Peter M Tessier

List of Publications by Year
in descending order

84 papers	5,028 citations	76326 40 h-index	91884 69 g-index
86 all docs	86 docs citations	86 times ranked	5461 citing authors

#	Article	IF	Citations
1	A class of porous metallic nanostructures. Nature, 1999, 401, 548-548.	27.8	481
2	Assembly of Gold Nanostructured Films Templated by Colloidal Crystals and Use in Surface-Enhanced Raman Spectroscopy. Journal of the American Chemical Society, 2000, 122, 9554-9555.	13.7	329
3	Resveratrol Selectively Remodels Soluble Oligomers and Fibrils of Amyloid Aî² into Off-pathway Conformers. Journal of Biological Chemistry, 2010, 285, 24228-24237.	3.4	271
4	Rapid Measurement of Protein Osmotic Second Virial Coefficients by Self-Interaction Chromatography. Biophysical Journal, 2002, 82, 1620-1631.	0.5	201
5	Conformational Differences between Two Amyloid î² Oligomers of Similar Size and Dissimilar Toxicity. Journal of Biological Chemistry, 2012, 287, 24765-24773.	3.4	191
6	Advances in Antibody Design. Annual Review of Biomedical Engineering, 2015, 17, 191-216.	12.3	184
7	Aromatic Small Molecules Remodel Toxic Soluble Oligomers of Amyloid î² through Three Independent Pathways. Journal of Biological Chemistry, 2011, 286, 3209-3218.	3.4	169
8	Prion recognition elements govern nucleation, strain specificity and species barriers. Nature, 2007, 447, 556-561.	27.8	134
9	Structure-based design of conformation- and sequence-specific antibodies against amyloid î². Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 84-89.	7.1	134
10	Mechanisms of Transthyretin Inhibition of î²-Amyloid Aggregation<i>In Vitro</i>. Journal of Neuroscience, 2013, 33, 19423-19433.	3.6	118
11	High-throughput screening for developability during early-stage antibody discovery using self-interaction nanoparticle spectroscopy. MAbs, 2014, 6, 483-492.	5.2	110
12	Aggregation-resistant domain antibodies engineered with charged mutations near the edges of the complementarity-determining regions. Protein Engineering, Design and Selection, 2012, 25, 591-602.	2.1	101
13	Engineering Aggregation-Resistant Antibodies. Annual Review of Chemical and Biomolecular Engineering, 2012, 3, 263-286.	6.8	99
14	Understanding and overcoming trade-offs between antibody affinity, specificity, stability and solubility. Biochemical Engineering Journal, 2018, 137, 365-374.	3.6	99
15	Rational design of potent domain antibody inhibitors of amyloid fibril assembly. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 19965-19970.	7.1	93
16	Mutational analysis of domain antibodies reveals aggregation hotspots within and near the complementarity determining regions. Proteins: Structure, Function and Bioinformatics, 2011, 79, 2637-2647.	2.6	90
17	Toward aggregation-resistant antibodies by design. Trends in Biotechnology, 2013, 31, 612-620.	9.3	83
18	Efficient affinity maturation of antibody variable domains requires co-selection of compensatory mutations to maintain thermodynamic stability. Scientific Reports, 2017, 7, 45259.	3.3	77

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19	Self-interaction chromatography: a novel screening method for rational protein crystallization. Acta Crystallographica Section D: Biological Crystallography, 2002, 58, 1531-1535.	2.5	76
20	Unraveling infectious structures, strain variants and species barriers for the yeast prion [PSI+]. Nature Structural and Molecular Biology, 2009, 16, 598-605.	8.2	75
21	Modulation of Curli Assembly and Pellicle Biofilm Formation by Chemical and Protein Chaperones. Chemistry and Biology, 2013, 20, 1245-1254.	6.0	72
22	Measurements of protein self-association as a guide to crystallization. Current Opinion in Biotechnology, 2003, 14, 512-516.	6.6	69
23	Glycan Determinants of Heparin-Tau Interaction. Biophysical Journal, 2017, 112, 921-932.	0.5	68
24	Predictive crystallization of ribonuclease A via rapid screening of osmotic second virial coefficients. Proteins: Structure, Function and Bioinformatics, 2002, 50, 303-311.	2.6	66
25	Direct measurement of protein osmotic second virial cross coefficients by cross-interaction chromatography. Protein Science, 2004, 13, 1379-1390.	7.6	61
26	Self-Interaction Nanoparticle Spectroscopy:â€‰ A Nanoparticle-Based Protein Interaction Assay. Journal of the American Chemical Society, 2008, 130, 3106-3112.	13.7	61
27	Rapid Analysis of Antibody Self-Association in Complex Mixtures Using Immunogold Conjugates. Molecular Pharmaceutics, 2013, 10, 1322-1331.	4.6	58
28	Optimal charged mutations in the complementarity-determining regions that prevent domain antibody aggregation are dependent on the antibody scaffold. Protein Engineering, Design and Selection, 2014, 27, 29-39.	2.1	57
29	Selecting and engineering monoclonal antibodies with drug-like specificity. Current Opinion in Biotechnology, 2019, 60, 119-127.	6.6	56
30	Co-optimization of therapeutic antibody affinity and specificity using machine learning models that generalize to novel mutational space. Nature Communications, 2022, 13, .	12.8	55
31	Net charge of antibody complementarity-determining regions is a key predictor of specificity. Protein Engineering, Design and Selection, 2018, 31, 409-418.	2.1	53
32	High-Throughput Analysis of Concentration-Dependent Antibody Self-Association. Biophysical Journal, 2011, 101, 1749-1757.	0.5	52
33	Polyphenolic Glycosides and Aglycones Utilize Opposing Pathways To Selectively Remodel and Inactivate Toxic Oligomers of Amyloid Î². ChemBioChem, 2011, 12, 1749-1758.	2.6	51
34	Arginine mutations in antibody complementarity-determining regions display context-dependent affinity/specificity trade-offs. Journal of Biological Chemistry, 2017, 292, 16638-16652.	3.4	51
35	An engineered human Fc domain that behaves like a pH-toggle switch for ultra-long circulation persistence. Nature Communications, 2019, 10, 5031.	12.8	49
36	Solution pH That Minimizes Self-Association of Three Monoclonal Antibodies Is Strongly Dependent on Ionic Strength. Molecular Pharmaceutics, 2012, 9, 744-751.	4.6	48

