Henri Vahabi

List of Publications by Year
in descending order

126 papers	4,439 citations	101543 36 h-index	133252 59 g-index
130 all docs	130 docs citations	130 times ranked	2662 citing authors

#	Article	IF	Citations
1	Flame Retardancy Index for Thermoplastic Composites. Polymers, 2019, 11, 407.	4.5	195
2	Flame retardant polymer materials: An update and the future for 3D printing developments. Materials Science and Engineering Reports, 2021, 144, 100604.	31.8	141
3	Bio-epoxy resins with inherent flame retardancy. Progress in Organic Coatings, 2019, 135, 608-612.	3.9	121
4	Surface engineering of nanoparticles with macromolecules for epoxy curing: Development of super-reactive nitrogen-rich nanosilica through surface chemistry manipulation. Applied Surface Science, 2018, 447, 152-164.	6.1	112
5	Bushy-surface hybrid nanoparticles for developing epoxy superadhesives. Applied Surface Science, 2019, 479, 1148-1160.	6.1	112
6	Antibacterial glass-ionomer cement restorative materials: A critical review on the current status of extended release formulations. Journal of Controlled Release, 2017, 262, 317-328.	9.9	104
7	4D printing of shape memory polylactic acid (PLA). Polymer, 2021, 230, 124080.	3.8	103
8	Flame Retardant Epoxy Composites on the Road of Innovation: An Analysis with Flame Retardancy Index for Future Development. Molecules, 2019, 24, 3964.	3.8	101
9	Epoxy/starch-modified nano-zinc oxide transparent nanocomposite coatings: A showcase of superior curing behavior. Progress in Organic Coatings, 2018, 115, 143-150.	3.9	99
10	Metal-Organic Framework (MOF)/Epoxy Coatings: A Review. Materials, 2020, 13, 2881.	2.9	99
11	Flame retardant epoxy/halloysite nanotubes nanocomposite coatings: Exploring low-concentration threshold for flammability compared to expandable graphite as superior fire retardant. Progress in Organic Coatings, 2018, 119, 8-14.	3.9	98
12	Short-lasting fire in partially and completely cured epoxy coatings containing expandable graphite and halloysite nanotube additives. Progress in Organic Coatings, 2018, 123, 160-167.	3.9	97
13	Properties of nano-Fe_3O_4 incorporated epoxy coatings from Cure Index perspective. Progress in Organic Coatings, 2019, 133, 220-228.	3.9	92
14	Curing behavior of epoxy/Fe_3O_4 nanocomposites: A comparison between the effects of bare Fe_3O_4, Fe_3O_4/SiO_2/chitosan and Fe_3O_4/SiO_2/chitosan/imide/phenylalanine-modified nanofillers. Progress in Organic Coatings, 2018, 123, 10-19.	3.9	89
15	Hyperbranched poly(ethyleneimine) physically attached to silica nanoparticles to facilitate curing of epoxy nanocomposite coatings. Progress in Organic Coatings, 2018, 120, 100-109.	3.9	83
16	Poly(butylene succinate) (PBS): Materials, processing, and industrial applications. Progress in Polymer Science, 2022, 132, 101579.	24.7	82
17	Flame Retardancy of Bio-Based Polyurethanes: Opportunities and Challenges. Polymers, 2020, 12, 1234.	4.5	79
18	Acid-aided epoxy-amine curing reaction as reflected in epoxy/Fe_3O_4 nanocomposites: Chemistry, mechanism, and fracture behavior. Progress in Organic Coatings, 2018, 125, 384-392.	3.9	77

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19	Transparent nanocomposite coatings based on epoxy and layered double hydroxide: Nonisothermal cure kinetics and viscoelastic behavior assessments. Progress in Organic Coatings, 2017, 113, 126-135.	3.9	76
20	Synthesis, characterization, and high potential of 3D metalâ€“organic framework (MOF) nanoparticles for curing with epoxy. Journal of Alloys and Compounds, 2020, 829, 154547.	5.5	71
