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	Agonist antibody discovery: Experimental, computational, and rational engineering approaches. Drug Discovery Today, 2022, 27, 31-48.	6.4	11
2	Improving antibody drug development using bionanotechnology. Current Opinion in Biotechnology, 2022, 74, 137-145.	6.6	5
3	Antibodies with Weakly Basic Isoelectric Points Minimize Trade-offs between Formulation and Physiological Colloidal Properties. Molecular Pharmaceutics, 2022, 19, 775-787.	4.6	17
4	Facile isolation of high-affinity nanobodies from synthetic libraries using CDR-swapping mutagenesis. STAR Protocols, 2022, 3, 101101.	1.2	5
5	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
6	Isolating Anti-amyloid Antibodies from Yeast-Displayed Libraries. Methods in Molecular Biology, 2022, 2491, 471-490.	0.9	3
7	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
8	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
9	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
10	Discovery-stage identification of drug-like antibodies using emerging experimental and computational methods. MAbs, 2021, 13, 1895540.	5.2	31
11	Rational affinity maturation of anti-amyloid antibodies with high conformational and sequence specificity. Journal of Biological Chemistry, 2021, 296, 100508.	3.4	19
12	Highly sensitive detection of antibody nonspecific interactions using flow cytometry. MAbs, 2021, 13, 1951426.	5.2	22
13	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
14	Engineered Multivalent Nanobodies Potently and Broadly Neutralize SARSâ€CoVâ€2 Variants. Advanced Therapeutics, 2021, 4, 2100099.	3.2	27
15	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
16	Systematic Engineering of Optimized Autonomous Heavy-Chain Variable Domains. Journal of Molecular Biology, 2021, 433, 167241.	4.2	3
17	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
18	A hybridoma-derived monoclonal antibody with high homology to the aberrant myeloma light chain. PLoS ONE, 2021, 16, e0252558.	2.5	4

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19	Directed evolution methods for overcoming tradeâ€offs between protein activity and stability. AIChE Journal, 2020, 66, e16814.	3.6	24
20	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
21	Toward Drug-Like Multispecific Antibodies by Design. International Journal of Molecular Sciences, 2020, 21, 7496.	4.1	36
22	Toward in silico CMC: An industrial collaborative approach to modelâ€based process development. Biotechnology and Bioengineering, 2020, 117, 3986-4000.	3.3	26
23	Physicochemical Rules for Identifying Monoclonal Antibodies with Drug-like Specificity. Molecular Pharmaceutics, 2020, 17, 2555-2569.	4.6	42
24	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
25	Sensitive detection of glucagon aggregation using amyloid fibrilâ€specific antibodies. Biotechnology and Bioengineering, 2019, 116, 1868-1877.	3.3	5
26	Selecting and engineering monoclonal antibodies with drug-like specificity. Current Opinion in Biotechnology, 2019, 60, 119-127.	6.6	56
27	Deamidation Can Compromise Antibody Colloidal Stability and Enhance Aggregation in a pH-Dependent Manner. Molecular Pharmaceutics, 2019, 16, 1939-1949.	4.6	21
28	Nature-inspired design and evolution of anti-amyloid antibodies. Journal of Biological Chemistry, 2019, 294, 8438-8451.	3.4	20
29	Biophysical and Sequence-Based Methods for Identifying Monovalent and Bivalent Antibodies with High Colloidal Stability. Molecular Pharmaceutics, 2018, 15, 150-163.	4.6	18
30	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
31	Understanding and overcoming trade-offs between antibody affinity, specificity, stability and solubility. Biochemical Engineering Journal, 2018, 137, 365-374.	3.6	99
32	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
33	Glycan Determinants of Heparin-Tau Interaction. Biophysical Journal, 2017, 112, 921-932.	0.5	68
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	Facile Affinity Maturation of Antibody Variable Domains Using Natural Diversity Mutagenesis. Frontiers in Immunology, 2017, 8, 986.	4.8	47
36	Engineered Autonomous Human Variable Domains. Current Pharmaceutical Design, 2017, 22, 6527-6537.	1.9	32

