Shirui Mao

List of Publications by Year
in descending order

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117 papers	6,280 citations	81900 39 h-index	71685 76 g-index
120 all docs	120 docs citations	120 times ranked	7667 citing authors

#	Article	IF	Citations
1	Chitosan-based formulations for delivery of DNA and siRNA. Advanced Drug Delivery Reviews, 2010, 62, 12-27.	13.7	842
2	Carrageenan and its applications in drug delivery. Carbohydrate Polymers, 2014, 103, 1-11.	10.2	448
3	The depolymerization of chitosan: effects on physicochemical and biological properties. International Journal of Pharmaceutics, 2004, 281, 45-54.	5.2	328
4	Synthesis, characterization and cytotoxicity of poly(ethylene glycol)-graft-trimethyl chitosan block copolymers. Biomaterials, 2005, 26, 6343-6356.	11.4	260
5	Effect of WOW process parameters on morphology and burst release of FITC-dextran loaded PLGA microspheres. International Journal of Pharmaceutics, 2007, 334, 137-148.	5.2	232
6	Self-Assembled Polyelectrolyte Nanocomplexes between Chitosan Derivatives and Insulin. Journal of Pharmaceutical Sciences, 2006, 95, 1035-1048.	3.3	161
7	Recent advances in controlled pulmonary drug delivery. Drug Discovery Today, 2015, 20, 380-389.	6.4	152
8	Uptake and Transport of PEG-Graft-Trimethyl-Chitosan Copolymerâ€“Insulin Nanocomplexes by Epithelial Cells. Pharmaceutical Research, 2005, 22, 2058-2068.	3.5	149
9	Application of quality by design in the current drug development. Asian Journal of Pharmaceutical Sciences, 2017, 12, 1-8.	9.1	143
10	Peroral delivery of insulin using chitosan derivatives: A comparative study of polyelectrolyte nanocomplexes and nanoparticles. International Journal of Pharmaceutics, 2007, 342, 240-249.	5.2	137
11	l -Leucine as an excipient against moisture on in vitro aerosolization performances of highly hygroscopic spray-dried powders. European Journal of Pharmaceutics and Biopharmaceutics, 2016, 102, 132-141.	4.3	135
12	Physicochemical properties affecting the fate of nanoparticles in pulmonary drug delivery. Drug Discovery Today, 2020, 25, 150-159.	6.4	130
13	Effects of process and formulation parameters on characteristics and internal morphology of poly(d,l-lactide-co-glycolide) microspheres formed by the solvent evaporation method. European Journal of Pharmaceutics and Biopharmaceutics, 2008, 68, 214-223.	4.3	126
14	Physicochemical properties and biocompatibility of N-trimethyl chitosan: Effect of quaternization and dimethylation. European Journal of Pharmaceutics and Biopharmaceutics, 2008, 70, 563-571.	4.3	93
15	Nanonization of Itraconazole by High Pressure Homogenization: Stabilizer Optimization and Effect of Particle Size on Oral Absorption. Journal of Pharmaceutical Sciences, 2011, 100, 3365-3373.	3.3	88
16	Intranasal administration of melatonin starch microspheres. International Journal of Pharmaceutics, 2004, 272, 37-43.	5.2	81
17	Strategies and industrial perspectives to improve oral absorption of biological macromolecules. Expert Opinion on Drug Delivery, 2018, 15, 223-233.	5.0	79
18	Recent advances in polymeric microspheres for parenteral drug delivery â€“ part 1. Expert Opinion on Drug Delivery, 2012, 9, 1161-1176.	5.0	75

