David A Spiegel

List of Publications by Year
in descending order

55 papers	2,864 citations	201674 27 h-index	175258 52 g-index
60 all docs	60 docs citations	60 times ranked	3843 citing authors

#	Article	IF	Citations
1	Combined Methylglyoxal Scavenger and Collagen Hydrogel Therapy Prevents Adverse Remodeling and Improves Cardiac Function Postâ€Myocardial Infarction. Advanced Functional Materials, 2022, 32, 2108630.	14.9	14
2	Classically activated mouse macrophages produce methylglyoxal that induces a TLR4- and RAGE-independent proinflammatory response. Journal of Leukocyte Biology, 2021, 109, 605-619.	3.3	22
3	Model studies of advanced glycation end product modification of heterograft biomaterials: The effects of in vitro glucose, glyoxal, and serum albumin on collagen structure and mechanical properties. Acta Biomaterialia, 2021, 123, 275-285.	8.3	6
4	Sirtuin 2 Regulates Protein LactoylLys Modifications. ChemBioChem, 2021, 22, 2102-2106.	2.6	23
5	Bifunctional small molecules that mediate the degradation of extracellular proteins. Nature Chemical Biology, 2021, 17, 947-953.	8.0	87
6	Comment on a suite of mathematical solutions to describe ternary complex formation and their application to targeted protein degradation by heterobifunctional ligands. Journal of Biological Chemistry, 2021, 296, 100331.	3.4	1
7	Synthetic Rhamnose Glycopolymer Cell-Surface Receptor for Endogenous Antibody Recruitment. Biomacromolecules, 2020, 21, 793-802.	5.4	24
8	Non-enzymatic Lysine Lactoylation of Glycolytic Enzymes. Cell Chemical Biology, 2020, 27, 206-213.e6.	5.2	114
9	Generation and Characterization of Anti-Glucosepane Antibodies Enabling Direct Detection of Glucosepane in Retinal Tissue. ACS Chemical Biology, 2020, 15, 2655-2661.	3.4	3
10	Glycation and Serum Albumin Infiltration Contribute to the Structural Degeneration of Bioprosthetic Heart Valves. JACC Basic To Translational Science, 2020, 5, 755-766.	4.1	19
11	A low glycemic diet protects disease-prone Nrf2-deficient mice against age-related macular degeneration. Free Radical Biology and Medicine, 2020, 150, 75-86.	2.9	23
12	Regulatory myeloid cells paralyze T cells through cellâ€“cell transfer of the metabolite methylglyoxal. Nature Immunology, 2020, 21, 555-566.	14.5	147
13	Fluorescent stem peptide mimics: In situ probes for peptidoglycan crosslinking. Methods in Enzymology, 2020, 638, 57-67.	1.0	2
14	Age-related changes in the physical properties, cross-linking, and glycation of collagen from mouse tail tendon. Journal of Biological Chemistry, 2020, 295, 10562-10571.	3.4	27
15	Oneâ€Step Synthesis of 2,5â€Diaminoimidazoles and Total Synthesis of Methylglyoxalâ€Derived Imidazolium Crosslink (MODIC). Angewandte Chemie, 2019, 131, 19089-19093.	2.0	1
16	Oneâ€Step Synthesis of 2,5â€Diaminoimidazoles and Total Synthesis of Methylglyoxalâ€Derived Imidazolium Crosslink (MODIC). Angewandte Chemie - International Edition, 2019, 58, 18913-18917.	13.8	7
17	Biocatalytic Reversal of Advanced Glycation End Product Modification. ChemBioChem, 2019, 20, 2402-2410.	2.6	10
18	A Slick Solution to a Sticky Problem. Biochemistry, 2018, 57, 5923-5924.	2.5	0

