Xin Wang

List of Publications by Year
in descending order

101 papers	10,927 citations	36303 51 h-index	31849 101 g-index
103 all docs	103 docs citations	103 times ranked	10530 citing authors

#	Article	IF	Citations
1	A metalâ€"organic framework-derived bifunctional oxygenÂelectrocatalyst. Nature Energy, 2016, 1, .	39.5	1,974
2	Recent Development of Molybdenum Sulfides as Advanced Electrocatalysts for Hydrogen Evolution Reaction. ACS Catalysis, 2014, 4, 1693-1705.	11.2	769
3	Flame retardancy and thermal degradation mechanism of epoxy resin composites based on a DOPO substituted organophosphorus oligomer. Polymer, 2010, 51, 2435-2445.	3.8	477
4	Carbon-family materials for flame retardant polymeric materials. Progress in Polymer Science, 2017, 69, 22-46.	24.7	406
5	In situ polymerization of graphene nanosheets and polyurethane with enhanced mechanical and thermal properties. Journal of Materials Chemistry, 2011, 21, 4222.	6.7	371
6	Thermal exfoliation of hexagonal boron nitride for effective enhancements on thermal stability, flame retardancy and smoke suppression of epoxy resin nanocomposites via solâ€"gel process. Journal of Materials Chemistry A, 2016, 4, 7330-7340.	10.3	346
7	Melamine-containing polyphosphazene wrapped ammonium polyphosphate: A novel multifunctional organic-inorganic hybrid flame retardant. Journal of Hazardous Materials, 2018, 344, 839-848.	12.4	262
8	Simultaneous reduction and surface functionalization of graphene oxide with POSS for reducing fire hazards in epoxy composites. Journal of Materials Chemistry, 2012, 22, 22037.	6.7	227
9	Self-assembly of Niâ€"Fe layered double hydroxide/graphene hybrids for reducing fire hazard in epoxy composites. Journal of Materials Chemistry A, 2013, 1, 4383.	10.3	227
10	Flame-retardant-wrapped polyphosphazene nanotubes: A novel strategy for enhancing the flame retardancy and smoke toxicity suppression of epoxy resins. Journal of Hazardous Materials, 2017, 325, 327-339.	12.4	223
11	A novel biobased epoxy resin with high mechanical stiffness and low flammability: synthesis, characterization and properties. Journal of Materials Chemistry A, 2015, 3, 21907-21921.	10.3	209
12	Renewable Cardanol-Based Phosphate as a Flame Retardant Toughening Agent for Epoxy Resins. ACS Sustainable Chemistry and Engineering, 2017, 5, 3409-3416.	6.7	188
13	Renewable Cardanol-Based Surfactant Modified Layered Double Hydroxide as a Flame Retardant for Epoxy Resin. ACS Sustainable Chemistry and Engineering, 2015, 3, 3281-3290.	6.7	174
14	Construction of durable flame-retardant and robust superhydrophobic coatings on cotton fabrics for water-oil separation application. Chemical Engineering Journal, 2020, 398, 125661.	12.7	165
15	Flame Retardancy and Thermal Degradation of Intumescent Flame Retardant Poly(lactic acid)/Starch Biocomposites. Industrial & Engineering Chemistry Research, 2011, 50, 713-720.	3.7	163
16	Thermal Degradation and Flame Retardance of Biobased Polylactide Composites Based on Aluminum Hypophosphite. Industrial & Engineering Chemistry Research, 2012, 51, 12009-12016.	3.7	156
17	The effect of graphene presence in flame retarded epoxy resin matrix on the mechanical and flammability properties of glass fiber-reinforced composites. Composites Part A: Applied Science and Manufacturing, 2013, 53, 88-96.	7.6	149
18	Mussel-inspired functionalization of electrochemically exfoliated graphene: Based on self-polymerization of dopamine and its suppression effect on the fire hazards and smoke toxicity of thermoplastic polyurethane. Journal of Hazardous Materials, 2018, 352, 57-69.	12.4	142

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19	Synthesis and characterization of a DOPO-substitued organophosphorus oligomer and its application in flame retardant epoxy resins. Progress in Organic Coatings, 2011, 71, 72-82.	3.9	141
