

Elizabeth M Topp

List of Publications by Year in descending order

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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	Immunogenicity of Therapeutic Protein Aggregates. <i>Journal of Pharmaceutical Sciences</i> , 2016, 105, 417-430.	3.3	392
2	Adhesive/Dentin Interface: The Weak Link in the Composite Restoration. <i>Annals of Biomedical Engineering</i> , 2010, 38, 1989-2003.	2.5	362
3	Chemical Degradation of Peptides and Proteins in PLGA: A Review of Reactions and Mechanisms. <i>Journal of Pharmaceutical Sciences</i> , 2008, 97, 2395-2404.	3.3	224
4	Release from polymeric prodrugs: Linkages and their degradation. <i>Journal of Pharmaceutical Sciences</i> , 2004, 93, 1962-1979.	3.3	123
5	Polyvinylpyrrolidone drug conjugate: synthesis and release mechanism. <i>Journal of Controlled Release</i> , 2004, 94, 91-100.	9.9	119
6	Effect of formulation variables on drug and polymer release from HPMC-based matrix tablets. <i>International Journal of Pharmaceutics</i> , 1996, 142, 53-60.	5.2	107
7	Application of benzyl hyaluronate membranes as potential wound dressings: evaluation of water vapour and gas permeabilities. <i>Biomaterials</i> , 1996, 17, 1639-1643.	11.4	102
8	Gellan-based systems for ophthalmic sustained delivery of methylprednisolone. <i>Journal of Controlled Release</i> , 1993, 26, 195-201.	9.9	96
9	Physical properties of PLGA films during polymer degradation. <i>Journal of Applied Polymer Science</i> , 2009, 114, 2848-2854.	2.6	96
10	Effect of protein structure on deamidation rate in the Fc fragment of an IgG1 monoclonal antibody. <i>Protein Science</i> , 2009, 18, 1573-1584.	7.6	80
11	Comparison of LC and LC/MS methods for quantifying N-glycosylation in recombinant IgGs. <i>Journal of the American Society for Mass Spectrometry</i> , 2008, 19, 1643-1654.	2.8	79
12	Analyzing Subvisible Particles in Protein Drug Products: a Comparison of Dynamic Light Scattering (DLS) and Resonant Mass Measurement (RMM). <i>AAPS Journal</i> , 2014, 16, 440-451.	4.4	75
13	Water sorption and dynamic mechanical properties of dentin adhesives with a urethane-based multifunctional methacrylate monomer. <i>Dental Materials</i> , 2009, 25, 1569-1575.	3.5	70
14	Effect of pH on the rate of asparagine deamidation in polymeric formulations: pH rate profile. <i>Journal of Pharmaceutical Sciences</i> , 2001, 90, 141-156.	3.3	67
15	Effect of photoinitiators on the in vitro performance of a dentin adhesive exposed to simulated oral environment. <i>Dental Materials</i> , 2009, 25, 452-458.	3.5	67
16	Chemical stability of peptides in polymers. 1. Effect of water on peptide deamidation in poly(vinyl) Tj ETQq0 0 0 rgBT/Overlock 10 Tf 50	3.3	64
17	Methylprednisolone esters of hyaluronic acid in ophthalmic drug delivery: in vitro and in vivo release studies. <i>International Journal of Pharmaceutics</i> , 1992, 80, 161-169.	5.2	57
18	Dynamic mechanical analysis and esterase degradation of dentin adhesives containing a branched methacrylate. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2009, 91B, 61-70.	3.4	57

