Sabyasachi Gaan

List of Publications by Year
in descending order

69 papers	4,095 citations	117571 34 h-index	118793 62 g-index
71 all docs	71 docs citations	71 times ranked	3144 citing authors

#	Article	IF	Citations
1	Recent developments in flame retardant polymeric coatings. Progress in Organic Coatings, 2013, 76, 1642-1665.	1.9	294
2	An overview of some recent advances in DOPO-derivatives: Chemistry and flame retardant applications. Polymer Degradation and Stability, 2015, 113, 119-134.	2.7	285
3	Effect of nitrogen additives on flame retardant action of tributyl phosphate: Phosphorusâ€"nitrogen synergism. Polymer Degradation and Stability, 2008, 93, 99-108.	2.7	213
4	Recent Advances for Flame Retardancy of Textiles Based on Phosphorus Chemistry. Polymers, 2016, 8, 319.	2.0	165
5	Effect of phosphorus and nitrogen on flame retardant cellulose: A study of phosphorus compounds. Journal of Analytical and Applied Pyrolysis, 2007, 78, 371-377.	2.6	150
6	Effect of phosphorus flame retardants on thermo-oxidative decomposition of cotton. Polymer Degradation and Stability, 2007, 92, 968-974.	2.7	148
7	Flame retardant flexible polyurethane foams from novel DOPO-phosphonamidate additives. Polymer Degradation and Stability, 2015, 113, 180-188.	2.7	146
8	Hybrid wood materials with improved fire retardance by bio-inspired mineralisation on the nano- and submicron level. Green Chemistry, 2015, 17, 1423-1428.	4.6	131
9	Thermal decomposition and burning behavior of cellulose treated with ethyl ester phosphoramidates: Effect of alkyl substituent on nitrogen atom. Polymer Degradation and Stability, 2009, 94, 1125-1134.	2.7	130
10	Bridged DOPO derivatives as flame retardants for PA6. Polymer Degradation and Stability, 2014, 107, 158-165.	2.7	125
11	Recent Developments in Organophosphorus Flame Retardants Containing P-C Bond and Their Applications. Materials, 2017, 10, 784.	1.3	113
12	Flame retardancy and thermal decomposition of flexible polyurethane foams: Structural influence of organophosphorus compounds. Polymer Degradation and Stability, 2012, 97, 2428-2440.	2.7	112
13	Recent studies on the decomposition and strategies of smoke and toxicity suppression for polyurethane based materials. RSC Advances, 2016, 6, 74742-74756.	1.7	111
14	An Overview of Mode of Action and Analytical Methods for Evaluation of Gas Phase Activities of Flame Retardants. Polymers, 2015, 7, 504-526.	2.0	110
15	Synthesis of DOPO-Based Phosphonamidates and their Thermal Properties. Industrial & Engineering Chemistry Research, 2014, 53, 2889-2896.	1.8	106
16	Elucidating the Thermal Decomposition of Dimethyl Methylphosphonate by Vacuum Ultraviolet (VUV) Photoionization: Pathways to the PO Radical, a Key Species in Flameâ€Retardant Mechanisms. Chemistry - A European Journal, 2015, 21, 1073-1080.	1.7	102
17	Mineralization of wood by calcium carbonate insertion for improved flame retardancy. Holzforschung, 2016, 70, 867-876.	0.9	81
18	Thermal decomposition and flammability of rigid PU foams containing some DOPO derivatives and other phosphorus compounds. Journal of Analytical and Applied Pyrolysis, 2017, 124, 219-229.	2.6	81