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19	Effect of chitosan structure properties and molecular weight on the intranasal absorption of tetramethylpyrazine phosphate in rats. European Journal of Pharmaceutics and Biopharmaceutics, 2008, 70, 874-881.	4.3	70
20	New strategies to improve the intranasal absorption of insulin. Drug Discovery Today, 2010, 15, 416-427.	6.4	69
21	Design and intestinal mucus penetration mechanism of core-shell nanocomplex. Journal of Controlled Release, 2018, 272, 29-38.	9.9	69
22	Self-assembled polyelectrolyte nanocomplexes between chitosan derivatives and enoxaparin. European Journal of Pharmaceutics and Biopharmaceutics, 2008, 69, 417-425.	4.3	67
23	Amphiphilic polymeric micelles as the nanocarrier for peroral delivery of poorly soluble anticancer drugs. Expert Opinion on Drug Delivery, 2012, 9, 687-700.	5.0	67
24	Bioadhesion and oral absorption of enoxaparin nanocomplexes. International Journal of Pharmaceutics, 2010, 386, 275-281.	5.2	66
25	Exploring polyvinylpyrrolidone in the engineering of large porous PLGA microparticles via single emulsion method with tunable sustained release in the lung: In vitro and in vivo characterization. Journal of Controlled Release, 2017, 249, 11-22.	9.9	65
26	Enhanced oral insulin delivery via surface hydrophilic modification of chitosan copolymer based self-assembly polyelectrolyte nanocomplex. International Journal of Pharmaceutics, 2019, 554, 36-47.	5.2	64
27	Nanocrystals embedded in chitosan-based respirable swellable microparticles as dry powder for sustained pulmonary drug delivery. European Journal of Pharmaceutical Sciences, 2017, 99, 137-146.	4.0	63
28	Effect of novel stabilizersâ€"cationic polymers on the particle size and physical stability of poorly soluble drug nanocrystals. Nanomedicine: Nanotechnology, Biology, and Medicine, 2012, 8, 460-467.	3.3	59
29	Insights into the mechanisms of chitosanâ€"anionic polymers-based matrix tablets for extended drug release. International Journal of Pharmaceutics, 2014, 476, 253-265.	5.2	59
30	Chitosan based polymer-lipid hybrid nanoparticles for oral delivery of enoxaparin. International Journal of Pharmaceutics, 2018, 547, 499-505.	5.2	58
31	The depolymerization of sodium alginate by oxidative degradation. Pharmaceutical Development and Technology, 2012, 17, 763-769.	2.4	56
32	Factors influencing drug deposition in the nasal cavity upon delivery via nasal sprays. Journal of Pharmaceutical Investigation, 2020, 50, 251-259.	5.3	55
33	Drug release characteristics from chitosanâ€"alginate matrix tablets based on the theory of self-assembled film. International Journal of Pharmaceutics, 2013, 450, 197-207.	5.2	54
34	Designing Micellar Nanocarriers with Improved Drug Loading and Stability Based on Solubility Parameter. Molecular Pharmaceutics, 2015, 12, 816-825.	4.6	51
35	Synthesis, characterization and liver targeting evaluation of self-assembled hyaluronic acid nanoparticles functionalized with glycyrrhetinic acid. European Journal of Pharmaceutical Sciences, 2017, 96, 255-262.	4.0	48
36	Enhanced delivery of doxorubicin to the liver through self-assembled nanoparticles formed via conjugation of glycyrrhetinic acid to the hydroxyl group of hyaluronic acid. Carbohydrate Polymers, 2018, 195, 170-179.	10.2	46

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37	Inner layer-embedded contact lenses for pH-triggered controlled ocular drug delivery. European Journal of Pharmaceutics and Biopharmaceutics, 2018, 128, 220-229.	4.3	43
38	Sustained ophthalmic delivery of highly soluble drug using pH-triggered inner layer-embedded contact lens. International Journal of Pharmaceutics, 2018, 544, 100-111.	5.2	42
39	Comparison of different absorption enhancers on the intranasal absorption of isosorbide dinitrate in rats. International Journal of Pharmaceutics, 2010, 397, 59-66.	5.2	41
40	Effect of formulation variables on inÂvitro release of a water-soluble drug from chitosanâ€“sodium alginate matrix tablets. Asian Journal of Pharmaceutical Sciences, 2015, 10, 314-321.	9.1	40
41	Preparation and Solidification of Redispersible Nanosuspensions. Journal of Pharmaceutical Sciences, 2014, 103, 2166-2176.	3.3	39
42	In vitro and in vivo evaluation of chitosan graft glyceryl monooleate as peroral delivery carrier of enoxaparin. International Journal of Pharmaceutics, 2014, 471, 391-399.	5.2	38
43	Influence of stabilizer type and concentration on the lung deposition and retention of resveratrol nanosuspension-in-microparticles. International Journal of Pharmaceutics, 2019, 569, 118562.	5.2	37
44	Comparison of thermosensitive in situ gels and drug-resin complex for ocular drug delivery: In vitro drug release and in vivo tissue distribution. International Journal of Pharmaceutics, 2020, 578, 119184.	5.2	36
45	Evaluation of chitosanâ€“anionic polymers based tablets for extended-release of highly water-soluble drugs. Asian Journal of Pharmaceutical Sciences, 2015, 10, 24-30.	9.1	34
46	Alginate as a potential diphase solid dispersion carrier with enhanced drug dissolution and improved storage stability. European Journal of Pharmaceutical Sciences, 2018, 114, 346-355.	4.0	34
47	Mucoadhesive versus mucopenetrating nanoparticles for oral delivery of insulin. Acta Biomaterialia, 2021, 135, 506-519.	8.3	33
48	Non-ionic surfactants as novel intranasal absorption enhancers: in vitro and in vivo characterization. Drug Delivery, 2016, 23, 2272-2279.	5.7	32
49	Elucidation of Release Characteristics of Highly Soluble Drug Trimetazidine Hydrochloride from Chitosan-Carrageenan Matrix Tablets. Journal of Pharmaceutical Sciences, 2013, 102, 2644-2654.	3.3	31
50	Charge reversible hyaluronic acid-modified dendrimer-based nanoparticles for siMDR-1 and doxorubicin co-delivery. European Journal of Pharmaceutics and Biopharmaceutics, 2020, 154, 43-49.	4.3	31
51	Sustained therapeutic efficacy of budesonide-loaded chitosan swellable microparticles after lung delivery: Influence of in vitro release, treatment interval and dose. Journal of Controlled Release, 2018, 283, 163-174.	9.9	30
52	Inner layer-embedded contact lenses for ion-triggered controlled drug delivery. Materials Science and Engineering C, 2018, 93, 36-48.	7.3	30
53	Study on liver targeting effect of vinegar-baked Radix Bupleuri on resveratrol in mice. Journal of Ethnopharmacology, 2009, 126, 415-420.	4.1	29
54	Modulating intestinal mucus barrier for nanoparticles penetration by surfactants. Asian Journal of Pharmaceutical Sciences, 2019, 14, 543-551.	9.1	29