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19	Predicting Protein Aggregation during Storage in Lyophilized Solids Using Solid State Amide Hydrogen/Deuterium Exchange with Mass Spectrometric Analysis (ssHDX-MS). <i>Molecular Pharmaceutics</i> , 2014, 11, 1869-1879.	4.6	56
20	Chemical stability of peptides in polymers. 2. Discriminating between solvent and plasticizing effects of water on peptide deamidation in poly(vinylpyrrolidone). <i>Journal of Pharmaceutical Sciences</i> , 1999, 88, 1081-1089.	3.3	54
21	Examination of microdialysis sampling in a well-characterized hydrodynamic system. <i>Analytical Chemistry</i> , 1993, 65, 2324-2328.	6.5	53
22	Microarrays and microneedle arrays for delivery of peptides, proteins, vaccines and other applications. <i>Expert Opinion on Drug Delivery</i> , 2013, 10, 1155-1170.	5.0	46
23	Effects of Excipients on Protein Conformation in Lyophilized Solids by Hydrogen/Deuterium Exchange Mass Spectrometry. <i>Pharmaceutical Research</i> , 2008, 25, 259-267.	3.5	44
24	Characterizing protein structure in amorphous solids using hydrogen/deuterium exchange with mass spectrometry. <i>Analytical Biochemistry</i> , 2007, 366, 18-28.	2.4	41
25	Preparation and properties of novel dentin adhesives with esterase resistance. <i>Journal of Applied Polymer Science</i> , 2008, 107, 3588-3597.	2.6	39
26	Solid-State Hydrogen-Deuterium Exchange Mass Spectrometry: Correlation of Deuterium Uptake and Long-Term Stability of Lyophilized Monoclonal Antibody Formulations. <i>Molecular Pharmaceutics</i> , 2018, 15, 1-11.	4.6	39
27	Solid-state NMR studies of pharmaceutical solids in polymer matrices. <i>Analytical and Bioanalytical Chemistry</i> , 2004, 378, 1504-1510.	3.7	38
28	Characterizing Protein Structure, Dynamics and Conformation in Lyophilized Solids. <i>Current Pharmaceutical Design</i> , 2015, 21, 5845-5853.	1.9	38
29	Racemization of an Asparagine Residue during Peptide Deamidation. <i>Journal of the American Chemical Society</i> , 2003, 125, 11486-11487.	13.7	37
30	Localized Hydration in Lyophilized Myoglobin by Hydrogen-Deuterium Exchange Mass Spectrometry. 1. Exchange Mapping. <i>Molecular Pharmaceutics</i> , 2012, 9, 718-726.	4.6	36
31	Effects of drying method and excipient on the structure and physical stability of protein solids: Freeze drying vs. spray freeze drying. <i>International Journal of Pharmaceutics</i> , 2021, 594, 120169.	5.2	36
32	Enzyme-catalyzed hydrolysis of dentin adhesives containing a new urethane-based trimethacrylate monomer. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2009, 91B, 562-571.	3.4	35
33	Design of novel pharmaceutical products via combinatorial optimization. <i>Computers and Chemical Engineering</i> , 2000, 24, 701-704.	3.8	34
34	Applications of model Î²-sheet hairpin peptides. <i>Journal of Pharmaceutical Sciences</i> , 2004, 93, 2881-2894.	3.3	33
35	Pharmaceutical product design using combinatorial optimization. <i>Computers and Chemical Engineering</i> , 2004, 28, 425-434.	3.8	33
36	Protein Conformation in Amorphous Solids by FTIR and by Hydrogen/Deuterium Exchange with Mass Spectrometry. <i>Biophysical Journal</i> , 2008, 95, 5951-5961.	0.5	32