20	MoS₂/Polymer Nanocomposites: Preparation, Properties, and Applications. Polymer Reviews, 2017, 57, 440-466.	10.9	132
21	Multifunctional intercalation in layered double hydroxide: toward multifunctional nanohybrids for epoxy resin. Journal of Materials Chemistry A, 2016, 4, 2147-2157.	10.3	131
22	Thermal degradation mechanism of flame retarded epoxy resins with a DOPO-substitued organophosphorus oligomer by TG-FTIR and DP-MS. Journal of Analytical and Applied Pyrolysis, 2011, 92, 164-170.	5.5	129
23	Intrinsically flame retardant bio-based epoxy thermosets: A review. Composites Part B: Engineering, 2019, 179, 107487.	12.0	124
24	Cobalt oxide/graphene composite for highly efficient CO oxidation and its application in reducing the fire hazards of aliphatic polyesters. Journal of Materials Chemistry, 2012, 22, 3426.	6.7	119
25	Studies on Synthesis of Electrochemically Exfoliated Functionalized Graphene and Polylactic Acid/Ferric Phytate Functionalized Graphene Nanocomposites as New Fire Hazard Suppression Materials. ACS Applied Materials & Interfaces, 2016, 8, 25552-25562.	8.0	119
26	Cardanol derived benzoxazine in combination with boron-doped graphene toward simultaneously improved toughening and flame retardant epoxy composites. Composites Part A: Applied Science and Manufacturing, 2019, 116, 13-23.	7.6	107
27	Liquid-exfoliated MoS2 by chitosan and enhanced mechanical and thermal properties of chitosan/MoS2 composites. Composites Science and Technology, 2014, 93, 76-82.	7.8	105
28	Large-scale production of simultaneously exfoliated and Functionalized Mxenes as promising flame retardant for polyurethane. Composites Part B: Engineering, 2019, 179, 107486.	12.0	103
29	Nano-fibrillated cellulose-hydroxyapatite based composite foams with excellent fire resistance. Carbohydrate Polymers, 2018, 195, 71-78.	10.2	99
30	A green approach to constructing multilayered nanocoating for flame retardant treatment of polyamide 66 fabric from chitosan and sodium alginate. Carbohydrate Polymers, 2017, 166, 131-138.	10.2	92
31	Construction of SiO2@UiO-66 coreâ€“shell microarchitectures through covalent linkage as flame retardant and smoke suppressant for epoxy resins. Composites Part B: Engineering, 2019, 176, 107261.	12.0	91
32	Self-assembly followed by radical polymerization of ionic liquid for interfacial engineering of black phosphorus nanosheets: Enhancing flame retardancy, toxic gas suppression and mechanical performance of polyurethane. Journal of Colloid and Interface Science, 2020, 561, 32-45.	9.4	91
33	A high performance fully bio-based epoxy thermoset from a syringaldehyde-derived epoxy monomer cured by furan-derived amine. Green Chemistry, 2021, 23, 501-510.	9.0	85
34	Multi-functional hydroxyapatite/polyvinyl alcohol composite aerogels with self-cleaning, superior fire resistance and low thermal conductivity. Composites Science and Technology, 2018, 158, 128-136.	7.8	84
35	Metal-organic frameworks for flame retardant polymers application: A critical review. Composites Part A: Applied Science and Manufacturing, 2020, 139, 106113.	7.6	80
36	Cardanol as a versatile platform for fabrication of bio-based flame-retardant epoxy thermosets as DGEBA substitutes. Chemical Engineering Journal, 2021, 421, 129738.	12.7	78

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37	Finishing of cotton fabrics by multi-layered coatings to improve their flame retardancy and water repellency. Cellulose, 2018, 25, 4791-4803.	4.9	74
38	Phosphorus-Free Vanillin-Derived Intrinsically Flame-Retardant Epoxy Thermoset with Extremely Low Heat Release Rate and Smoke Emission. ACS Sustainable Chemistry and Engineering, 2021, 9, 5268-5277.	6.7	74
39	Highly-aligned cellulose fibers reinforced epoxy composites derived from bulk natural bamboo. Industrial Crops and Products, 2019, 129, 434-439.	5.2	73
40	Hypophosphorous acid cross-linked layer-by-layer assembly of green polyelectrolytes on polyester-cotton blend fabrics for durable flame-retardant treatment. Carbohydrate Polymers, 2018, 201, 1-8.	10.2	69