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37	Improving Monoclonal Antibody Selection and Engineering using Measurements of Colloidal Protein Interactions. Journal of Pharmaceutical Sciences, 2014, 103, 3356-3363.	3.3	48
38	Facile Affinity Maturation of Antibody Variable Domains Using Natural Diversity Mutagenesis. Frontiers in Immunology, 2017, 8, 986.	4.8	47
39	An alternative assay to hydrophobic interaction chromatography for high-throughput characterization of monoclonal antibodies. MAbs, 2015, 7, 553-561.	5.2	46
40	On-Line Spectroscopic Characterization of Sodium Cyanide with Nanostructured Gold Surface-Enhanced Raman Spectroscopy Substrates. Applied Spectroscopy, 2002, 56, 1524-1530.	2.2	44
41	Physicochemical Rules for Identifying Monoclonal Antibodies with Drug-like Specificity. Molecular Pharmaceutics, 2020, 17, 2555-2569.	4.6	42
42	Discovery of highly soluble antibodies prior to purification using affinity-capture self-interaction nanoparticle spectroscopy. Protein Engineering, Design and Selection, 2015, 28, 403-414.	2.1	41
43	Toward Drug-Like Multispecific Antibodies by Design. International Journal of Molecular Sciences, 2020, 21, 7496.	4.1	36
44	Co-evolution of affinity and stability of grafted amyloid-motif domain antibodies. Protein Engineering, Design and Selection, 2015, 28, 339-350.	2.1	35
45	Design and Optimization of Anti-amyloid Domain Antibodies Specific for Î²-Amyloid and Islet Amyloid Polypeptide. Journal of Biological Chemistry, 2016, 291, 2858-2873.	3.4	35
46	Unique Impacts of Methionine Oxidation, Tryptophan Oxidation, and Asparagine Deamidation on Antibody Stability and Aggregation. Journal of Pharmaceutical Sciences, 2020, 109, 656-669.	3.3	35
47	Plasmonic measurements of monoclonal antibody selfâ€association using selfâ€interaction nanoparticle spectroscopy. Biotechnology and Bioengineering, 2014, 111, 1513-1520.	3.3	32
48	Engineered Autonomous Human Variable Domains. Current Pharmaceutical Design, 2017, 22, 6527-6537.	1.9	32
49	Discovery-stage identification of drug-like antibodies using emerging experimental and computational methods. MAbs, 2021, 13, 1895540.	5.2	31
50	Directed evolution of potent neutralizing nanobodies against SARS-CoV-2 using CDR-swapping mutagenesis. Cell Chemical Biology, 2021, 28, 1379-1388.e7.	5.2	31
51	Measurements of Monoclonal Antibody Self-Association Are Correlated with Complex Biophysical Properties. Molecular Pharmaceutics, 2016, 13, 1636-1645.	4.6	29
52	Engineered Multivalent Nanobodies Potently and Broadly Neutralize SARSâ€CoVâ€2 Variants. Advanced Therapeutics, 2021, 4, 2100099.	3.2	27
53	Toward in silico CMC: An industrial collaborative approach to modelâ€based process development. Biotechnology and Bioengineering, 2020, 117, 3986-4000.	3.3	26
54	Facile Preparation of Stable Antibodyâ€"Gold Conjugates and Application to Affinity-Capture Self-Interaction Nanoparticle Spectroscopy. Bioconjugate Chemistry, 2016, 27, 2287-2300.	3.6	24