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19	Phosphoramidate-Containing Flame-Retardant Flexible Polyurethane Foams. Industrial & Engineering Chemistry Research, 2013, 52, 9752-9762.	1.8	80
20	Fire and mechanical properties of DGEBA-based epoxy resin cured with a cycloaliphatic hardener: Combined action of silica, melamine and DOPO-derivative. Materials and Design, 2020, 193, 108862.	3.3	75
21	Bioinspired Struvite Mineralization for Fire-Resistant Wood. ACS Applied Materials & Interfaces, 2019, 11, 5427-5434.	4.0	68
22	Thermal degradation of cellulose acetate in presence of bis-phosphoramidates. Journal of Analytical and Applied Pyrolysis, 2011, 90, 33-41.	2.6	66
23	Comprehensive study on flame retardant polyesters from phosphorus additives. Polymer Degradation and Stability, 2018, 155, 22-34.	2.7	64
24	Recent developments in P(O/S)â€“N containing flame retardants. Journal of Applied Polymer Science, 2020, 137, 47910.	1.3	64
25	Multiparameter toxicity assessment of novel DOPO-derived organophosphorus flame retardants. Archives of Toxicology, 2017, 91, 407-425.	1.9	63
26	Recent advances in flame retardant epoxy systems containing non-reactive DOPO based phosphorus additives. Polymer Degradation and Stability, 2022, 200, 109962.	2.7	60
27	Effect of nitrogen additives on thermal decomposition of cotton. Journal of Analytical and Applied Pyrolysis, 2009, 84, 108-115.	2.6	58
28	Recent Development in Phosphonic Acid-Based Organic Coatings on Aluminum. Coatings, 2017, 7, 133.	1.2	58
29	Flammability of Cellulose-Based Fibers and the Effect of Structure of Phosphorus Compounds on Their Flame Retardancy. Polymers, 2016, 8, 293.	2.0	53
30	Characterization of chars obtained from cellulose treated with phosphoramidate flame retardants. Journal of Analytical and Applied Pyrolysis, 2010, 87, 93-98.	2.6	48
31	Effect of Meltable Triazine-DOPO Additive on Rheological, Mechanical, and Flammability Properties of PA6. Polymers, 2015, 7, 1541-1563.	2.0	48
32	Recent advances in flame retardant epoxy systems from reactive DOPOâ€“based phosphorus additives. Polymer Degradation and Stability, 2022, 202, 110020.	2.7	45
33	Smart hydrogel-microsphere embedded silver nanoparticle catalyst with high activity and selectivity for the reduction of 4-nitrophenol and azo dyes. Journal of Hazardous Materials, 2021, 416, 126237.	6.5	41
34	Enhanced PET processing with organophosphorus additive: Flame retardant products with added-value for recycling. Polymer Degradation and Stability, 2019, 160, 218-228.	2.7	36
35	In-situ phosphine oxide physical networks: A facile strategy to achieve durable flame retardant and antimicrobial treatments of cellulose. Chemical Engineering Journal, 2021, 417, 128028.	6.6	34
36	Struvite Mineralized Wood as Sustainable Building Material: Mechanical and Combustion Behavior. ACS Sustainable Chemistry and Engineering, 2020, 8, 10402-10412.	3.2	32

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37	Polymer-assisted in-situ thermal reduction of silver precursors: A solventless route for silver nanoparticles-polymer composites. Chemical Engineering Journal, 2020, 389, 123983.	6.6	28
38	Probing Phosphorus Nitride (Pâ‰¡N) and Other Elusive Species Formed upon Pyrolysis of Dimethyl Phosphoramidate. Chemistry - A European Journal, 2017, 23, 5595-5601.	1.7	26
39	Effects of Combining Graphene Nanoplatelet and Phosphorous Flame Retardant as Additives on Mechanical Properties and Flame Retardancy of Epoxy Nanocomposite. Polymers, 2020, 12, 2349.	2.0	25
40	Some Key Factors Influencing the Flame Retardancy of EDA-DOPO Containing Flexible Polyurethane Foams. Polymers, 2018, 10, 1115.	2.0	23
41	Structure and Bottom-up Formation Mechanism of Multisheet Silica-Based Nanoparticles Formed in an Epoxy Matrix through an <i>In Situ</i> Process. Langmuir, 2021, 37, 8886-8893.	1.6	23
42	Detailed Thermal, Fire, and Mechanical Study of Silicon-Modified Epoxy Resin Containing Humic Acid and Other Additives. ACS Applied Polymer Materials, 2021, 3, 5969-5981.	2.0	23
43	Recent developments in phosphorus based flame retardant coatings for textiles: Synthesis, applications and performance. Progress in Organic Coatings, 2022, 171, 107027.	1.9	23
44	Michael addition in reactive extrusion: A facile sustainable route to developing phosphorus based flame retardant materials. Composites Part B: Engineering, 2019, 178, 107470.	5.9	22
45	Semiâ€"interpenetrating networks based on epoxy resin and oligophosphonate: Comparative effect of three hardeners on the thermal and fire properties. Materials and Design, 2021, 212, 110237.	3.3	22
46	Improving flame retardancy of in-situ silica-epoxy nanocomposites cured with aliphatic hardener: Combined effect of DOPO-based flame-retardant and melamine. Composites Part C: Open Access, 2020, 2, 100022.	1.5	21
47	Template-free synthesis of hybrid silica nanoparticle with functionalized mesostructure for efficient methylene blue removal. Materials and Design, 2021, 201, 109494.	3.3	20
48	Fabrication of Cellulase Catalysts Immobilized on a Nanoscale Hybrid Polyaniline/Cationic Hydrogel Support for the Highly Efficient Catalytic Conversion of Cellulose. ACS Applied Materials & Interfaces, 2021, 13, 49816-49827.	4.0	18
49	Physical and thermal properties of poly(ethylene terephthalate) fabric coated with electrospun polyimide fibers. High Performance Polymers, 2015, 27, 616-624.	0.8	17
50	Thermal decomposition of polyimides containing phosphine-oxide units. Journal of Analytical and Applied Pyrolysis, 2018, 134, 254-264.	2.6	17
51	The Underlying Chemistry to the Formation of PO₂ Radicals from Organophosphorus Compounds: A Missing Puzzle Piece in Flame Chemistry. Chemistry - A European Journal, 2020, 26, 10795-10800.	1.7	17
52	Phosphorus-containing polyimide fibers and their thermal properties. RSC Advances, 2016, 6, 38371-38379.	1.7	16
53	Industrial Upscaling of DOPO-Based Phosphonamidates and Phosphonates Derivatives Using Cl₂ Gas as a Chlorinating Agent. Organic Process Research and Development, 2018, 22, 1570-1577.	1.3	15
54	Stabilizing effects of novel phosphorus flame retardant on PET for high-temperature applications. Materials Letters, 2020, 276, 128225.	1.3	15

