Kevin J Edgar

List of Publications by Year
in descending order

109 papers	7,389 citations	76326 40 h-index	54911 84 g-index
110 all docs	110 docs citations	110 times ranked	8028 citing authors

#	Article	IF	Citations
1	Alginate derivatization: A review of chemistry, properties and applications. Biomaterials, 2012, 33, 3279-3305.	11.4	1,261
2	Advances in cellulose ester performance and application. Progress in Polymer Science, 2001, 26, 1605-1688.	24.7	904
3	Regioselective Esterification and Etherification of Cellulose: A Review. Biomacromolecules, 2011, 12, 1956-1972.	5.4	281
4	Mechanism of Inhibition of P-Glycoprotein Mediated Efflux by Vitamin E TPGS:â€‰ Influence on ATPase Activity and Membrane Fluidity. Molecular Pharmaceutics, 2007, 4, 465-474.	4.6	244
5	Properties, Chemistry, and Applications of the Bioactive Polysaccharide Curdlan. Biomacromolecules, 2014, 15, 1079-1096.	5.4	221
6	Maintaining Supersaturation in Aqueous Drug Solutions: Impact of Different Polymers on Induction Times. Crystal Growth and Design, 2013, 13, 740-751.	3.0	203
7	Pharmaceutical Applications of Cellulose Ethers and Cellulose Ether Esters. Biomacromolecules, 2018, 19, 2351-2376.	5.4	192
8	Vitamin E TPGS P-Glycoprotein Inhibition Mechanism: Influence on Conformational Flexibility, Intracellular ATP Levels, and Role of Time and Site of Access. Molecular Pharmaceutics, 2010, 7, 642-651.	4.6	186
9	Understanding Polymer Properties Important for Crystal Growth Inhibitionâ€"Impact of Chemically Diverse Polymers on Solution Crystal Growth of Ritonavir. Crystal Growth and Design, 2012, 12, 3133-3143.	3.0	186
10	Influence of vitamin E TPGS poly(ethylene glycol) chain length on apical efflux transporters in Caco-2 cell monolayers. Journal of Controlled Release, 2006, 111, 35-40.	9.9	165
11	â€œClickâ€•reactions in polysaccharide modification. Progress in Polymer Science, 2016, 53, 52-85.	24.7	161
12	Crystallization of Amorphous Solid Dispersions of Resveratrol during Preparation and Storageâ€"Impact of Different Polymers. Journal of Pharmaceutical Sciences, 2013, 102, 171-184.	3.3	159
13	Cellulose esters in drug delivery. Cellulose, 2006, 14, 49-64.	4.9	152
14	Both solubility and chemical stability of curcumin are enhanced by solid dispersion in cellulose derivative matrices. Carbohydrate Polymers, 2013, 98, 1108-1116.	10.2	147
15	Solid dispersion of quercetin in cellulose derivative matrices influences both solubility and stability. Carbohydrate Polymers, 2013, 92, 2033-2040.	10.2	104
16	Chemical Modification of Alginates in Organic Solvent Systems. Biomacromolecules, 2011, 12, 4095-4103.	5.4	101
17	Challenges and strategies in drug delivery systems for treatment of pulmonary infections. European Journal of Pharmaceutics and Biopharmaceutics, 2019, 144, 110-124.	4.3	95
18	Impact of Polymers on Crystal Growth Rate of Structurally Diverse Compounds from Aqueous Solution. Molecular Pharmaceutics, 2013, 10, 2381-2393.	4.6	90