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37	Effects of acidic Nâ€‰%+â€‰%1 residues on asparagine deamidation rates in solution and in the solid state. <i>Journal of Pharmaceutical Sciences</i> , 2005, 94, 666-675.	3.3	29
38	Effects of Drying Process on an IgG1 Monoclonal Antibody Using Solid-State Hydrogen Deuterium Exchange with Mass Spectrometric Analysis (ssHDX-MS). <i>Pharmaceutical Research</i> , 2018, 35, 12.	3.5	29
39	Localized Hydration in Lyophilized Myoglobin by Hydrogenâ€‰Deuterium Exchange Mass Spectrometry. 2. Exchange Kinetics. <i>Molecular Pharmaceutics</i> , 2012, 9, 727-733.	4.6	28
40	Physical Characterization and Innate Immunogenicity of Aggregated Intravenous Immunoglobulin (IGIV) in an In Vitro Cell-Based Model. <i>Pharmaceutical Research</i> , 2016, 33, 1736-1751.	3.5	28
41	Evaluation of mucoadhesive properties of hyaluronic acid benzyl esters. <i>International Journal of Pharmaceutics</i> , 1994, 107, 91-97.	5.2	27
42	Reaction of a Peptide with Polyvinylpyrrolidone in the Solid State. <i>Journal of Pharmaceutical Sciences</i> , 2003, 92, 585-593.	3.3	26
43	Gastric Function in the Elderly: Effects on Absorption of Ketoconazole. <i>Journal of Clinical Pharmacology</i> , 2003, 43, 996-1002.	2.0	26
44	Immune response to controlled release of immunomodulating peptides in a murine experimental autoimmune encephalomyelitis (EAE) model. <i>Journal of Controlled Release</i> , 2010, 141, 145-152.	9.9	25
45	Ocular sustained delivery of prednisolone using hyaluronic acid benzyl ester films. <i>International Journal of Pharmaceutics</i> , 1994, 111, 295-298.	5.2	24
46	Understanding the Impact of Proteinâ€‰Excipient Interactions on Physical Stability of Spray-Dried Protein Solids. <i>Molecular Pharmaceutics</i> , 2021, 18, 2657-2668.	4.6	24
47	Effects of drying method and excipient on structure and stability of protein solids using solid-state hydrogen/deuterium exchange mass spectrometry (ssHDX-MS). <i>International Journal of Pharmaceutics</i> , 2019, 567, 118470.	5.2	22
48	Swelling properties of hyaluronic acid ester membranes. <i>Journal of Membrane Science</i> , 1994, 92, 157-167.	8.2	19
49	Effect of drug hydrophilicity and membrane hydration on diffusion in hyaluronic acid ester membranes. <i>Journal of Controlled Release</i> , 1995, 37, 95-104.	9.9	19
50	Structural Transitions and Interactions in the Early Stages of Human Glucagon Amyloid Fibrillation. <i>Biophysical Journal</i> , 2015, 108, 937-948.	0.5	19
51	Buccal absorption. III. Simultaneous diffusion and metabolism of an aminopeptidase substrate in the hamster cheek pouch. <i>Pharmaceutical Research</i> , 1989, 06, 966-970.	3.5	18
52	Automated analytical systems for drug development studies part IV. A microdialysis system to study the partitioning of lomefloxacin across an erythrocyte membrane in vitro. <i>Journal of Pharmaceutical and Biomedical Analysis</i> , 1995, 14, 121-129.	2.8	18
53	Effects of sucrose and mannitol on asparagine deamidation rates of model peptides in solution and in the solid state. <i>Journal of Pharmaceutical Sciences</i> , 2005, 94, 1723-1735.	3.3	18
54	Process and Formulation Effects on Protein Structure in Lyophilized Solids Using Mass Spectrometric Methods. <i>Journal of Pharmaceutical Sciences</i> , 2016, 105, 1684-1692.	3.3	17

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55	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
56	Cocrystalline Solids of Telaprevir with Enhanced Oral Absorption. Journal of Pharmaceutical Sciences, 2015, 104, 3343-3350.	3.3	16
57	Probing the Conformation of an IgG1 Monoclonal Antibody in Lyophilized Solids Using Solid-State Hydrogen-Deuterium Exchange with Mass Spectrometric Analysis (ssHDX-MS). Molecular Pharmaceutics, 2018, 15, 356-368.	4.6	16
58	Formaldehyde production by Tris buffer in peptide formulations at elevated temperature. Journal of Pharmaceutical Sciences, 2001, 90, 1198-1203.	3.3	14
59	Thiol-Disulfide Exchange in Peptides Derived from Human Growth Hormone. Journal of Pharmaceutical Sciences, 2014, 103, 1032-1042.	3.3	14
60	Thiol-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
61	Mass Spectrometric Approaches to Study Protein Structure and Interactions in Lyophilized Powders. Journal of Visualized Experiments, 2015, , 52503.	0.3	14
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	Photolytic Labeling To Probe Molecular Interactions in Lyophilized Powders. Molecular Pharmaceutics, 2013, 10, 4629-4639.	4.6	13
64	Surface Composition and Formulation Heterogeneity of Protein Solids Produced by Spray Drying. Pharmaceutical Research, 2020, 37, 14.	3.5	13
65	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
66	Protein aggregation and lyophilization: Protein structural descriptors as predictors of aggregation propensity. Computers and Chemical Engineering, 2013, 58, 369-377.	3.8	12
67	Topical drug delivery from thin applications: theoretical predictions and experimental results. Pharmaceutical Research, 1990, 07, 1048-1054.	3.5	11
68	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
69	Deamidation of model β -turn cyclic peptides in the solid state. Journal of Pharmaceutical Sciences, 2005, 94, 2616-2631.	3.3	10
70	Fibpredictor: a computational method for rapid prediction of amyloid fibril structures. Journal of Molecular Modeling, 2016, 22, 206.	1.8	10
71	Fibrillation of Human Calcitonin and Its Analogs: Effects of Phosphorylation and Disulfide Reduction. Biophysical Journal, 2021, 120, 86-100.	0.5	10
72	Thiol-Disulfide Exchange in Human Growth Hormone. Pharmaceutical Research, 2016, 33, 1370-1382.	3.5	9