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55	Exploration of alginates as potential stabilizers of nanosuspension. AAPS PharmSciTech, 2017, 18, 3172-3181.	3.3	27
56	Nanosuspensions of Poorly Water Soluble Drugs Prepared by Top-down Technologies. Current Pharmaceutical Design, 2014, 20, 388-407.	1.9	27
57	Elucidating inhaled liposome surface charge on its interaction with biological barriers in the lung. European Journal of Pharmaceutics and Biopharmaceutics, 2022, 172, 101-111.	4.3	27
58	Exploration of supersaturable lacidipine ternary amorphous solid dispersion for enhanced dissolution and in vivo absorption. European Journal of Pharmaceutical Sciences, 2019, 139, 105043.	4.0	26
59	Physicochemical properties of nanoparticles affecting their fate and the physiological function of pulmonary surfactants. Acta Biomaterialia, 2022, 140, 76-87.	8.3	26
60	Spray drying of a poorly water-soluble drug nanosuspension for tablet preparation: formulation and process optimization with bioavailability evaluation. Drug Development and Industrial Pharmacy, 2015, 41, 927-933.	2.0	25
61	Exploring the effect of hydrophilic and hydrophobic structure of grafted polymeric micelles on drug loading. International Journal of Pharmaceutics, 2016, 512, 282-291.	5.2	25
62	Design of self-polymerized insulin loaded poly(n-butylcyanoacrylate) nanoparticles for tunable oral delivery. Journal of Controlled Release, 2020, 321, 641-653.	9.9	25
63	Exploring the influence of inhaled liposome membrane fluidity on its interaction with pulmonary physiological barriers. Biomaterials Science, 2020, 8, 6786-6797.	5.4	24
64	Design of biotin decorated enterocyte targeting muco-inert nanocomplexes for enhanced oral insulin delivery. Carbohydrate Polymers, 2021, 261, 117873.	10.2	24
65	Recent advances in polymeric microspheres for parenteral drug deliveryâ€"part 2. Expert Opinion on Drug Delivery, 2012, 9, 1209-1223.	5.0	23
66	Enhanced bloodâ€"brain barrier transport of vinpocetine by oral delivery of mixed micelles in combination with a message guider. Journal of Drug Targeting, 2017, 25, 532-540.	4.4	22
67	Inhalable PLGA microspheres: Tunable lung retention and systemic exposure via polyethylene glycol modification. Acta Biomaterialia, 2021, 123, 325-334.	8.3	22
68	Applications of Natural Polymeric Materials in Solid Oral Modified-Release Dosage Forms. Current Pharmaceutical Design, 2015, 21, 5854-5867.	1.9	22
69	Uptake, transport and peroral absorption of fatty glyceride grafted chitosan copolymerâ€"enoxaparin nanocomplexes: Influence of glyceride chain length. Acta Biomaterialia, 2014, 10, 3675-3685.	8.3	20
70	Enhanced liver-targeting via coadministration of 10-Hydroxycamptothecin polymeric micelles with vinegar baked Radix Bupleuri. Phytomedicine, 2018, 44, 1-8.	5.3	20
71	Exploration of hydrophobic modification degree of chitosan-based nanocomplexes on the oral delivery of enoxaparin. European Journal of Pharmaceutical Sciences, 2013, 50, 263-271.	4.0	19
72	Modulatory effects of extracts of vinegar-baked Radix Bupleuri and saikosaponins on the activity of cytochrome P450 enzymesin vitro. Xenobiotica, 2014, 44, 861-867.	1.1	19