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19	Inhibition of solution crystal growth of ritonavir by cellulose polymers â€“ factors influencing polymer effectiveness. CrystEngComm, 2012, 14, 6503.	2.6	89
20	Curcumin amorphous solid dispersions: the influence of intra and intermolecular bonding on physical stability. Pharmaceutical Development and Technology, 2014, 19, 976-986.	2.4	82
21	Influence of Additives on the Properties of Nanodroplets Formed in Highly Supersaturated Aqueous Solutions of Ritonavir. Molecular Pharmaceutics, 2013, 10, 3392-3403.	4.6	76
22	The role of polymers in oral bioavailability enhancement; a review. Polymer, 2015, 77, 399-415.	3.8	67
23	Preparation of cellulose [1-carbon-13]acetates and determination of monomer composition by NMR spectroscopy. Macromolecules, 1991, 24, 3050-3059.	4.8	66
24	Effect of Binary Additive Combinations on Solution Crystal Growth of the Poorly Water-Soluble Drug, Ritonavir. Crystal Growth and Design, 2012, 12, 6050-6060.	3.0	65
25	Stability and solubility enhancement of ellagic acid in cellulose ester solid dispersions. Carbohydrate Polymers, 2013, 92, 1443-1450.	10.2	65
26	Staudinger Reactions for Selective Functionalization of Polysaccharides: A Review. Biomacromolecules, 2015, 16, 2556-2571.	5.4	58
27	Inhibiting efflux with novel non-ionic surfactants: Rational design based on vitamin E TPGS. International Journal of Pharmaceutics, 2009, 370, 93-102.	5.2	56
28	Pairwise Polymer Blends for Oral Drug Delivery. Journal of Pharmaceutical Sciences, 2014, 103, 2871-2883.	3.3	54
29	Influence of Polymer and Drug Loading on the Release Profile and Membrane Transport of Telaprevir. Molecular Pharmaceutics, 2018, 15, 1700-1713.	4.6	52
30	Preparation and characterization of cellulose monoacetates: the relationship between structure and water solubility. Macromolecules, 1991, 24, 3060-3064.	4.8	50
31	Synthesis and structureâ€“property evaluation of cellulose Ï‰-carboxyesters for amorphous solid dispersions. Carbohydrate Polymers, 2014, 100, 116-125.	10.2	50
32	Staudinger Reduction Chemistry of Cellulose: Synthesis of Selectively <i>O</i>-Acylated 6-Amino-6-deoxy-cellulose. Biomacromolecules, 2012, 13, 992-1001.	5.4	47
33	Studies on regioselective acylation of cellulose with bulky acid chlorides. Cellulose, 2011, 18, 405-419.	4.9	46
34	Alginate esters via chemoselective carboxyl group modification. Carbohydrate Polymers, 2013, 98, 1288-1296.	10.2	45
35	Synthesis of Cellulose Adipate Derivatives. Biomacromolecules, 2011, 12, 1106-1115.	5.4	44
36	Mechanistic Design of Chemically Diverse Polymers with Applications in Oral Drug Delivery. Biomacromolecules, 2016, 17, 3659-3671.	5.4	44

