Elizabeth M Topp

List of Publications by Year
in descending order

95 papers	3,731 citations	126907 33 h-index	138484 58 g-index
100 all docs	100 docs citations	100 times ranked	4091 citing authors

#	Article	IF	Citations
1	Statistical electromagnetics for industrial pharmaceutical lyophilization. , 2022, 1, .		4
2	Fibrillation of Human Calcitonin and Its Analogs: Effects of Phosphorylation and Disulfide Reduction. Biophysical Journal, 2021, 120, 86-100.	0.5	10
3	Effects of drying method and excipient on the structure and physical stability of protein solids: Freeze drying vs. spray freeze drying. International Journal of Pharmaceutics, 2021, 594, 120169.	5.2	36
4	Stability of antibody drug conjugate formulations evaluated using solid-state hydrogen-deuterium exchange mass spectrometry. Journal of Pharmaceutical Sciences, 2021, 110, 2379-2385.	3.3	5
5	Effects of temperature and relative humidity in D2O on solid-state hydrogen deuterium exchange mass spectrometry (ssHDX-MS). International Journal of Pharmaceutics, 2021, 596, 120263.	5.2	4
6	Understanding the Impact of Proteinâ€“Excipient Interactions on Physical Stability of Spray-Dried Protein Solids. Molecular Pharmaceutics, 2021, 18, 2657-2668.	4.6	24
7	Effect of â€˜pHâ€™ on the Rate of Pyroglutamate Formation in Solution and Lyophilized Solids. Molecular Pharmaceutics, 2021, 18, 3116-3124.	4.6	9
8	Surface Composition and Formulation Heterogeneity of Protein Solids Produced by Spray Drying. Pharmaceutical Research, 2020, 37, 14.	3.5	13
9	A Novel Photoreactive Excipient to Probe Peptide-Matrix Interactions in Lyophilized Solids. Journal of Pharmaceutical Sciences, 2020, 109, 709-718.	3.3	1
10	Effects of Secondary Structure on Solid-State Hydrogenâ€“Deuterium Exchange in Model Î±-Helix and Î²-Sheet Peptides. Molecular Pharmaceutics, 2020, 17, 3501-3512.	4.6	9
11	Prehydration and the Reversibility of Solid-State Hydrogenâ€“Deuterium Exchange. Molecular Pharmaceutics, 2020, 17, 3541-3552.	4.6	1
12	Solid-State Hydrogenâ€“Deuterium Exchange Mass Spectrometry (ssHDX-MS) of Lyophilized Poly-<scp>d</scp>,<scp>l</scp>-Alanine. Molecular Pharmaceutics, 2019, 16, 2935-2946.	4.6	9
13	Effects of ionic interactions on protein stability prediction using solid-state hydrogen deuterium exchange with mass spectrometry (ssHDX-MS). International Journal of Pharmaceutics, 2019, 568, 118512.	5.2	3
14	Effects of drying method and excipient on structure and stability of protein solids using solid-state hydrogen/deuterium exchange mass spectrometry (ssHDX-MS). International Journal of Pharmaceutics, 2019, 567, 118470.	5.2	22
15	Optimizing the Formulation and Lyophilization Process for a Fragment Antigen Binding (Fab) Protein Using Solid-State Hydrogenâ€“Deuterium Exchange Mass Spectrometry (ssHDX-MS). Molecular Pharmaceutics, 2019, 16, 4485-4495.	4.6	8
16	Photolytic Labeling To Quantify Peptideâ€“Water Interactions in Lyophilized Solids. Molecular Pharmaceutics, 2019, 16, 1053-1064.	4.6	0
17	Photolytic Labeling and Its Applications in Protein Drug Discovery and Development. Journal of Pharmaceutical Sciences, 2019, 108, 791-797.	3.3	9
18	High-Resolution Mass Spectrometric Methods for Proteins in Lyophilized Solids. Methods in Pharmacology and Toxicology, 2019, , 353-375.	0.2	1