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55	Alkyl sulfone bridged phosphorus flame-retardants for polypropylene. Materials and Design, 2021, 200, 109459.	3.3	15
56	Investigating thermomechanical recycling of poly(ethylene terephthalate) containing phosphorus flame retardants. Polymer Degradation and Stability, 2022, 195, 109783.	2.7	15
57	One-Pot Synthesis of P(O)-N Containing Compounds Using N-Chlorosuccinimide and Their Influence in Thermal Decomposition of PU Foams. Polymers, 2018, 10, 740.	2.0	14
58	Phosphine oxide based polyimides: structureâ€"property relationships. RSC Advances, 2017, 7, 50508-50518.	1.7	13
59	Insight into the Synthesis and Characterization of Organophosphorus-Based Bridged Triazine Compounds. Molecules, 2019, 24, 2672.	1.7	13
60	Self-Assembly of Polystyrene-b-poly(2-vinylpyridine) Micelles: From Solutions to Silica Particles Surfaces. Macromolecules, 2016, 49, 5978-5984.	2.2	12
61	Structurally Tunable pH-responsive Phosphine Oxide Based Gels by Facile Synthesis Strategy. ACS Applied Materials & Interfaces, 2020, 12, 7639-7649.	4.0	9
62	Fire safe epoxy composite with low dielectric properties from a combination of fluoro-phosphonium salt, melamine and copper hydroxystannate. Polymer Degradation and Stability, 2022, 202, 110033.	2.7	9
63	Solvent-Free One-Pot Synthesis of Epoxy Nanocomposites Containing Mg(OH)₂ Nanocrystalâ€"Nanoparticle Formation Mechanism. Langmuir, 2022, 38, 5795-5802.	1.6	8
64	Enhanced flame-retardancy and controlled physical properties of flexible polyurethane foams based on a shear-responsive internal network. RSC Advances, 2017, 7, 44013-44020.	1.7	6
65	Thermal characterization of fire-protective fabrics. , 2020, , 355-387.		4
66	Comparative Analysis of Peat Fibre Properties and Peat Fibre-Based Knits Flammability. Autex Research Journal, 2019, 19, 157-164.	0.6	3
67	Recent Developments in Flame Retardancy of Flexible Polyurethane Foams. ACS Symposium Series, 2012, , 251-270.	0.5	2
68	Importance of the number emission factor of combustion-generated aerosols from nano-enabled products. NanoImpact, 2021, 22, 100307.	2.4	1
69	Evaluation of gas phase: Mechanisms and analyses. , 2022, , 117-159.		0