

Raghavachari Dhamodharan

List of Publications by Year in descending order

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106
papers

2,726
citations

185998

28
h-index

214527

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106
all docs

106
docs citations

106
times ranked

3343
citing authors

#	ARTICLE	IF	CITATIONS
1	Surface Segregation Studies of Fluorine-Containing Diblock Copolymers. <i>Macromolecules</i> , 1996, 29, 1229-1234.	2.2	231
2	Biocompatible hydrogels of chitosan-alkali lignin for potential wound healing applications. <i>Materials Science and Engineering C</i> , 2019, 102, 447-457.	3.8	137
3	Polymer Brushes via ATRP: Role of Activator and Deactivator in the Surface-Initiated ATRP of Styrene on Planar Substrates. <i>Macromolecular Rapid Communications</i> , 2002, 23, 277-281.	2.0	108
4	Controlled Growth of PMMA Brushes on Silicon Surfaces at Room Temperature. <i>Macromolecular Rapid Communications</i> , 2002, 23, 612.	2.0	106
5	Novel ethynyl-pyrene substituted phenothiazine based metal free organic dyes in DSSC with 12% conversion efficiency. <i>Journal of Materials Chemistry A</i> , 2017, 5, 10289-10300.	5.2	103
6	Facile Synthesis of ABC and CBABC Multiblock Copolymers of Styrene, tert-Butyl Acrylate, and Methyl Methacrylate via Room Temperature ATRP of MMA. <i>Macromolecules</i> , 2003, 36, 1039-1046.	2.2	92
7	Ambient Temperature Polymerization of Styrene by Single Electron Transfer Initiation, Followed by Reversible Addition Fragmentation Chain Transfer Control. <i>Macromolecules</i> , 2008, 41, 262-265.	2.2	75
8	Epoxidized natural rubber-magnetite nanocomposites for oil spill recovery. <i>Journal of Materials Chemistry A</i> , 2013, 1, 868-876.	5.2	68
9	Advances in chitosan-based hydrogels: Evolution from covalently crosslinked systems to ionotropically crosslinked superabsorbents. <i>Reactive and Functional Polymers</i> , 2020, 149, 104517.	2.0	65
10	Immobilization of α -amylase on gum acacia stabilized magnetite nanoparticles, an easily recoverable and reusable support. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2013, 96, 6-13.	1.8	64
11	Super water absorbing polymeric gel from chitosan, citric acid and urea: Synthesis and mechanism of water absorption. <i>Carbohydrate Polymers</i> , 2018, 191, 152-160.	5.1	64
12	Pretreatment in Hot Glycerol for Facile and Green Separation of Chitin from Prawn Shell Waste. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 846-853.	3.2	61
13	Block copolymers with low surface energy segments: siloxane- and perfluoroalkane-modified blocks. <i>Polymer</i> , 1995, 36, 1321-1325.	1.8	56
14	Super water-absorbing new material from chitosan, EDTA and urea. <i>Carbohydrate Polymers</i> , 2015, 134, 337-343.	5.1	53
15	Strengthening Polymer Interfaces with Triblock Copolymers. <i>Macromolecules</i> , 1997, 30, 549-560.	2.2	46
16	Synthesis of Polymer Grafted Magnetite Nanoparticle with the Highest Grafting Density via Controlled Radical Polymerization. <i>Nanoscale Research Letters</i> , 2009, 4, 1090-102.	3.1	46
17	Phenothiazine Based Donor-Acceptor Compounds with Solid-State Emission in the Yellow to NIR Region and Their Highly Selective and Sensitive Detection of Cyanide Ion in ppb Level. <i>Chemistry - A European Journal</i> , 2018, 24, 11042-11050.	1.7	46
18	Growth of poly(methyl methacrylate) brushes on silicon surfaces by atom transfer radical polymerization. <i>Journal of Polymer Science Part A</i> , 2006, 44, 1758-1769.	2.5	45