41	Integrated effect of supramolecular self-assembled sandwich-like melamine cyanurate/MoS2 hybrid sheets on reducing fire hazards of polyamide 6 composites. Journal of Hazardous Materials, 2016, 320, 252-264.	12.4	68
42	Construction of flame retardant coating on polyamide 6.6 via UV grafting of phosphorylated chitosan and solâ€“gel process of organo-silane. Carbohydrate Polymers, 2018, 181, 833-840.	10.2	66
43	An eco-friendly way to fire retardant flexible polyurethane foam: layer-by-layer assembly of fully bio-based substances. RSC Advances, 2014, 4, 46164-46169.	3.6	64
44	Construction of hierarchical MoS2@TiO2 structure for the high performance bimaleimide system with excellent fire safety and mechanical properties. Chemical Engineering Journal, 2019, 369, 451-462.	12.7	62
45	Zeolitic imidazolate framework-8/polyvinyl alcohol hybrid aerogels with excellent flame retardancy. Composites Part A: Applied Science and Manufacturing, 2020, 129, 105720.	7.6	61
46	Multifunctional epoxy composites with highly flame retardant and effective electromagnetic interference shielding performances. Composites Part B: Engineering, 2020, 192, 107990.	12.0	61
47	Borate cross-linked layer-by-layer assembly of green polyelectrolytes on polyamide 66 fabrics for flame-retardant treatment. Progress in Organic Coatings, 2018, 121, 173-181.	3.9	60
48	Processing bulk natural bamboo into a strong and flame-retardant composite material. Industrial Crops and Products, 2019, 138, 111478.	5.2	60
49	An operable platform towards functionalization of chemically inert boron nitride nanosheets for flame retardancy and toxic gas suppression of thermoplastic polyurethane. Composites Part B: Engineering, 2019, 178, 107462.	12.0	58
50	Highly flame retardant zeolitic imidazole framework-8@cellulose composite aerogels as absorption materials for organic pollutants. Cellulose, 2020, 27, 2237-2251.	4.9	55
51	A fully bio-based coating made from alginate, chitosan and hydroxyapatite for protecting flexible polyurethane foam from fire. Carbohydrate Polymers, 2020, 246, 116641.	10.2	54
52	Phosphorylated cardanol-formaldehyde oligomers as flame-retardant and toughening agents for epoxy thermosets. Chemical Engineering Journal, 2021, 423, 130192.	12.7	52
53	Effect of metal-based nanoparticles decorated graphene hybrids on flammability of epoxy nanocomposites. Composites Part A: Applied Science and Manufacturing, 2020, 129, 105694.	7.6	50
54	Two-dimensional cardanol-derived zirconium phosphate hybrid as flame retardant and smoke suppressant for epoxy resin. Polymer Degradation and Stability, 2018, 151, 172-180.	5.8	49

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55	Effect of phytic acidâ€“modified layered double hydroxide on flammability and mechanical properties of intumescent flame retardant polypropylene system. Fire and Materials, 2018, 42, 213-220.	2.0	49
56	Molybdenum disulfide nanosheets as barrier enhancing nanofillers in thermal decomposition of polypropylene composites. Chemical Engineering Journal, 2016, 295, 278-287.	12.7	47
57	An environmentally friendly approach to fabricating flame retardant, antibacterial and antifungal cotton fabrics via self-assembly of guanazole-metal complex. Journal of Cleaner Production, 2020, 273, 122832.	9.3	47
58	Facile synthesis of a novel zinc-triazole complex for simultaneous improvement in fire safety and mechanical properties of epoxy resins. Composites Part A: Applied Science and Manufacturing, 2021, 143, 106284.	7.6	46
59	Synthesis of star-shaped allyl phosphazene small molecules for enhancing fire safety and toughness of high performance BMI resin. Chemical Engineering Journal, 2021, 425, 130655.	12.7	46