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37	Olefin Cross-Metathesis in Polymer and Polysaccharide Chemistry: A Review. Biomacromolecules, 2017, 18, 1661-1676.	5.4	44
38	Interplay of Degradation, Dissolution and Stabilization of Clarithromycin and Its Amorphous Solid Dispersions. Molecular Pharmaceutics, 2013, 10, 4640-4653.	4.6	43
39	Synthesis of curdlan derivatives regioselectively modified at C-6: O-(N)-Acylated 6-amino-6-deoxycurdlan. Carbohydrate Polymers, 2014, 105, 161-168.	10.2	43
40	All-Polysaccharide, Self-Healing Injectable Hydrogels Based on Chitosan and Oxidized Hydroxypropyl Polysaccharides. Biomacromolecules, 2020, 21, 4261-4272.	5.4	43
41	Zero-order release formulations using a novel cellulose ester. Cellulose, 2007, 14, 73-83.	4.9	41
42	Olefin cross-metathesis, a mild, modular approach to functionalized cellulose esters. Polymer Chemistry, 2014, 5, 7021-7033.	3.9	39
43	Olefin Cross-Metathesis as a Source of Polysaccharide Derivatives: Cellulose Ï‰-Carboxyalkanoates. Biomacromolecules, 2014, 15, 177-187.	5.4	38
44	Mid-infrared spectroscopy as a polymer selection tool for formulating amorphous solid dispersions. Journal of Pharmacy and Pharmacology, 2014, 66, 244-255.	2.4	38
45	Amphiphilic hydroxyalkyl cellulose derivatives for amorphous solid dispersion prepared by olefin cross-metathesis. Polymer Chemistry, 2016, 7, 4953-4963.	3.9	38
46	Antibacterial modification of Lyocell fiber: A review. Carbohydrate Polymers, 2020, 250, 116932.	10.2	38
47	Novel cellulose-based amorphous solid dispersions enhance quercetin solution concentrations in vitro. Carbohydrate Polymers, 2017, 157, 86-93.	10.2	37
48	Amorphous solid dispersions of enzalutamide and novel polysaccharide derivatives: investigation of relationships between polymer structure and performance. Scientific Reports, 2020, 10, 18535.	3.3	34
49	Stability and solution concentration enhancement of resveratrol by solid dispersion in cellulose derivative matrices. Cellulose, 2013, 20, 1249-1260.	4.9	33
50	Imparting functional variety to cellulose ethers <i>via</i> olefin cross-metathesis. Polymer Chemistry, 2015, 6, 3816-3827.	3.9	33
51	Synthesis of regioselectively brominated cellulose esters and 6-cyano-6-deoxycellulose esters. Cellulose, 2011, 18, 1305-1314.	4.9	31
52	Chemical synthesis of polysaccharideâ€“protein and polysaccharideâ€“peptide conjugates: A review. Carbohydrate Polymers, 2021, 274, 118662.	10.2	31
53	Probing the Mechanism of TBAF-Catalyzed Deacylation of Cellulose Esters. Biomacromolecules, 2013, 14, 1388-1394.	5.4	30
54	Cellulose ether derivatives: a new platform for prodrug formation of fluoroquinolone antibiotics. Cellulose, 2015, 22, 2011-2022.	4.9	30

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55	Amphiphilic Cellulose Ethers Designed for Amorphous Solid Dispersion via Olefin Cross-Metathesis. Biomacromolecules, 2016, 17, 454-465.	5.4	30
56	Polysaccharide-containing block copolymers: synthesis and applications. Materials Chemistry Frontiers, 2020, 4, 99-112.	5.9	30
57	TBAF and Cellulose Esters: Unexpected Deacylation with Unexpected Regioselectivity. Biomacromolecules, 2012, 13, 299-303.	5.4	28
58	Direct synthesis of cellulose adipate derivatives using adipic anhydride. Cellulose, 2012, 19, 1279-1293.	4.9	27
59	Water-soluble aminocurdlan derivatives by chemoselective azide reduction using NaBH4. Carbohydrate Polymers, 2015, 122, 84-92.	10.2	26
60	Multifunctional cellulose esters by olefin cross-metathesis and thiol-Michael addition. Polymer Chemistry, 2016, 7, 3848-3856.	3.9	26
61	Tandem modification of amphiphilic cellulose ethers for amorphous solid dispersion via olefin cross-metathesis and thiol-Michael addition. Polymer Chemistry, 2017, 8, 3129-3139.	3.9	25
62	Multidrug, Anti-HIV Amorphous Solid Dispersions: Nature and Mechanisms of Impacts of Drugs on Each Otherâ€™s Solution Concentrations. Molecular Pharmaceutics, 2017, 14, 3617-3627.	4.6	25
63	Rifampin Stability and Solution Concentration Enhancement Through Amorphous Solid Dispersion in Cellulose Ï‰-Carboxyalkanoate Matrices. Journal of Pharmaceutical Sciences, 2018, 107, 127-138.	3.3	25
64	Enhancement of naringenin solution concentration by solid dispersion in cellulose derivative matrices. Cellulose, 2013, 20, 2137-2149.	4.9	24
65	Synthesis of amide-functionalized cellulose esters by olefin cross-metathesis. Carbohydrate Polymers, 2015, 132, 565-573.	10.2	24
66	Phase Behavior of Resveratrol Solid Dispersions Upon Addition to Aqueous media. Pharmaceutical Research, 2015, 32, 3324-3337.	3.5	24
67	Regioselective synthesis of cationic 6-deoxy-6-(N,N,N-trialkylammonio)curdlan derivatives. Carbohydrate Polymers, 2016, 136, 474-484.	10.2	23
68	An Efficient, Regioselective Pathway to Cationic and Zwitterionic <i>N</i>-Heterocyclic Cellulose Ionomers. Biomacromolecules, 2016, 17, 503-513.	5.4	22
69	Extended release and enhanced bioavailability of moxifloxacin conjugated with hydrophilic cellulose ethers. Carbohydrate Polymers, 2016, 136, 1297-1306.	10.2	22
70	Water-soluble co-polyelectrolytes by selective modification of cellulose esters. Carbohydrate Polymers, 2017, 162, 1-9.	10.2	22
71	Regioselective chlorination of cellulose esters by methanesulfonyl chloride. Carbohydrate Polymers, 2018, 193, 108-118.	10.2	22
72	Functionalized Celluloses with Regular Substitution Pattern by Glycosynthase-Catalyzed Polymerization. Biomacromolecules, 2016, 17, 1272-1279.	5.4	21