21	Flame retardancy of phosphorus-containing ionic liquid based epoxy networks. Polymer Degradation and Stability, 2016, 134, 186-193.	5.8	67
22	Surface chemistry of halloysite nanotubes controls the curability of low filled epoxy nanocomposites. Progress in Organic Coatings, 2019, 135, 555-564.	3.9	65
23	New polyvinyl chloride (PVC) nanocomposite consisting of aromatic polyamide and chitosan modified ZnO nanoparticles with enhanced thermal stability, low heat release rate and improved mechanical properties. Applied Surface Science, 2018, 439, 1163-1179.	6.1	63
24	Additive manufacturing of polyhydroxyalkanoates (PHAs) biopolymers: Materials, printing techniques, and applications. Materials Science and Engineering C, 2021, 127, 112216.	7.3	63
25	Effects of ageing on the fire behaviour of flame-retarded polymers: a review. Polymer International, 2015, 64, 313-328.	3.1	59
26	Magnetron-sputtered copper/diamond-like carbon composite thin films with super anti-corrosion properties. Surface and Coatings Technology, 2018, 333, 148-157.	4.8	59
27	Thermal degradation of polylactic acid (PLA)/polyhydroxybutyrate (PHB) blends: A systematic review. Polymer Degradation and Stability, 2022, 201, 109995.	5.8	58
28	Inclusion of modified lignocellulose and nano-hydroxyapatite in development of new bio-based adjuvant flame retardant for poly(lactic acid). Thermochimica Acta, 2018, 666, 51-59.	2.7	52
29	Electroactive poly (p-phenylene sulfide)/r-graphene oxide/chitosan as a novel potential candidate for tissue engineering. International Journal of Biological Macromolecules, 2020, 154, 18-24.	7.5	51
30	Curing Kinetics and Thermal Stability of Epoxy Composites Containing Newly Obtained Nano-Scale Aluminum Hypophosphite (AlPO2). Polymers, 2020, 12, 644.	4.5	47
31	A new direction in design of bioâ€based flame retardants for poly(lactic acid). Fire and Materials, 2018, 42, 914-924.	2.0	45
32	Thermal Stability and Flammability Behavior of Poly(3-hydroxybutyrate) (PHB) Based Composites. Materials, 2019, 12, 2239.	2.9	44
33	Thermal decomposition kinetics of dynamically vulcanized polyamide 6â€“acrylonitrile butadiene rubberâ€“halloysite nanotube nanocomposites. Journal of Applied Polymer Science, 2019, 136, 47483.	2.6	44
34	Electrospinning for developing flame retardant polymer materials: Current status and future perspectives. Polymer, 2021, 217, 123466.	3.8	43
35	An attempt to mechanistically explain the viscoelastic behavior of transparent epoxy/starch-modified ZnO nanocomposite coatings. Progress in Organic Coatings, 2018, 119, 171-182.	3.9	41
36	Crystalline polysaccharides: A review. Carbohydrate Polymers, 2022, 275, 118624.	10.2	41

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37	Polyaniline in retrospect and prospect. Materials Today: Proceedings, 2018, 5, 15852-15860.	1.8	39
38	Flame Retardant Polypropylenes: A Review. Polymers, 2020, 12, 1701.	4.5	39
39	Resorcinol-Based Epoxy Resins Hardened with Limonene and Eugenol Derivatives: From the Synthesis of Renewable Diamines to the Mechanical Properties of Biobased Thermosets. ACS Sustainable Chemistry and Engineering, 2020, 8, 13064-13075.	6.7	37
40	Superâ€crosslinked ionic liquidâ€intercalated montmorillonite/epoxy nanocomposites: Cure kinetics, viscoelastic behavior and thermal degradation mechanism. Polymer Engineering and Science, 2020, 60, 1940-1957.	3.1	37