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73	In vitroâ€“in vivo correlation of inhalable budesonide-loaded large porous particles for sustained treatment regimen of asthma. Acta Biomaterialia, 2019, 96, 505-516.	8.3	19
74	Characterization of chitosan and its derivatives using asymmetrical flow field-flow-fractionation: A comparison with traditional methods. Journal of Pharmaceutical and Biomedical Analysis, 2007, 45, 736-741.	2.8	18
75	Exploring the influence of drug content on DPI powder properties and potential prediction of pulmonary drug deposition. International Journal of Pharmaceutics, 2020, 575, 119000.	5.2	18
76	Exploring the intrinsic microâˆ’/nanoparticle size on their in vivo fate after lung delivery. Journal of Controlled Release, 2022, 347, 435-448.	9.9	18
77	Design and In Vitro Evaluation of a Film-Controlled Dosage Form Self-Converted from Monolithic Tablet in Gastrointestinal Environment. Journal of Pharmaceutical Sciences, 2010, 99, 4678-4690.	3.3	17
78	Design of Virus-Mimicking Polyelectrolyte Complexes for Enhanced Oral Insulin Delivery. Journal of Pharmaceutical Sciences, 2019, 108, 3408-3415.	3.3	17
79	Engineering large porous microparticles with tailored porosity and sustained drug release behavior for inhalation. European Journal of Pharmaceutics and Biopharmaceutics, 2020, 155, 139-146.	4.3	17
80	Design of folic acid decorated virus-mimicking nanoparticles for enhanced oral insulin delivery. International Journal of Pharmaceutics, 2021, 596, 120297.	5.2	17
81	Tunable and sustained-release characteristics of venlafaxine hydrochloride from chitosanâ€“carbomer matrix tablets based on in situ formed polyelectrolyte complex film coating. Asian Journal of Pharmaceutical Sciences, 2018, 13, 566-574.	9.1	16
82	Nanomicelle Based Peroral Delivery System for Enhanced Absorption and Sustained Release of 10-Hydrocamptothecin. Journal of Biomedical Nanotechnology, 2015, 11, 262-273.	1.1	15
83	Molecular simulation approach to the rational design of self-assembled nanoparticles for enhanced peroral delivery of doxorubicin. Carbohydrate Polymers, 2019, 218, 279-288.	10.2	15
84	Effect of polysorbate 80 on the intranasal absorption and brain distribution of tetramethylpyrazine phosphate in rats. Drug Delivery and Translational Research, 2019, 9, 311-318.	5.8	15
85	Phospholipid-modified poly(lactide-co-glycolide) microparticles for tuning the interaction with alveolar macrophages: In vitro and in vivo assessment. European Journal of Pharmaceutics and Biopharmaceutics, 2019, 143, 70-79.	4.3	14
86	Synergistic effect of Soluplus and hyaluronic acid on the supersaturation maintenance of lovastatin: The facilitated in vitro-in vivo performance and improved physical stability. Carbohydrate Polymers, 2019, 222, 114978.	10.2	14
87	Development and evaluation of vinpocetine inclusion complex for brain targeting. Asian Journal of Pharmaceutical Sciences, 2015, 10, 114-120.	9.1	13
88	Influence of polymeric carrier on the disposition and retention of 20(R)-ginsenoside-rg3-loaded swellable microparticles in the lung. Drug Delivery and Translational Research, 2018, 8, 252-265.	5.8	13
89	Effect of Glyceryl Monocaprylateâ€“Modified Chitosan on the Intranasal Absorption of Insulin in Rats. Journal of Pharmaceutical Sciences, 2019, 108, 3623-3629.	3.3	13
90	Effect of Sodium Alginate Type on Drug Release from Chitosan-Sodium Alginateâ€“Based In Situ Film-Forming Tablets. AAPS PharmSciTech, 2020, 21, 55.	3.3	13