60	Few layer deposition and sol-gel finishing of organic-inorganic compounds for improved flame retardant and hydrophilic properties of polyamide 66 textiles: A hybrid approach. Progress in Organic Coatings, 2019, 129, 318-326.	3.9	45
61	Effect of aluminum diethylphosphinate on the thermal stability and flame retardancy of flexible polyurethane foams. Fire Safety Journal, 2019, 106, 72-79.	3.1	45
62	A phosphaphenanthrene-containing vanillin derivative as co-curing agent for flame-retardant and antibacterial epoxy thermoset. Polymer, 2021, 217, 123460.	3.8	45
63	Fully bio-based epoxy resin derived from vanillin with flame retardancy and degradability. Reactive and Functional Polymers, 2021, 168, 105034.	4.1	43
64	Organic-inorganic hybridization of isoreticular metal-organic framework-3 with melamine for efficiently reducing the fire risk of epoxy resin. Composites Part B: Engineering, 2021, 211, 108606.	12.0	42
65	Synthesis of Phosphorylated Graphene Oxide Based Multilayer Coating: Self-Assembly Method and Application for Improving the Fire Safety of Cotton Fabrics. Industrial & Engineering Chemistry Research, 2017, 56, 6664-6670.	3.7	39
66	Self-assembly of phosphonate-metal complex for superhydrophobic and durable flame-retardant polyesterâ€“cotton fabrics. Cellulose, 2020, 27, 6011-6025.	4.9	38
67	Lightweight, hydrophobic and recyclable carbon foam derived from ligninâ€“resorcinolâ€“glyoxal resin for oil and solvent spill capture. Journal of Materials Research and Technology, 2020, 9, 4655-4664.	5.8	34
68	Phosphorus-Free Ellagic Acid-Derived Epoxy Thermosets with Intrinsic Antiflammability and High Glass Transition Temperature. ACS Sustainable Chemistry and Engineering, 2021, 9, 10799-10808.	6.7	34
69	Application of Chitosan and DOPO derivatives in fire protection of polyamide 66 textiles: Towards a combined gas phase and condensed phase activity. Polymer Degradation and Stability, 2020, 176, 109158.	5.8	33
70	Recent advances in construction of hybrid nano-structures for flame retardant polymers application. Applied Materials Today, 2020, 20, 100762.	4.3	31
71	Recent Progress in Two-dimensional Nanomaterials Following Graphene for Improving Fire Safety of Polymer (Nano)composites. Chinese Journal of Polymer Science (English Edition), 2021, 39, 935-956.	3.8	31
72	Intrinsically flame retardant cardanol-based epoxy monomer for high-performance thermosets. Polymer Degradation and Stability, 2021, 186, 109519.	5.8	30

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73	Halogen and halogen-free flame retarded biologically-based polyamide with markedly suppressed smoke and toxic gases releases. Composites Part B: Engineering, 2020, 184, 107737.	12.0	28
74	Chitosan-based flame retardant coatings for polyamide 66 textiles: One-pot deposition versus layer-by-layer assembly. International Journal of Biological Macromolecules, 2020, 143, 1-10.	7.5	28
75	Polyanilineâ€coupled graphene/nickel hydroxide nanohybrids as flame retardant and smoke suppressant for epoxy composites. Polymers for Advanced Technologies, 2019, 30, 1959-1967.	3.2	27
76	Exceptional flame-retardant cellulosic foams modified with phosphorus-hybridized graphene nanosheets. Cellulose, 2019, 26, 1247-1260.	4.9	27
77	Graphene oxide/zeolitic imidazolate frameworks-8 coating for cotton fabrics with highly flame retardant, self-cleaning and efficient oil/water separation performances. Materials Chemistry and Physics, 2020, 256, 123656.	4.0	27
78	Preparation, mechanical properties, and thermal degradation of flame retarded epoxy resins with an organophosphorus oligomer. Polymer Bulletin, 2011, 67, 859-873.	3.3	26
79	Hydrophobic and flame-retardant finishing of cotton fabrics for waterâ€“oil separation. Cellulose, 2020, 27, 4145-4159.	4.9	26
80	Self-floating black phosphorous nanosheets as a carry-on solar vapor generator. Journal of Colloid and Interface Science, 2021, 582, 496-505.	9.4	25