41	Novel poly(amide-azomethine) nanocomposites reinforced with polyacrylic acid- co -2-acrylamido-2-methylpropanesulfonic acid modified LDH: Synthesis and properties. Applied Clay Science, 2018, 157, 165-176.	5.2	36
42	Description of complementary actions of mineral and organic additives in thermoplastic polymer composites by <i>Flame Retardancy Index</i>. Polymers for Advanced Technologies, 2019, 30, 2056-2066.	3.2	36
43	Three in one: <i>Î²</i>â€cyclodextrin, nanohydroxyapatite, and a nitrogenâ€rich polymer integrated into a new flame retardant for poly (lactic acid). Fire and Materials, 2018, 42, 593-602.	2.0	35
44	Well-cured silicone/halloysite nanotubes nanocomposite coatings. Progress in Organic Coatings, 2019, 129, 357-365.	3.9	34
45	Nonisothermal cure kinetics of epoxy/MnxFe3-xO4 nanocomposites. Progress in Organic Coatings, 2020, 140, 105505.	3.9	34
46	High-performance hybrid coatings based on diamond-like carbon and copper for carbon steel protection. Diamond and Related Materials, 2017, 80, 84-92.	3.9	33
47	Towards advanced flame retardant organic coatings: Expecting a new function from polyaniline. Progress in Organic Coatings, 2019, 130, 144-148.	3.9	33
48	Copper-enriched diamond-like carbon coatings promote regeneration at the boneâ€“implant interface. Heliyon, 2020, 6, e03798.	3.2	33
49	Relationships between the molecular structure and the flammability of polymers: Study of phosphonate functions using microscale combustion calorimeter. Polymer, 2012, 53, 1258-1266.	3.8	32
50	Effect of Surface Treatment of Halloysite Nanotubes (HNTs) on the Kinetics of Epoxy Resin Cure with Amines. Polymers, 2020, 12, 930.	4.5	32
51	Novel nanocomposites based on poly(ethylene- co -vinyl acetate) for coating applications: The complementary actions of hydroxyapatite, MWCNTs and ammonium polyphosphate on flame retardancy. Progress in Organic Coatings, 2017, 113, 207-217.	3.9	31
52	The Taste of Waste: The Edge of Eggshell Over Calcium Carbonate in Acrylonitrile Butadiene Rubber. Journal of Polymers and the Environment, 2019, 27, 2478-2489.	5.0	31
53	Injectable poloxamer/graphene oxide hydrogels with wellâ€controlled mechanical and rheological properties. Polymers for Advanced Technologies, 2019, 30, 2250-2260.	3.2	31
54	Polycarbonate nanocomposite with improved fire behavior, physical and psychophysical transparency. European Polymer Journal, 2013, 49, 319-327.	5.4	30

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55	Investigation of thermal stability and flammability of poly(methyl methacrylate) composites by combination of APP with ZrO 2 , sepiolite or MMT. Polymer Degradation and Stability, 2016, 124, 60-67.	5.8	30
56	A recent advancement on preparation, characterization and application of nanolignin. International Journal of Biological Macromolecules, 2022, 200, 303-326.	7.5	29
57	Combination effect of polyhedral oligomeric silsesquioxane (POSS) and a phosphorus modified PMMA, flammability and thermal stability properties. Materials Chemistry and Physics, 2012, 136, 762-770.	4.0	28
58	Theoretical and empirical approaches to understanding the effect of phosphonate groups on the thermal degradation for two chemically modified PMMA. European Polymer Journal, 2012, 48, 604-612.	5.4	28
59	Competitiveness and synergy between three flame retardants in poly(ethylene- co -vinyl acetate). Polymer Degradation and Stability, 2017, 143, 164-175.	5.8	27
60	Biodegradable polyester thin films and coatings in the line of fire: the time of polyhydroxyalkanoate (PHA)?. Progress in Organic Coatings, 2019, 133, 85-89.	3.9	27