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19	In-Situ Molecular Vapor Composition Measurements During Lyophilization. Pharmaceutical Research, 2018, 35, 115.	3.5	4
20	Probing the Conformation of an IgG1 Monoclonal Antibody in Lyophilized Solids Using Solid-State Hydrogenâ€“Deuterium Exchange with Mass Spectrometric Analysis (ssHDX-MS). Molecular Pharmaceutics, 2018, 15, 356-368.	4.6	16
21	Effects of Drying Process on an IgG1 Monoclonal Antibody Using Solid-State Hydrogen Deuterium Exchange with Mass Spectrometric Analysis (ssHDX-MS). Pharmaceutical Research, 2018, 35, 12.	3.5	29
22	Solid-State Hydrogenâ€“Deuterium Exchange Mass Spectrometry: Correlation of Deuterium Uptake and Long-Term Stability of Lyophilized Monoclonal Antibody Formulations. Molecular Pharmaceutics, 2018, 15, 1-11.	4.6	39
23	Quantitative Analysis of Peptideâ€“Matrix Interactions in Lyophilized Solids Using Photolytic Labeling. Molecular Pharmaceutics, 2018, 15, 2797-2806.	4.6	4
24	A Cooperative Folding Unit as the Structural Link for Energetic Coupling within a Protein. Biochemistry, 2017, 56, 6555-6564.	2.5	3
25	Process and Formulation Effects on Protein Structure in Lyophilized Solids Using Mass Spectrometric Methods. Journal of Pharmaceutical Sciences, 2016, 105, 1684-1692.	3.3	17
26	Physical Characterization and Innate Immunogenicity of Aggregated Intravenous Immunoglobulin (IGIV) in an In Vitro Cell-Based Model. Pharmaceutical Research, 2016, 33, 1736-1751.	3.5	28
27	Immunogenicity of Therapeutic Protein Aggregates. Journal of Pharmaceutical Sciences, 2016, 105, 417-430.	3.3	392
28	Fibpredictor: a computational method for rapid prediction of amyloid fibril structures. Journal of Molecular Modeling, 2016, 22, 206.	1.8	10
29	Thiol-Disulfide Exchange in Human Growth Hormone. Pharmaceutical Research, 2016, 33, 1370-1382.	3.5	9
30	Thiolâ€“Disulfide Exchange in Peptides Derived from Human Growth Hormone During Lyophilization and Storage in the Solid State. Journal of Pharmaceutical Sciences, 2015, 104, 1291-1302.	3.3	14
31	Mass Spectrometric Approaches to Study Protein Structure and Interactions in Lyophilized Powders. Journal of Visualized Experiments, 2015, , 52503.	0.3	14
32	Photolytic Cross-Linking to Probe Proteinâ€“Protein and Proteinâ€“Matrix Interactions in Lyophilized Powders. Molecular Pharmaceutics, 2015, 12, 3237-3249.	4.6	8
33	Cocrystalline Solids of Telaprevir with Enhanced Oral Absorption. Journal of Pharmaceutical Sciences, 2015, 104, 3343-3350.	3.3	16
34	Structural Transitions and Interactions in the Early Stages of Human Glucagon Amyloid Fibrillation. Biophysical Journal, 2015, 108, 937-948.	0.5	19
35	Effect of Hydrolytic Degradation on the In Vivo Properties of Monoclonal Antibodies. AAPS Advances in the Pharmaceutical Sciences Series, 2015, , 105-135.	0.6	1
36	Characterizing Protein Structure, Dynamics and Conformation in Lyophilized Solids. Current Pharmaceutical Design, 2015, 21, 5845-5853.	1.9	38