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19	Methylglyoxal-derived posttranslational arginine modifications are abundant histone marks. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 9228-9233.	7.1	123
20	Encoded Silicon-Chip-Based Platform for Combinatorial Synthesis and Screening. ACS Combinatorial Science, 2017, 19, 255-261.	3.8	6
21	Hormetic potential of methylglyoxal, a side-product of glycolysis, in switching tumours from growth to death. Scientific Reports, 2017, 7, 11722.	3.3	60
22	Neutralization of Pathogenic Fungi with Smallâ€Molecule Immunotherapeutics. Angewandte Chemie - International Edition, 2017, 56, 13036-13040.	13.8	11
23	Neutralization of Pathogenic Fungi with Smallâ€Molecule Immunotherapeutics. Angewandte Chemie, 2017, 129, 13216-13220.	2.0	1
24	Glyoxalase Goes Green: The Expanding Roles of Glyoxalase in Plants. International Journal of Molecular Sciences, 2017, 18, 898.	4.1	73
25	Methylglyoxal, a glycolysis side-product, induces Hsp90 glycation and YAP-mediated tumor growth and metastasis. ELife, 2016, 5, .	6.0	100
26	Reâ€engineering the Immune Response to Metastatic Cancer: Antibodyâ€Recruiting Small Molecules Targeting the Urokinase Receptor. Angewandte Chemie - International Edition, 2016, 55, 3642-3646.	13.8	63
27	Reâ€engineering the Immune Response to Metastatic Cancer: Antibodyâ€Recruiting Small Molecules Targeting the Urokinase Receptor. Angewandte Chemie, 2016, 128, 3706-3710.	2.0	23
28	A Nanobody Activation Immunotherapeutic that Selectively Destroys HER2â€Positive Breast Cancer Cells. ChemBioChem, 2016, 17, 155-158.	2.6	45
29	Peptidines: glycine-amidine-based oligomers for solution- and solid-phase synthesis. Chemical Science, 2016, 7, 3317-3324.	7.4	9
30	Wall teichoic acids prevent antibody binding to epitopes within the cell wall of Staphylococcus aureus. ACS Chemical Biology, 2016, 11, 25-30.	3.4	35
31	An Activityâ€Based Probe for Studying Crosslinking in Live Bacteria. Angewandte Chemie - International Edition, 2015, 54, 10492-10496.	13.8	33
32	Chemical Probes Reveal an Extraseptal Mode of Cross-Linking in Staphylococcus aureus. Journal of the American Chemical Society, 2015, 137, 7441-7447.	13.7	37
33	Click-coated, heparinized, decellularized vascular grafts. Acta Biomaterialia, 2015, 13, 177-187.	8.3	65
34	Generation and characterization of antibodies against arginine-derived advanced glycation endproducts. Bioorganic and Medicinal Chemistry Letters, 2015, 25, 4881-4886.	2.2	23
35	Concise total synthesis of glucosepane. Science, 2015, 350, 294-298.	12.6	40
36	Chemically Synthesized Molecules with the Targeting and Effector Functions of Antibodies. Journal of the American Chemical Society, 2014, 136, 18034-18043.	13.7	40

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37	Illuminating HIV gp120-ligand recognition through computationally-driven optimization of antibody-recruiting molecules. Chemical Science, 2014, 5, 2311-2317.	7.4	19
38	A â€œTurn-Onâ€•Fluorescent Sensor for Methylglyoxal. Journal of the American Chemical Society, 2013, 135, 12429-12433.	13.7	163
39	Exploring Binding and Effector Functions of Natural Human Antibodies Using Synthetic Immunomodulators. ACS Chemical Biology, 2013, 8, 2404-2411.	3.4	59
40	A call to ARMs: the promise of immunomodulatory small molecules. Expert Review of Clinical Pharmacology, 2013, 6, 223-225.	3.1	6
41	Exterior design: strategies for redecorating the bacterial surface with small molecules. Trends in Biotechnology, 2013, 31, 258-267.	9.3	39
42	A Comprehensive Mathematical Model for Three-Body Binding Equilibria. Journal of the American Chemical Society, 2013, 135, 6092-6099.	13.7	310
43	Serendipitous discovery of two highly selective inhibitors ofÂbacterial luciferase. Tetrahedron, 2013, 69, 7692-7698.	1.9	6
44	Exploring Post-translational Arginine Modification Using Chemically Synthesized Methylglyoxal Hydroimidazolones. Journal of the American Chemical Society, 2012, 134, 8958-8967.	13.7	39
45	Reprogramming Urokinase into an Antibody-Recruiting Anticancer Agent. ACS Chemical Biology, 2012, 7, 316-321.	3.4	25
46	Antibody-Recruiting Molecules: An Emerging Paradigm for Engaging Immune Function in Treating Human Disease. ACS Chemical Biology, 2012, 7, 1139-1151.	3.4	113
47	A Chemically Induced Vaccine Strategy for Prostate Cancer. ACS Chemical Biology, 2011, 6, 1223-1231.	3.4	42
48	Grand Challenge Commentary: Synthetic immunology to engineer human immunity. Nature Chemical Biology, 2010, 6, 871-872.	8.0	23
49	A Remote Arene-Binding Site on Prostate Specific Membrane Antigen Revealed by Antibody-Recruiting Small Molecules. Journal of the American Chemical Society, 2010, 132, 12711-12716.	13.7	131
50	A Biosynthetic Strategy for Re-engineering theStaphylococcus aureusCell Wall with Non-native Small Molecules. ACS Chemical Biology, 2010, 5, 1147-1155.	3.4	63
51	An Antibody-Recruiting Small Molecule That Targets HIV gp120. Journal of the American Chemical Society, 2009, 131, 16392-16394.	13.7	76
52	Chemical Control over Immune Recognition: A Class of Antibody-Recruiting Small Molecules That Target Prostate Cancer. Journal of the American Chemical Society, 2009, 131, 17090-17092.	13.7	106
53	Deoxygenation of Alcohols Employing Water as the Hydrogen Atom Source. Journal of the American Chemical Society, 2005, 127, 12513-12515.	13.7	213
54	The Art of Innovation in Organic Chemistry:Â Synthetic Efforts toward the Phomoidrides. Chemical Reviews, 2003, 103, 2691-2728.	47.7	54

#	Article	IF	Citations
55	An Expeditious Approach toward the Total Synthesis of CP-263,114. Organic Letters, 2001, 3, 2435-2438.	4.6	51