61	Tailoring hardness and electrochemical performance of TC4 coated Cu/a-C thin coating with introducing second metal Zr. Corrosion Science, 2020, 172, 108713.	6.6	25
62	Niobium-Treated Titanium Implants with Improved Cellular and Molecular Activities at the Tissueâ€“Implant Interface. Materials, 2019, 12, 3861.	2.9	24
63	Preliminary Investigation on Auto-Thermal Extrusion of Ground Tire Rubber. Materials, 2019, 12, 2090.	2.9	23
64	Nonisothermal cure kinetics of epoxy/Zn Fe3-O4 nanocomposites. Progress in Organic Coatings, 2019, 136, 105290.	3.9	23
65	Curing epoxy with polyethylene glycol (PEG) surface-functionalized NixFe3-xO4magnetic nanoparticles. Progress in Organic Coatings, 2019, 136, 105250.	3.9	22
66	Imidazole-functionalized nitrogen-rich Mg-Al-CO3 layered double hydroxide for developing highly crosslinkable epoxy with high thermal and mechanical properties. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 611, 125826.	4.7	22
67	Pyrolysis-Combustion Flow Calorimetry: A Powerful Tool To Evaluate the Flame Retardancy of Polymers. ACS Symposium Series, 2012, , 361-390.	0.5	21
68	Chitosan and imide-functional Fe₃O₄ nanoparticles to prepare new xanthene based poly(ether-imide) nanocomposites. RSC Advances, 2016, 6, 112568-112575.	3.6	20
69	Crystallization kinetics study of dynamically vulcanized PA6/NBR/HNTs nanocomposites by nonisothermal differential scanning calorimetry. Journal of Applied Polymer Science, 2018, 135, 46488.	2.6	20
70	Influence of a treated kaolinite on the thermal degradation and flame retardancy of poly(methyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 1	5.2	19
71	Effect of aminobisphosphonated copolymer on the thermal stability and flammability of poly(methyl) Tj ETQq1 1 0.784314 rgBT /Overlo	3.1	19
72	FTIRâ€“PCFC coupling: A new method for studying the combustion of polymers. Combustion and Flame, 2014, 161, 1398-1407.	5.2	19

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73	Influence of modified mesoporous silica SBAâ€15 on the flammability of intumescent highâ€density polyethylene. Polymers for Advanced Technologies, 2016, 27, 1363-1375.	3.2	19
74	New Insights into the Investigation of Smoke Production Using a Cone Calorimeter. Fire Technology, 2019, 55, 853-873.	3.0	19
75	Epoxy/Zn-Al-CO3 LDH nanocomposites: Curability assessment. Progress in Organic Coatings, 2020, 138, 105355.	3.9	19
76	Coffee Wastes as Sustainable Flame Retardants for Polymer Materials. Coatings, 2021, 11, 1021.	2.6	19
77	Zeolite-based catalysts for exergy efficiency enhancement: The insights gained from nanotechnology. Materials Today: Proceedings, 2018, 5, 15868-15876.	1.8	18
78	Improving the resistance to hydrothermal ageing of flame-retarded PLA by incorporating miscible PMMA. Polymer Degradation and Stability, 2018, 155, 52-66.	5.8	17
79	Application of polyaniline and its derivatives. , 2019, , 259-272.		17
80	Nanocomposites of polypropylene/polyamide 6 blends based on three different nanoclays: thermal stability and flame retardancy. Polimery, 2013, 58, 350-360.	0.7	16
81	New nitrogen-rich flame retardant based on conductive poly(aniline-co-melamine). Reactive and Functional Polymers, 2020, 150, 104548.	4.1	15
82	Polyurethane/Silane-Functionalized ZrO2 Nanocomposite Powder Coatings: Thermal Degradation Kinetics. Coatings, 2020, 10, 413.	2.6	15
83	The effect of phosphorus based melamine-terephthaldehyde resin and Mg-Al layered double hydroxide on the thermal stability, flame retardancy and mechanical properties of polypropylene MgO composites. Materials Today Communications, 2020, 23, 100880.	1.9	14