81	Combination of cardanol-derived flame retardant with SiO2@MOF particles for simultaneously enhancing the toughness, anti-flammability and smoke suppression of epoxy thermosets. Composites Communications, 2021, 27, 100904.	6.3	25
82	Intrinsically anti-flammable and self-toughened phosphorylated cardanol-derived novolac epoxy thermosets. Industrial Crops and Products, 2021, 166, 113496.	5.2	24
83	Hierarchical coreâ€“shell SiO2@COFs@metallic oxide architecture: An efficient flame retardant and toxic smoke suppression for polystyrene. Journal of Colloid and Interface Science, 2022, 605, 241-252.	9.4	24
84	Cicada wing-inspired solar transmittance enhancement and hydrophobicity design for graphene-based solar steam generation: A novel gas phase deposition approach. Applied Energy, 2022, 320, 119322.	10.1	24
85	Laponite-based inorganic-organic hybrid coating to reduce fire risk of flexible polyurethane foams. Applied Clay Science, 2020, 189, 105525.	5.2	22
86	Integration of black phosphorene and MXene to improve fire safety and mechanical properties of waterborne polyurethane. Applied Surface Science, 2022, 581, 152386.	6.1	22
87	A desoxyanisoin- and furfurylamine-derived high-performance benzoxazine thermoset with high glass transition temperature and excellent anti-flammability. Polymer Degradation and Stability, 2021, 189, 109604.	5.8	20
88	Building of hierarchical structure of functionalized montmorillonite anchored with ZnO: Toward fabricating high-performance polyethylene composite. Applied Clay Science, 2020, 196, 105767.	5.2	19
89	Eco-friendly thermally insulating cellulose aerogels with exceptional flame retardancy, mechanical property and thermal stability. Journal of the Taiwan Institute of Chemical Engineers, 2022, 131, 104159.	5.3	18
90	Cardanol-derived anhydride cross-linked epoxy thermosets with intrinsic anti-flammability, toughness and shape memory effect. Chemical Engineering Journal, 2022, 450, 137906.	12.7	17

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91	A Furan-based Phosphaphenanthrene-containing Derivative as a Highly Efficient Flame-retardant Agent for Epoxy Thermosets without Deteriorating Thermomechanical Performances. Chinese Journal of Polymer Science (English Edition), 2022, 40, 233-240.	3.8	16
92	Substrate-versatile approach to fabricate mechanochemically robust and superhydrophobic surfaces from waste fly ash. Progress in Organic Coatings, 2019, 132, 353-361.	3.9	14
93	Flame Retardant Cellulose-Based Hybrid Hydrogels for Firefighting and Fire Prevention. Fire Technology, 2022, 58, 2077-2091.	3.0	14
94	Heterolayered Boron Nitride/Polyaniline/Molybdenum Disulfide Nanosheets for Flame-Retardant Epoxy Resins. ACS Applied Nano Materials, 2021, 4, 8162-8172.	5.0	13
95	Fabrication of zirconium phenylphosphonate/epoxy composites with simultaneously enhanced mechanical strength, anti-flammability and smoke suppression. Composites Part A: Applied Science and Manufacturing, 2022, 155, 106837.	7.6	13
96	Hybrid coatings for durable flame retardant and hydrophilic treatment of Polyamide 6.6 fabrics. Progress in Organic Coatings, 2020, 144, 105640.	3.9	11
97	Thermogravimetric analysis and kinetics characteristics of typical grains. Journal of Thermal Analysis and Calorimetry, 2021, 143, 647-659.	3.6	11
98	The effect of triphenyl phosphate inhibition on flame propagation over cast PMMA slabs. Proceedings of the Combustion Institute, 2021, 38, 4635-4644.	3.9	11
99	Highly flame retardant, low thermally conducting, and hydrophobic phytic acid-guanazole-cellulose nanofiber composite foams. Cellulose, 2021, 28, 9769-9783.	4.9	11
100	Hierarchical MoS₂/polyaniline binary hybrids with high performance for improving fire safety of epoxy resin. Polymers for Advanced Technologies, 2022, 33, 163-172.	3.2	6
101	Preparation and antimicrobial effect of a cinnamaldehyde-based sustained release fumigant tablet for grain storage. Journal of Materials Research and Technology, 2020, 9, 14122-14130.	5.8	5