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37	Measurements of Monoclonal Antibody Self-Association Are Correlated with Complex Biophysical Properties. Molecular Pharmaceutics, 2016, 13, 1636-1645.	4.6	29
38	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
39	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
40	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
41	Comparison of Human and Bovine Insulin Amyloidogenesis under Uniform Shear. Journal of Physical Chemistry B, 2015, 119, 10426-10433.	2.6	23
42	High-Throughput Assay for Measuring Monoclonal Antibody Self-Association and Aggregation in Serum. Bioconjugate Chemistry, 2015, 26, 520-528.	3.6	8
43	Co-evolution of affinity and stability of grafted amyloid-motif domain antibodies. Protein Engineering, Design and Selection, 2015, 28, 339-350.	2.1	35
44	An alternative assay to hydrophobic interaction chromatography for high-throughput characterization of monoclonal antibodies. MAbs, 2015, 7, 553-561.	5.2	46
45	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
46	Advances in Antibody Design. Annual Review of Biomedical Engineering, 2015, 17, 191-216.	12.3	184
47	High-throughput screening for developability during early-stage antibody discovery using self-interaction nanoparticle spectroscopy. MAbs, 2014, 6, 483-492.	5.2	110
48	Improving Monoclonal Antibody Selection and Engineering using Measurements of Colloidal Protein Interactions. Journal of Pharmaceutical Sciences, 2014, 103, 3356-3363.	3.3	48
49	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
50	Plasmonic measurements of monoclonal antibody selfâ€association using selfâ€interaction nanoparticle spectroscopy. Biotechnology and Bioengineering, 2014, 111, 1513-1520.	3.3	32
51	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
52	Toward aggregation-resistant antibodies by design. Trends in Biotechnology, 2013, 31, 612-620.	9.3	83
53	Modulation of Curli Assembly and Pellicle Biofilm Formation by Chemical and Protein Chaperones. Chemistry and Biology, 2013, 20, 1245-1254.	6.0	72
54	Rapid Analysis of Antibody Self-Association in Complex Mixtures Using Immunogold Conjugates. Molecular Pharmaceutics, 2013, 10, 1322-1331.	4.6	58

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55	Mechanisms of Transthyretin Inhibition of Î²-Amyloid Aggregation<i>In Vitro</i>. Journal of Neuroscience, 2013, 33, 19423-19433.	3.6	118
56	Lifting the veil on amyloid drug design. ELife, 2013, 2, e01089.	6.0	3
57	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
58	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
59	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
60	Conformational Differences between Two Amyloid Î² Oligomers of Similar Size and Dissimilar Toxicity. Journal of Biological Chemistry, 2012, 287, 24765-24773.	3.4	191
61	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
62	Polyphenolic disaccharides endow proteins with unusual resistance to aggregation. Biotechnology and Bioengineering, 2012, 109, 1869-1874.	3.3	7
63	Engineering Aggregation-Resistant Antibodies. Annual Review of Chemical and Biomolecular Engineering, 2012, 3, 263-286.	6.8	99
64	Removal versus fragmentation of amyloidâ€forming precursors via membrane filtration. Biotechnology and Bioengineering, 2012, 109, 840-845.	3.3	6
65	High-Throughput Analysis of Concentration-Dependent Antibody Self-Association. Biophysical Journal, 2011, 101, 1749-1757.	0.5	52
66	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
67	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
68	Site-specific structural analysis of a yeast prion strain with species-specific seeding activity. Prion, 2011, 5, 208-210.	1.8	3
69	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
70	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
71	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
72	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

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73	Self-Interaction Nanoparticle Spectroscopy:â€‰ A Nanoparticle-Based Protein Interaction Assay. Journal of the American Chemical Society, 2008, 130, 3106-3112.	13.7	61
74	Prion recognition elements govern nucleation, strain specificity and species barriers. Nature, 2007, 447, 556-561.	27.8	134
75	Direct measurement of protein osmotic second virial cross coefficients by cross-interaction chromatography. Protein Science, 2004, 13, 1379-1390.	7.6	61
76	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
77	Measurements of protein self-association as a guide to crystallization. Current Opinion in Biotechnology, 2003, 14, 512-516.	6.6	69
78	On-Line Spectroscopic Characterization of Sodium Cyanide with Nanostructured Gold Surface-Enhanced Raman Spectroscopy Substrates. Applied Spectroscopy, 2002, 56, 1524-1530.	2.2	44
79	Assembly of gold nanostructured films templated by colloidal crystals and use in surface-enhanced Raman spectroscopy. , 2002, , .		3
80	Rapid Measurement of Protein Osmotic Second Virial Coefficients by Self-Interaction Chromatography. Biophysical Journal, 2002, 82, 1620-1631.	0.5	201
81	Self-interaction chromatography: a novel screening method for rational protein crystallization. Acta Crystallographica Section D: Biological Crystallography, 2002, 58, 1531-1535.	2.5	76
82	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
83	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
84	A class of porous metallic nanostructures. Nature, 1999, 401, 548-548.	27.8	481