84	Phosphorization of exfoliated graphite for developing flame retardant ethylene vinyl acetate composites. Journal of Materials Research and Technology, 2020, 9, 7341-7353.	5.8	14
85	Investigation of structureâ€performance properties of a special type of polysulfone blended membranes. Polymers for Advanced Technologies, 2018, 29, 2690-2700.	3.2	13
86	Tripleâ€faced polypropylene: Fire retardant, thermally stable, and antioxidative. Journal of Vinyl and Additive Technology, 2019, 25, 366-376.	3.4	13
87	Thermal-Resistant Polyurethane/Nanoclay Powder Coatings: Degradation Kinetics Study. Coatings, 2020, 10, 871.	2.6	13
88	Halloysite nanotubes (HNTs)/polymer nanocomposites: thermal degradation and flame retardancy. , 2020, , 67-93.		13
89	GTR/Thermoplastics Blends: How Do Interfacial Interactions Govern Processing and Physico-Mechanical Properties?. Materials, 2022, 15, 841.	2.9	13
90	Layer-by-layer polymer deposited fabrics with superior flame retardancy and electrical conductivity. Reactive and Functional Polymers, 2022, 173, 105221.	4.1	13

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91	Silaneâ€functionalized Al 2 O 3 â€modified polyurethane powder coatings: Nonisothermal degradation kinetics and mechanistic insights. Journal of Applied Polymer Science, 2020, 137, 49412.	2.6	12
92	Amineâ€functionalized <scp>metalâ€"organic</scp> frameworks/epoxy nanocomposites: <scp>Structureâ€properties</scp> relationships. Journal of Applied Polymer Science, 2021, 138, 51005.	2.6	12
93	Green carbon-based nanocompositeÂbiomaterials through the lens of microscopes. Emergent Materials, 2022, 5, 665-671.	5.7	12
94	Promising effect of combining [60]Fullerene nanoparticles and calcium hydroxide on thermal stability and flammability of Poly(ethylene-co-vinyl acetate). Thermochimica Acta, 2018, 668, 73-79.	2.7	11
95	Hopes Beyond PET Recycling: Environmentally Clean and Engineeringly Applicable. Journal of Polymers and the Environment, 2019, 27, 2490-2508.	5.0	11
96	Immobilizing palladium on melamineâ€functionalized magnetic nanoparticles: An efficient and reusable phosphineâ€free catalyst for Mizorokiâ€"Heck reaction. Applied Organometallic Chemistry, 2021, 35, e6198.	3.5	11
97	Green composites in bone tissue engineering. Emergent Materials, 2022, 5, 603-620.	5.7	11
98	Synergistic flame-retardant effect between lignin and magnesium hydroxide in poly(ethylene-co-vinyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	1.1	10
99	Assessment of the protective effect of PMMA on water immersion ageing of flame retarded PLA/PMMA blends. Polymer Degradation and Stability, 2020, 174, 109104.	5.8	10
100	Polyaniline/metal oxides nanocomposites. , 2019, , 131-141.		9
101	Epoxy/Ionic Liquid-Modified Mica Nanocomposites: Network Formationâ€"Network Degradation Correlation. Nanomaterials, 2021, 11, 1990.	4.1	9
102	Flame-Retardant Polymer Materials Developed by Reactive Extrusion: Present Status and Future Perspectives. Polymer Reviews, 2022, 62, 919-949.	10.9	9
103	Studying the thermo-oxidative stability of chars using pyrolysis-combustion flow calorimetry. Polymer Degradation and Stability, 2016, 134, 340-348.	5.8	8
104	Exploring the Contribution of Two Phosphorus-Based Groups to Polymer Flammability via Pyrolysisâ€"Combustion Flow Calorimetry. Materials, 2019, 12, 2961.	2.9	8
105	Interface analysis of compatibilized polymer blends. , 2020, , 349-371.		8