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73	Solid-State Hydrogenâ€“Deuterium Exchange Mass Spectrometry (ssHDX-MS) of Lyophilized Poly-<sc>d</sc>,<sc>l</sc>-Alanine. Molecular Pharmaceutics, 2019, 16, 2935-2946.	4.6	9
74	Photolytic Labeling and Its Applications in Protein Drug Discovery and Development. Journal of Pharmaceutical Sciences, 2019, 108, 791-797.	3.3	9
75	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
76	Effect of â€“pHâ€“™ on the Rate of Pyroglutamate Formation in Solution and Lyophilized Solids. Molecular Pharmaceutics, 2021, 18, 3116-3124.	4.6	9
77	Photolytic Cross-Linking to Probe Proteinâ€“Protein and Proteinâ€“Matrix Interactions in Lyophilized Powders. Molecular Pharmaceutics, 2015, 12, 3237-3249.	4.6	8
78	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
79	Commentary: Current Perspectives on the Aggregation of Protein Drugs. AAPS Journal, 2014, 16, 413-414.	4.4	7
80	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
81	Thiol-Disulfide Interchange in the Tocinoic Acid/Glutathione System During Freezing and Drying. Journal of Pharmaceutical Sciences, 2010, 99, 4849-4856.	3.3	6
82	Diffusion of an anti-transferrin receptor antibody in cultured murine melanoma cell layers. Pharmaceutical Research, 1995, 12, 1907-1916.	3.5	5
83	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
84	In-Situ Molecular Vapor Composition Measurements During Lyophilization. Pharmaceutical Research, 2018, 35, 115.	3.5	4
85	Quantitative Analysis of Peptideâ€“Matrix Interactions in Lyophilized Solids Using Photolytic Labeling. Molecular Pharmaceutics, 2018, 15, 2797-2806.	4.6	4
86	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
87	Statistical electromagnetics for industrial pharmaceutical lyophilization. , 2022, 1, .		4
88	A Cooperative Folding Unit as the Structural Link for Energetic Coupling within a Protein. Biochemistry, 2017, 56, 6555-6564.	2.5	3
89	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
90	Development of a Cell Culture System To Study Antibody Convection in Tumors. Journal of Pharmaceutical Sciences, 1997, 86, 858-864.	3.3	2

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91	A Novel Photoreactive Excipient to Probe Peptide-Matrix Interactions in Lyophilized Solids. Journal of Pharmaceutical Sciences, 2020, 109, 709-718.	3.3	1
92	Prehydration and the Reversibility of Solid-State Hydrogen-Deuterium Exchange. Molecular Pharmaceutics, 2020, 17, 3541-3552.	4.6	1
93	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
94	High-Resolution Mass Spectrometric Methods for Proteins in Lyophilized Solids. Methods in Pharmacology and Toxicology, 2019, , 353-375.	0.2	1
95	Photolytic Labeling To Quantify Peptide-Water Interactions in Lyophilized Solids. Molecular Pharmaceutics, 2019, 16, 1053-1064.	4.6	0