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91	Self-aggregation of cationically modified poly(Îµ -caprolactone) 2 - co -poly(ethylene glycol) copolymers: Effect of cationic grafting ligand and poly(Îµ -caprolactone) chain length. Materials Science and Engineering C, 2017, 72, 444-455.	7.3	12
92	Synergetic effect of nucleation and crystal growth inhibitor on in vitro-in vivo performance of supersaturable lacidipine solid dispersion. International Journal of Pharmaceutics, 2019, 566, 594-603.	5.2	12
93	The influence of a biomimetic pulmonary surfactant modification on the in vivo fate of nanoparticles in the lung. Acta Biomaterialia, 2022, 147, 391-402.	8.3	12
94	Effect of saikosaponins and extracts of vinegar-baked Bupleuri Radix on the activity ofÎ²-glucuronidase. Xenobiotica, 2014, 44, 785-791.	1.1	11
95	Enhanced drug loading efficiency of contact lenses via salt-induced modulation. Asian Journal of Pharmaceutical Sciences, 2019, 14, 204-215.	9.1	11
96	Elucidation of alginate-drug miscibility on its crystal growth inhibition effect in supersaturated drug delivery system. Carbohydrate Polymers, 2020, 230, 115601.	10.2	11
97	Design of circular-ring film embedded contact lens for improved compatibility and sustained ocular drug delivery. European Journal of Pharmaceutics and Biopharmaceutics, 2020, 157, 28-37.	4.3	11
98	Exploring the potential influence of drug charge on downstream deposition behaviour of DPI powders. International Journal of Pharmaceutics, 2020, 588, 119798.	5.2	11
99	Dynamic structure model of polyelectrolyte complex based controlled-release matrix tablets visualized by synchrotron radiation micro-computed tomography. Materials Science and Engineering C, 2020, 116, 111137.	7.3	11
100	Pharmacodynamics and Potential Toxicity of Intranasally Administered Dipyrone. Biological and Pharmaceutical Bulletin, 2006, 29, 1355-1359.	1.4	10
101	Elucidating the Effect of Fine Lactose Ratio on the Rheological Properties and Aerodynamic Behavior of Dry Powder for Inhalation. AAPS Journal, 2021, 23, 55.	4.4	10
102	In vivoabsorption comparison of nanotechnology-based silybin tablets with its water-soluble derivative. Drug Development and Industrial Pharmacy, 2015, 41, 552-559.	2.0	8
103	Exploring the potential of functional polymer-lipid hybrid nanoparticles for enhanced oral delivery of paclitaxel. Asian Journal of Pharmaceutical Sciences, 2021, 16, 387-395.	9.1	8
104	Investigations on 5-fluorouracil solid lipid nanoparticles (SLN) prepared by hot homogenization. Die Pharmazie, 2005, 60, 273-7.	0.5	8
105	Investigation of cationized triblock and diblock poly(Îµ-caprolactone)-co-poly(ethylene glycol) copolymers for oral delivery of enoxaparin: In vitro approach. Acta Biomaterialia, 2017, 61, 180-192.	8.3	7
106	Tuning the membrane fluidity of liposomes for desirable in vivo fate with enhanced drug delivery. Advances in Biomembranes and Lipid Self-Assembly, 2021, 34, 67-106.	0.6	7
107	Exploration of nanocrystal technology for the preparation of lovastatin immediate and sustained release tablets. Journal of Drug Delivery Science and Technology, 2019, 50, 107-112.	3.0	6
108	Influence of drug-carrier compatibility and preparation method on the properties of paclitaxel-loaded lipid liquid crystalline nanoparticles. Journal of Pharmaceutical Sciences, 2021, 110, 2800-2807.	3.3	6

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109	Exploring the potential of redispersible nanocomplex-in-microparticles for enhanced oral insulin delivery. International Journal of Pharmaceutics, 2022, 612, 121357.	5.2	6
110	Spray dried inhalable ivacaftor co-amorphous microparticle formulations with leucine achieved enhanced in vitro dissolution and superior aerosol performance. International Journal of Pharmaceutics, 2022, 622, 121859.	5.2	6
111	Optimization of budesonide-loaded large-porous microparticles for inhalation using quality by design approach. Journal of Drug Delivery Science and Technology, 2019, 53, 101140.	3.0	5
112	Grafted polysaccharides as advanced pharmaceutical excipients. , 2021, , 75-129.		4
113	Drug Delivery Applications of Chitosan and its Derivatives. , 2015, , 637-678.		2
114	Chitosan and its derivatives-based nano-formulations in drug delivery. , 2016, , 515-572.		1
115	Nanobiomaterials in Drug Delivery: Designing Strategies and Critical Concepts for Their Potential Clinical Applications. , 2020, , 253-274.		1
116	Applications of hyaluronic acid and its derivatives-based nanoparticles in drug delivery. , 2022, , 281-311.		1
117	Applications of hybrid nanocrystals in drug delivery. , 2022, , 53-83.		0