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37	Analyzing Subvisible Particles in Protein Drug Products: a Comparison of Dynamic Light Scattering (DLS) and Resonant Mass Measurement (RMM). AAPS Journal, 2014, 16, 440-451.	4.4	75
38	Commentary: Current Perspectives on the Aggregation of Protein Drugs. AAPS Journal, 2014, 16, 413-414.	4.4	7
39	Thiolâ€“Disulfide Exchange in Peptides Derived from Human Growth Hormone. Journal of Pharmaceutical Sciences, 2014, 103, 1032-1042.	3.3	14
40	Predicting Protein Aggregation during Storage in Lyophilized Solids Using Solid State Amide Hydrogen/Deuterium Exchange with Mass Spectrometric Analysis (ssHDX-MS). Molecular Pharmaceutics, 2014, 11, 1869-1879.	4.6	56
41	Protein aggregation and lyophilization: Protein structural descriptors as predictors of aggregation propensity. Computers and Chemical Engineering, 2013, 58, 369-377.	3.8	12
42	Microarrays and microneedle arrays for delivery of peptides, proteins, vaccines and other applications. Expert Opinion on Drug Delivery, 2013, 10, 1155-1170.	5.0	46
43	Photolytic Labeling To Probe Molecular Interactions in Lyophilized Powders. Molecular Pharmaceutics, 2013, 10, 4629-4639.	4.6	13
44	Localized Hydration in Lyophilized Myoglobin by Hydrogenâ€“Deuterium Exchange Mass Spectrometry. 2. Exchange Kinetics. Molecular Pharmaceutics, 2012, 9, 727-733.	4.6	28
45	Protein G, Protein A and Protein A-Derived Peptides Inhibit the Agitation Induced Aggregation of IgG. Molecular Pharmaceutics, 2012, 9, 622-628.	4.6	12
46	Localized Hydration in Lyophilized Myoglobin by Hydrogenâ€“Deuterium Exchange Mass Spectrometry. 1. Exchange Mapping. Molecular Pharmaceutics, 2012, 9, 718-726.	4.6	36
47	Adhesive/Dentin Interface: The Weak Link in the Composite Restoration. Annals of Biomedical Engineering, 2010, 38, 1989-2003.	2.5	362
48	Immune response to controlled release of immunomodulating peptides in a murine experimental autoimmune encephalomyelitis (EAE) model. Journal of Controlled Release, 2010, 141, 145-152.	9.9	25
49	Thiol-Disulfide Interchange in the Tocinoic Acid/Glutathione System During Freezing and Drying. Journal of Pharmaceutical Sciences, 2010, 99, 4849-4856.	3.3	6
50	Effect of photoinitiators on the in vitro performance of a dentin adhesive exposed to simulated oral environment. Dental Materials, 2009, 25, 452-458.	3.5	67
51	Water sorption and dynamic mechanical properties of dentin adhesives with a urethane-based multifunctional methacrylate monomer. Dental Materials, 2009, 25, 1569-1575.	3.5	70
52	Dynamic mechanical analysis and esterase degradation of dentin adhesives containing a branched methacrylate. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2009, 91B, 61-70.	3.4	57
53	Enzyme-catalyzed hydrolysis of dentin adhesives containing a new urethane-based trimethacrylate monomer. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2009, 91B, 562-571.	3.4	35
54	Reversibility and regioselectivity in thiol/disulfide interchange of tocinoic acid with glutathione in lyophilized solids. Journal of Pharmaceutical Sciences, 2009, 98, 3312-3318.	3.3	6

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55	Physical properties of PLGA films during polymer degradation. Journal of Applied Polymer Science, 2009, 114, 2848-2854.	2.6	96
56	Effect of protein structure on deamidation rate in the Fc fragment of an IgG1 monoclonal antibody. Protein Science, 2009, 18, 1573-1584.	7.6	80
57	Effects of Excipients on Protein Conformation in Lyophilized Solids by Hydrogen/Deuterium Exchange Mass Spectrometry. Pharmaceutical Research, 2008, 25, 259-267.	3.5	44
58	Chemical Degradation of Peptides and Proteins in PLGA: A Review of Reactions and Mechanisms. Journal of Pharmaceutical Sciences, 2008, 97, 2395-2404.	3.3	224
59	Preparation and properties of novel dentin adhesives with esterase resistance. Journal of Applied Polymer Science, 2008, 107, 3588-3597.	2.6	39
60	Comparison of LC and LC/MS methods for quantifying N-glycosylation in recombinant IgGs. Journal of the American Society for Mass Spectrometry, 2008, 19, 1643-1654.	2.8	79
61	Protein Conformation in Amorphous Solids by FTIR and by Hydrogen/Deuterium Exchange with Mass Spectrometry. Biophysical Journal, 2008, 95, 5951-5961.	0.5	32
62	Trehalose and calcium exert site-specific effects on calmodulin conformation in amorphous solids. Biotechnology and Bioengineering, 2007, 97, 1650-1653.	3.3	13
63	Characterizing protein structure in amorphous solids using hydrogen/deuterium exchange with mass spectrometry. Analytical Biochemistry, 2007, 366, 18-28.	2.4	41
64	Effect of N-1 and N-2 residues on peptide deamidation rate in solution and solid state. AAPS Journal, 2006, 8, E166-E173.	4.4	16
65	Effects of acidic Nâ€‰+â€‰1 residues on asparagine deamidation rates in solution and in the solid state. Journal of Pharmaceutical Sciences, 2005, 94, 666-675.	3.3	29
66	Effects of sucrose and mannitol on asparagine deamidation rates of model peptides in solution and in the solid state. Journal of Pharmaceutical Sciences, 2005, 94, 1723-1735.	3.3	18
67	Deamidation of model Î²-turn cyclic peptides in the solid state. Journal of Pharmaceutical Sciences, 2005, 94, 2616-2631.	3.3	10
68	Polyvinylpyrrolidoneâ€“drug conjugate: synthesis and release mechanism. Journal of Controlled Release, 2004, 94, 91-100.	9.9	119
69	Solid-state NMR studies of pharmaceutical solids in polymer matrices. Analytical and Bioanalytical Chemistry, 2004, 378, 1504-1510.	3.7	38
70	Release from polymeric prodrugs: Linkages and their degradation. Journal of Pharmaceutical Sciences, 2004, 93, 1962-1979.	3.3	123
71	Applications of model Î²â€hairpin peptides. Journal of Pharmaceutical Sciences, 2004, 93, 2881-2894.	3.3	33
72	Pharmaceutical product design using combinatorial optimization. Computers and Chemical Engineering, 2004, 28, 425-434.	3.8	33

