.	4.5	64
56	Scaffolds to Control Inflammation and Facilitate Dental Pulp Regeneration. Journal of Endodontics, 2014, 40, S6-S12.	1.4	63
57	Short Homodimeric and Heterodimeric Coiled Coils. Biomacromolecules, 2006, 7, 691-695.	2.6	61
58	Influence of injection technique, drug formulation and tumor microenvironment on intratumoral immunotherapy delivery and efficacy. , 2021, 9, e001800.		59
59	Lyotropic Liquid Crystals Formed from ACHC-Rich Î²-Peptides. Journal of the American Chemical Society, 2011, 133, 13604-13613.	6.6	56
60	Covalent capture: a natural complement to self-assembly. Current Opinion in Chemical Biology, 2004, 8, 604-609.	2.8	54
61	Role of Hydrophobic Clusters in the Stability of Î±-Helical Coiled Coils and Their Conversion to Amyloid-like Î²-Sheets. Biomacromolecules, 2007, 8, 617-623.	2.6	53
62	â€œMissing Toothâ€•Multidomain Peptide Nanofibers for Delivery of Small Molecule Drugs. Biomacromolecules, 2016, 17, 2087-2095.	2.6	51
63	Selective Assembly of a High Stability AAB Collagen Heterotrimer. Journal of the American Chemical Society, 2010, 132, 3242-3243.	6.6	50
64	Self-assembling multidomain peptide hydrogels accelerate peripheral nerve regeneration after crush injury. Biomaterials, 2021, 265, 120401.	5.7	49
65	Sequence Effects of Self-Assembling MultiDomain Peptide Hydrogels on Encapsulated SHED Cells. Biomacromolecules, 2014, 15, 2004-2011.	2.6	48
66	Nanofibrous Snake Venom Hemostat. ACS Biomaterials Science and Engineering, 2015, 1, 1300-1305.	2.6	48
67	Electrostatic Catalysis of the Claisen Rearrangement:â€‰ Probing the Role of Glu78 in Bacillus subtilis Chorismate Mutase by Genetic Selection. Journal of the American Chemical Society, 1996, 118, 3069-3070.	6.6	47
68	Biomaterials and their potential applications for dental tissue engineering. Journal of Materials Chemistry, 2010, 20, 8730.	6.7	46
69	Covalent Capture of Aligned Self-Assembling Nanofibers. Journal of the American Chemical Society, 2017, 139, 8044-8050.	6.6	46
70	Inhibition of cancer cell proliferation by designed peptide amphiphiles. Acta Biomaterialia, 2009, 5, 842-853.	4.1	45
71	Computational design of self-assembling register-specific collagen heterotrimers. Nature Communications, 2012, 3, 1087.	5.8	45
72	Positive and Negative Design Leads to Compositional Control in AAB Collagen Heterotrimers. Journal of the American Chemical Society, 2011, 133, 5432-5443.	6.6	44

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73	Hydroxyproline-Free Single Composition ABC Collagen Heterotrimer. Journal of the American Chemical Society, 2013, 135, 6014-6017.	6.6	42
74	Self-Assembling Multidomain Peptides: Design and Characterization of Neutral Peptide-Based Materials with pH and Ionic Strength Independent Self-Assembly. ACS Biomaterials Science and Engineering, 2019, 5, 977-985.	2.6	42
75	Peptide Nanofibers Preconditioned with Stem Cell Secretome Are Renoprotective. Journal of the American Society of Nephrology: JASN, 2011, 22, 704-717.	3.0	39
76	Rational Design of Single-Composition ABC Collagen Heterotrimers. Journal of the American Chemical Society, 2012, 134, 1430-1433.	6.6	38
77	Multidomain Peptides as Single-Walled Carbon Nanotube Surfactants in Cell Culture. Biomacromolecules, 2009, 10, 2201-2206.	2.6	36
78	Controlled Angiogenesis in Peptide Nanofiber Composite Hydrogels. ACS Biomaterials Science and Engineering, 2015, 1, 845-854.	2.6	35
79	Modulation of Peptideâˆ'Amphiphile Nanofibers via Phospholipid Inclusions. Biomacromolecules, 2006, 7, 24-26.	2.6	33
80	Rational Design of a Non-canonical â€œSticky-Endedâ€•Collagen Triple Helix. Journal of the American Chemical Society, 2014, 136, 7535-7538.	6.6	33
81	Tuning the mechanical and bioresponsive properties of peptide-amphiphile nanofiber networks. Journal of Biomaterials Science, Polymer Edition, 2008, 19, 665-676.	1.9	32
82	Pairwise interactions in collagen and the design of heterotrimeric helices. Current Opinion in Chemical Biology, 2013, 17, 960-967.	2.8	28
83	Predicting the stability of homotrimeric and heterotrimeric collagen helices. Nature Chemistry, 2021, 13, 260-269.	6.6	28
84	Biomaterial-Facilitated Immunotherapy for Established Oral Cancers. ACS Biomaterials Science and Engineering, 2021, 7, 415-421.	2.6	27
85	Recent Advances in Collagen Mimetic Peptide Structure and Design. Biomacromolecules, 2022, 23, 1475-1489.	2.6	26
86	Chain alignment of collagen I deciphered using computationally designed heterotrimers. Nature Chemical Biology, 2020, 16, 423-429.	3.9	24
87	Simultaneous Control of Composition and Register of an AAB-Type Collagen Heterotrimer. Biomacromolecules, 2013, 14, 179-185.	2.6	21
88	Glycine Substitutions in Collagen Heterotrimers Alter Triple Helical Assembly. Biomacromolecules, 2017, 18, 617-624.	2.6	19
89	Ex Vivo Modeling of Multidomain Peptide Hydrogels with Intact Dental Pulp. Journal of Dental Research, 2015, 94, 1773-1781.	2.5	18
90	Synthetic, Register-Specific, AAB Heterotrimers to Investigate Single Point Glycine Mutations in Osteogenesis Imperfecta. Biomacromolecules, 2016, 17, 914-921.	2.6	18