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73	Regioselective Synthesis of Cellulose Ester Homopolymers. Biomacromolecules, 2012, 13, 2195-2201.	5.4	20
74	Synthesis of amphiphilic 6-carboxypullulan ethers. Carbohydrate Polymers, 2014, 100, 65-73.	10.2	20
75	Crystallization Inhibition Properties of Cellulose Esters and Ethers for a Group of Chemically Diverse Drugs: Experimental and Computational Insight. Biomacromolecules, 2018, 19, 4593-4606.	5.4	20
76	Selective Oxidation of 2-Hydroxypropyl Ethers of Cellulose and Dextran: Simple and Efficient Introduction of Versatile Ketone Groups to Polysaccharides. Biomacromolecules, 2020, 21, 4835-4849.	5.4	20
77	Efficient Synthesis of Glycosaminoglycan Analogs. Biomacromolecules, 2019, 20, 608-617.	5.4	18
78	Regioselective synthesis of 6-amino- and 6-amido-6-deoxypullulans. Cellulose, 2014, 21, 2379-2396.	4.9	17
79	Cellulose levulinate: a protecting group for cellulose that can be selectively removed in the presence of other ester groups. Cellulose, 2015, 22, 301-311.	4.9	17
80	TBAF-catalyzed deacylation of cellulose esters: Reaction scope and influence of reaction parameters. Carbohydrate Polymers, 2013, 98, 692-698.	10.2	16
81	Cellulose-based amorphous solid dispersions enhance rifapentine delivery characteristics in vitro. Carbohydrate Polymers, 2018, 182, 149-158.	10.2	16
82	Photo-curable, double-crosslinked, in situ-forming hydrogels based on oxidized hydroxypropyl cellulose. Cellulose, 2021, 28, 3903-3915.	4.9	15
83	Remarkably regioselective deacylation of cellulose esters using tetraalkylammonium salts of the strongly basic hydroxide ion. Carbohydrate Polymers, 2014, 111, 25-32.	10.2	14
84	Designing novel bioconjugates of hydroxyethyl cellulose and salicylates for potential pharmaceutical and pharmacological applications. International Journal of Biological Macromolecules, 2017, 103, 441-450.	7.5	14
85	Toughening Cellulose: Compatibilizing Polybutadiene and Cellulose Triacetate Blends. ACS Macro Letters, 2019, 8, 447-453.	4.8	14
86	Efficient synthesis of secondary amines by reductive amination of curdlan Staudinger ylides. Carbohydrate Polymers, 2017, 171, 1-8.	10.2	13
87	Cellulosic polyelectrolytes: synthetic pathways to regioselectively substituted ammonium and phosphonium derivatives. Cellulose, 2016, 23, 1687-1704.	4.9	10
88	Synthesis and characterization of alkyl cellulose Ï‰-carboxyesters for amorphous solid dispersion. Cellulose, 2017, 24, 609-625.	4.9	9
89	Design, characterization and pharmaceutical/pharmacological applications of ibuprofen conjugates based on hydroxyethylcellulose. RSC Advances, 2017, 7, 50672-50679.	3.6	9
90	Conjugation of bile esters to cellulose by olefin cross-metathesis: A strategy for accessing complex polysaccharide structures. Carbohydrate Polymers, 2019, 221, 37-47.	10.2	9