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55	Directed evolution methods for overcoming tradeâ€offs between protein activity and stability. AICHE Journal, 2020, 66, e16814.	3.6	24
56	Emerging methods for identifying monoclonal antibodies with low propensity to self-associate during the early discovery process. Expert Opinion on Drug Delivery, 2014, 11, 461-465.	5.0	23
57	Comparison of Human and Bovine Insulin Amyloidogenesis under Uniform Shear. Journal of Physical Chemistry B, 2015, 119, 10426-10433.	2.6	23
58	Ultradilute Measurements of Self-Association for the Identification of Antibodies with Favorable High-Concentration Solution Properties. Molecular Pharmaceutics, 2021, 18, 2744-2753.	4.6	23
59	Highly sensitive detection of antibody nonspecific interactions using flow cytometry. MAbs, 2021, 13, 1951426.	5.2	22
60	Deamidation Can Compromise Antibody Colloidal Stability and Enhance Aggregation in a pH-Dependent Manner. Molecular Pharmaceutics, 2019, 16, 1939-1949.	4.6	21
61	Nature-inspired design and evolution of anti-amyloid antibodies. Journal of Biological Chemistry, 2019, 294, 8438-8451.	3.4	20
62	Rational affinity maturation of anti-amyloid antibodies with high conformational and sequence specificity. Journal of Biological Chemistry, 2021, 296, 100508.	3.4	19
63	Biophysical and Sequence-Based Methods for Identifying Monovalent and Bivalent Antibodies with High Colloidal Stability. Molecular Pharmaceutics, 2018, 15, 150-163.	4.6	18
64	Antibodies with Weakly Basic Isoelectric Points Minimize Trade-offs between Formulation and Physiological Colloidal Properties. Molecular Pharmaceutics, 2022, 19, 775-787.	4.6	17
65	Correlation of diafiltration sieving behavior of lysozyme-BSA mixtures with osmotic second virial cross-coefficients. Biotechnology and Bioengineering, 2004, 87, 303-310.	3.3	16
66	Mutational analysis of SARS-CoV-2 variants of concern reveals key tradeoffs between receptor affinity and antibody escape. PLoS Computational Biology, 2022, 18, e1010160.	3.2	14
67	Agonist antibody discovery: Experimental, computational, and rational engineering approaches. Drug Discovery Today, 2022, 27, 31-48.	6.4	11
68	Discovery and characterization of high-affinity, potent SARS-CoV-2 neutralizing antibodies via single B cell screening. Scientific Reports, 2021, 11, 20738.	3.3	11
69	Biospecific protein immobilization for rapid analysis of weak protein interactions using selfâ€interaction nanoparticle spectroscopy. Biotechnology and Bioengineering, 2009, 104, 240-250.	3.3	10
70	Intrahippocampal administration of a domain antibody that binds aggregated amyloid-Î² reverses cognitive deficits produced by diet-induced obesity. Biochimica Et Biophysica Acta - General Subjects, 2016, 1860, 1291-1298.	2.4	10
71	High-Throughput Assay for Measuring Monoclonal Antibody Self-Association and Aggregation in Serum. Bioconjugate Chemistry, 2015, 26, 520-528.	3.6	8
72	Polyphenolic disaccharides endow proteins with unusual resistance to aggregation. Biotechnology and Bioengineering, 2012, 109, 1869-1874.	3.3	7

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73	Removal versus fragmentation of amyloidâ€forming precursors via membrane filtration. Biotechnology and Bioengineering, 2012, 109, 840-845.	3.3	6
74	Sensitive detection of glucagon aggregation using amyloid fibrilâ€specific antibodies. Biotechnology and Bioengineering, 2019, 116, 1868-1877.	3.3	5
75	Improving antibody drug development using bionanotechnology. Current Opinion in Biotechnology, 2022, 74, 137-145.	6.6	5
76	Facile isolation of high-affinity nanobodies from synthetic libraries using CDR-swapping mutagenesis. STAR Protocols, 2022, 3, 101101.	1.2	5
77	A hybridoma-derived monoclonal antibody with high homology to the aberrant myeloma light chain. PLoS ONE, 2021, 16, e0252558.	2.5	4
78	Assembly of gold nanostructured films templated by colloidal crystals and use in surface-enhanced Raman spectroscopy. , 2002, , .		3
79	Site-specific structural analysis of a yeast prion strain with species-specific seeding activity. Prion, 2011, 5, 208-210.	1.8	3
80	Systematic Engineering of Optimized Autonomous Heavy-Chain Variable Domains. Journal of Molecular Biology, 2021, 433, 167241.	4.2	3
81	Lifting the veil on amyloid drug design. ELife, 2013, 2, e01089.	6.0	3
82	Rapid and Quantitative <i>In Vitro</i> Evaluation of SARS-CoV-2 Neutralizing Antibodies and Nanobodies. Analytical Chemistry, 2022, 94, 4504-4512.	6.5	3
83	Isolating Anti-amyloid Antibodies from Yeast-Displayed Libraries. Methods in Molecular Biology, 2022, 2491, 471-490.	0.9	3
84	Directed evolution of conformationâ€specific antibodies for sensitive detection of polypeptide aggregates in therapeutic drug formulations. Biotechnology and Bioengineering, 2021, 118, 797-808.	3.3	2