106	Novel nanocomposite based on EVA/PHBV/[60]Fullerene with improved thermal properties. Polymer Testing, 2020, 81, 106277.	4.8	7
107	Design and preparation of new polypropylene/magnesium oxide micro particles composites reinforced with hydroxyapatite nanoparticles: A study of thermal stability, flame retardancy and mechanical properties. Materials Chemistry and Physics, 2021, 258, 123917.	4.0	7
108	Correlating the Photophysical Properties with the Cure Index of Epoxy Nanocomposite Coatings. Journal of Inorganic and Organometallic Polymers and Materials, 2021, 31, 923-933.	3.7	7

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109	Dual UV-Thermal Curing of Biobased Resorcinol Epoxy Resin-Diatomite Composites with Improved Acoustic Performance and Attractive Flame Retardancy Behavior. Sustainable Chemistry, 2021, 2, 24-48.	4.7	7
110	Flame retardancy effect of phosphorus graphite nanoplatelets on ethyleneâ€vinyl acetate copolymer: Physical blending versus chemical modification. Polymers for Advanced Technologies, 2021, 32, 4296-4305.	3.2	7
111	Structureâ€"propertiesâ€performance relationships in complex epoxy nanocomposites: A complete picture applying chemorheological and thermoâ€mechanical kinetic analyses. Journal of Applied Polymer Science, 2022, 139, 51446.	2.6	7
112	Synthesis of new aromatic polyamides containing Î±-amino phosphonate with high thermal stability and low heat release rate. Journal of Thermal Analysis and Calorimetry, 2019, 138, 3949-3959.	3.6	6
113	Nanolignin in materials science and technologyâ€" does flame retardancy matter?. , 2021, , 515-559.		6
114	Polymer nanocomposites from the flame retardancy viewpoint: A comprehensive classification of nanoparticle performance using the flame retardancy index. , 2021, , 61-146.		5
115	High-performance fire-retardant polyamide materials. , 2017, , 147-170.		4
116	Continuous fiberâ€reinforced thermoplastic composites: influence of processing on fire retardant properties. Fire and Materials, 2017, 41, 646-653.	2.0	4
117	Flame retardant PP/PA6 blends: A recipe for recycled wastes. Flame Retardancy and Thermal Stability of Materials, 2019, 2, 1-8.	1.1	4
118	Fire Protection and Materials Flammability Control by Artificial Intelligence. Fire Technology, 2022, 58, 1071-1073.	3.0	4
119	Improved Processability and Antioxidant Behavior of Poly(3-hydroxybutyrate) in Presence of Ferulic Acid-Based Additives. Bioengineering, 2022, 9, 100.	3.5	4
120	Nonisothermal Crystallization Kinetics of Polylactic Acid under the Influence of Polyolefin Elastomers. Journal of Composites Science, 2020, 4, 65.	3.0	3
121	Flame Retardancy of Reactive and Functional Polymers. , 2021, , 165-195.		3
122	Calcium carbonate and ammonium polyphosphate flame retardant additives formulated to protect ethylene vinyl acetate copolymer against fire: Hydrated or carbonated calcium?. Journal of Vinyl and Additive Technology, 2021, 27, 264-274.	3.4	3
123	Nanocomposite biomaterials made by 3D printing: Achievements and challenges. , 2021, , 675-685.		3
124	Novel electrically conductive nanocomposites based on polyaniline and poly(aniline-co-melamine) copolymers grafted on melamineâ€"formaldehyde resin. Iranian Polymer Journal (English Edition), 2022, 31, 1033-1045.	2.4	3
125	Editorial: Bioengineered Nanoparticles in Cancer Therapy. Frontiers in Molecular Biosciences, 2021, 8, 706277.	3.5	2
126	Improved Flame Retardancy in Polyurethanes Using Layered Double Hydroxides. ACS Symposium Series, 0, , 137-160.	0.5	0