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73	Reaction of a Peptide with Polyvinylpyrrolidone in the Solid State. Journal of Pharmaceutical Sciences, 2003, 92, 585-593.	3.3	26
74	Gastric Function in the Elderly: Effects on Absorption of Ketoconazole. Journal of Clinical Pharmacology, 2003, 43, 996-1002.	2.0	26
75	Racemization of an Asparagine Residue during Peptide Deamidation. Journal of the American Chemical Society, 2003, 125, 11486-11487.	13.7	37
76	Formaldehyde production by Tris buffer in peptide formulations at elevated temperature. Journal of Pharmaceutical Sciences, 2001, 90, 1198-1203.	3.3	14
77	Effect of â€˜pHâ€™ on the rate of asparagine deamidation in polymeric formulations: â€˜pHâ€™â€“rate profile. Journal of Pharmaceutical Sciences, 2001, 90, 141-156.	3.3	67
78	Design of novel pharmaceutical products via combinatorial optimization. Computers and Chemical Engineering, 2000, 24, 701-704.	3.8	34
79	Chemical stability of peptides in polymers. 1. Effect of water on peptide deamidation in poly(vinyl) Tj ETQq1 1 0.784314 rgBT /Overlock	3.3	64
80	Chemical stability of peptides in polymers. 2. Discriminating between solvent and plasticizing effects of water on peptide deamidation in poly(vinylpyrrolidone). Journal of Pharmaceutical Sciences, 1999, 88, 1081-1089.	3.3	54
81	Capillary electrophoresis separation of an asparagine containing hexapeptide and its deamidation products. Journal of Pharmaceutical and Biomedical Analysis, 1998, 18, 421-427.	2.8	10
82	Development of a Cell Culture System To Study Antibody Convection in Tumors. Journal of Pharmaceutical Sciences, 1997, 86, 858-864.	3.3	2
83	Effect of formulation variables on drug and polymer release from HPMC-based matrix tablets. International Journal of Pharmaceutics, 1996, 142, 53-60.	5.2	107
84	Application of benzyl hyaluronate membranes as potential wound dressings: evaluation of water vapour and gas permeabilities. Biomaterials, 1996, 17, 1639-1643.	11.4	102
85	Automated analytical systems for drug development studies part IV. A microdialysis system to study the partitioning of lomefloxacin across an erythrocyte membrane in vitro. Journal of Pharmaceutical and Biomedical Analysis, 1995, 14, 121-129.	2.8	18
86	Effect of drug hydrophilicity and membrane hydration on diffusion in hyaluronic acid ester membranes. Journal of Controlled Release, 1995, 37, 95-104.	9.9	19
87	Diffusion of an anti-transferrin receptor antibody in cultured murine melanoma cell layers. Pharmaceutical Research, 1995, 12, 1907-1916.	3.5	5
88	Swelling properties of hyaluronic acid ester membranes. Journal of Membrane Science, 1994, 92, 157-167.	8.2	19
89	Ocular sustained delivery of prednisolone using hyaluronic acid benzyl ester films. International Journal of Pharmaceutics, 1994, 111, 295-298.	5.2	24
90	Evaluation of mucoadhesive properties of hyaluronic acid benzyl esters. International Journal of Pharmaceutics, 1994, 107, 91-97.	5.2	27

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91	Gellan-based systems for ophthalmic sustained delivery of methylprednisolone. Journal of Controlled Release, 1993, 26, 195-201.	9.9	96
92	Examination of microdialysis sampling in a well-characterized hydrodynamic system. Analytical Chemistry, 1993, 65, 2324-2328.	6.5	53
93	Methylprednisolone esters of hyaluronic acid in ophthalmic drug delivery: in vitro and in vivo release studies. International Journal of Pharmaceutics, 1992, 80, 161-169.	5.2	57
94	Topical drug delivery from thin applications: theoretical predictions and experimental results. Pharmaceutical Research, 1990, 07, 1048-1054.	3.5	11
95	Buccal absorption. III. Simultaneous diffusion and metabolism of an aminopeptidase substrate in the hamster cheek pouch. Pharmaceutical Research, 1989, 06, 966-970.	3.5	18