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91	Azide reduction by DTT or thioacetic acid provides access to amino and amido polysaccharides. Cellulose, 2019, 26, 445-462.	4.9	9
92	Interaction of Polymers with Enzalutamide Nanodropletsâ€"Impact on Droplet Properties and Induction Times. Molecular Pharmaceutics, 2021, 18, 836-849.	4.6	9
93	A Versatile Method for Preparing Polysaccharide Conjugates via Thiol-Michael Addition. Polymers, 2021, 13, 1905.	4.5	9
94	Hydroborationâ€"oxidation: A chemoselective route to cellulose Ï‰-hydroxyalkanoate esters. Carbohydrate Polymers, 2015, 133, 262-269.	10.2	8
95	Synthesis of polysaccharide-based block copolymers via olefin cross-metathesis. Carbohydrate Polymers, 2020, 229, 115530.	10.2	8
96	Selective synthesis of curdlan Ï‰-carboxyamides by Staudinger ylide nucleophilic ring-opening. Carbohydrate Polymers, 2018, 190, 222-231.	10.2	7
97	Enhanced dissolution of poorly soluble drugs from solid dispersions in carboxymethylcellulose acetate butyrate matrices. ACS Symposium Series, 2010, , 93-113.	0.5	6
98	Synthesis and characterization of neutral and anionic cellulosic amphiphiles. Carbohydrate Polymers, 2014, 113, 480-489.	10.2	6
99	Design of cellulose ether-based macromolecular prodrugs of ciprofloxacin for extended release and enhanced bioavailability. International Journal of Biological Macromolecules, 2018, 113, 719-728.	7.5	6
100	Green Hydrogels Based on Starch: Preparation Methods for Biomedical Applications. ACS Symposium Series, 2020, , 173-196.	0.5	6
101	Designing synergistic crystallization inhibitors: Bile salt derivatives of cellulose with enhanced hydrophilicity. Carbohydrate Polymers, 2022, 292, 119680.	10.2	6
102	Glycan ester deacylation by TBAOH or TBAF: Regioselectivity vs. polysaccharide structure. Carbohydrate Polymers, 2014, 113, 159-165.	10.2	5
103	Regioselective Bromination of the Dextran Nonreducing End Creates a Pathway to Dextran-Based Block Copolymers. Biomacromolecules, 2020, 21, 1729-1738.	5.4	5
104	In situ forming hydrogels based on oxidized hydroxypropyl cellulose and Jeffamines. Cellulose, 2021, 28, 11367-11380.	4.9	4
105	Regioselective synthesis of polysaccharideâ€"amino acid ester conjugates. Carbohydrate Polymers, 2022, 277, 118886.	10.2	4
106	Direct Synthesis of Partially Substituted Cellulose Esters. ACS Symposium Series, 2010, , 213-229.	0.5	2
107	Editorial. Carbohydrate Polymers, 2014, 100, 1.	10.2	0
108	Reaction of 2,5-dihydroxy-[1,4]-benzoquinone with nucleophiles â€" ipso-substitution vs. addition/elimination. Chemical Communications, 2020, 56, 12845-12848.	4.1	0

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109	40th anniversary issue of carbohydrate polymers. Carbohydrate Polymers, 2022, 289, 119427.	10.2	0