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91	Covalent Capture of a Heterotrimeric Collagen Helix. Organic Letters, 2019, 21, 5480-5484.	2.4	17
92	Drug-Mimicking Nanofibrous Peptide Hydrogel for Inhibition of Inducible Nitric Oxide Synthase. ACS Biomaterials Science and Engineering, 2019, 5, 6755-6765.	2.6	17
93	Charge-Free, Stabilizing Amideâ˘Î€ Interactions Can Be Used to Control Collagen Triple-Helix Self-Assembly. Biomacromolecules, 2021, 22, 2137-2147.	2.6	16
94	New material stops bleeding in a hurry. Nature Nanotechnology, 2006, 1, 166-167.	15.6	15
95	Control of Collagen Triple Helix Stability by Phosphorylation. Biomacromolecules, 2017, 18, 1157-1161.	2.6	13
96	Covalent Capture of Collagen Triple Helices Using Lysineâ€"Aspartate and Lysineâ€"Glutamate Pairs. Biomacromolecules, 2020, 21, 3772-3781.	2.6	13
97	Local Antiâ€"PD-1 Delivery Prevents Progression of Premalignant Lesions in a 4NQO-Oral Carcinogenesis Mouse Model. Cancer Prevention Research, 2021, 14, 767-778.	0.7	13
98	Comparative NMR Analysis of Collagen Triple Helix Organization from N- to C-Termini. Biomacromolecules, 2015, 16, 145-155.	2.6	12
99	Evaluating the physicochemical effects of conjugating peptides into thermogelling hydrogels for regenerative biomaterials applications. International Journal of Energy Production and Management, 2021, 8, rbab073.	1.9	6
100	Sequence Position and Side Chain Length Dependence of Charge Pair Interactions in Collagen Triple Helices. Macromolecular Rapid Communications, 2012, 33, 1445-1452.	2.0	4
101	Covalent Capture of a Collagen Mimetic Peptide with an Integrin-Binding Motif. Biomacromolecules, 2022, 23, 2396-2403.	2.6	4
102	A Combined Conduit-Bioactive Hydrogel Approach for Regeneration of Transected Sciatic Nerves. ACS Applied Bio Materials, 2022, 5, 4611-4624.	2.3	4
103	Nanostructured Collagen Mimics in Tissue Engineering. , 2005, , 95-117.		3
104	Self Assembling Organic Nanotubes. , 1996, , 181-188.		1
105	Supramolecular Polymerization of Peptides and Peptide Derivatives: Nanofibrous Materials. , 0, , 359-393.		1
106	Peptide Nanotubes and Beyond. , 1998, 4, 1367.		1
107	Recent Advances in Supramolecular Polymers. , 2007, , 715-722.		1
108	Selective covalent capture of collagen triple helices with a minimal protecting group strategy. Chemical Science, 2022, 13, 2789-2796.	3.7	1

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109	Chain-Length-Dependent Vibrational Resonances in Alkanethiol Self-Assembled Monolayers Observed on Plasmonic Nanoparticle Substrates. Nano Letters, 2007, 7, 853-853.	4.5	0
110	Self-Assembling and Biomimetic Biomaterials. , 2003, , .		0