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19	Grafting of Poly(methyl methacrylate) Brushes from Magnetite Nanoparticles Using a Phosphonic Acid Based Initiator by Ambient Temperature Atom Transfer Radical Polymerization (ATATRP). <i>Nanoscale Research Letters</i> , 2008, 3, .	3.1	43
20	Surface modified microcrystalline cellulose from cotton as a potential mineral admixture in cement mortar composite. <i>Cement and Concrete Composites</i> , 2016, 74, 147-153.	4.6	40
21	Neutron Reflectivity Studies of End-Grafted Polymers. <i>Macromolecules</i> , 1995, 28, 492-499.	2.2	39
22	Grafting of PMMA brushes on titania nanoparticulate surface via surface-initiated conventional radical and α -controlled radical polymerization (ATRP). <i>Journal of Nanoparticle Research</i> , 2008, 10, 415-427.	0.8	39
23	A practical route for the preparation of poly(4-hydroxystyrene), a useful photoresist material. <i>Journal of Polymer Science Part A</i> , 2000, 38, 453-461.	2.5	38
24	A Robust Method for the Immobilization of Polymer Molecules on SiO ₂ Surfaces. <i>Macromolecules</i> , 2008, 41, 873-878.	2.2	37
25	Tetrakis(trialkylsilyl)ethynylphenyl)ethenes: mechanofluorochromism arising from steric considerations with an unusual crystal structure. <i>Journal of Materials Chemistry C</i> , 2017, 5, 10469-10476.	2.7	34
26	Green, Solid-State Synthesis of Maleated Chitosan and Ionotropic Gelation with Chitosan. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 15191-15200.	3.2	33
27	Very rapid copper-mediated atom transfer radical polymerization of benzyl methacrylate at ambient temperature. <i>Journal of Polymer Science Part A</i> , 2004, 42, 1053-1057.	2.5	31
28	Development of a green foaming agent and its performance evaluation. <i>Cement and Concrete Composites</i> , 2017, 80, 245-257.	4.6	31
29	Grafting of methacrylates and styrene on to polystyrene backbone via a α -grafting from ATRP process at ambient temperature. <i>Journal of Polymer Science Part A</i> , 2007, 45, 3818-3832.	2.5	30
30	Green, Selective, Seedless and One-Pot Synthesis of Triangular Au Nanoplates of Controlled Size Using Bael Gum and Mechanistic Study. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 3830-3839.	3.2	29
31	Facile synthesis of triphenylamine and phenothiazine-based Schiff bases for aggregation-induced enhanced emission, white light generation, and highly selective and sensitive copper(^{II}) sensing. <i>New Journal of Chemistry</i> , 2018, 42, 18979-18990.	1.4	27
32	ATRP of methyl methacrylate using a novel binol ester-based bifunctional initiator. <i>Journal of Polymer Science Part A</i> , 2004, 42, 902-915.	2.5	26
33	Controlled polymerization of carbazole-based vinyl and methacrylate monomers at ambient temperature: A comparative study through ATRP, SET, and SET-RAFT polymerizations. <i>Journal of Polymer Science Part A</i> , 2011, 49, 1021-1032.	2.5	26
34	Rational design of phenothiazine (PTz) and ethylenedioxythiophene (EDOT) based donor-acceptor compounds with a molecular aggregation breaker for solid state emission in red and NIR regions. <i>Journal of Materials Chemistry C</i> , 2015, 3, 8642-8648.	2.7	25
35	Preparation of nanofibrillated cellulose and nanocrystalline cellulose from surgical cotton and cellulose pulp in hot-glycerol medium. <i>Cellulose</i> , 2019, 26, 3127-3141.	2.4	24
36	Amphiphilic polystyrene-graft-poly(N,N-dimethylamino-2-ethyl methacrylate) hydrogels synthesized via room temperature ATRP: Studies on swelling behaviour and dye sorption. <i>Reactive and Functional Polymers</i> , 2008, 68, 967-973.	2.0	23

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37	Ambient temperature Atom Transfer Radical copolymerization of tetrahydrofurfuryl methacrylate and methyl methacrylate: Reactivity ratio determination. <i>European Polymer Journal</i> , 2009, 45, 2685-2694.	2.6	22
38	Sodium salt admixtures for enhancing the foaming characteristics of sodium lauryl sulphate. <i>Cement and Concrete Composites</i> , 2015, 57, 133-141.	4.6	22
39	Synthesis of Silver Nanoparticles Using a Novel Graft Copolymer and Enhanced Particle Stability via a "Polymer Brush Effect". <i>Macromolecular Rapid Communications</i> , 2008, 29, 737-742.	2.0	21
40	Arborescent Polystyrene via Ambient Temperature ATRP: Toward Ordered Honeycomb Microstructured Templates. <i>Macromolecules</i> , 2009, 42, 2300-2303.	2.2	21
41	A NOVEL AND SIMPLE METHOD OF PREPARATION OF POLY(STYRENE-B-2-VINYLPYRIDINE) BLOCK COPOLYMER OF NARROW MOLECULAR WEIGHT DISTRIBUTION: LIVING ANIONIC POLYMERIZATION FOLLOWED BY MECHANISM TRANSFER TO CONTROLLED/LIVING-RADICAL POLYMERIZATION (ATRP). <i>Journal of Macromolecular Science - Pure and Applied Chemistry</i> , 2000, 37, 621-631.	1.2	20
42	Synthesis of block and graft copolymers of styrene by raft polymerization, using dodecyl-based trithiocarbonates as initiators and chain transfer agents. <i>Journal of Polymer Science Part A</i> , 2013, 51, 1066-1078.	2.5	20
43	Controlled polymerization of methacrylates at ambient temperature using trithiocarbonate chain transfer agents via SET-RAFT cyclohexyl methacrylate: A model study. <i>Journal of Polymer Science Part A</i> , 2010, 48, 5329-5338.	2.5	19
44	Naphthalimide-phenothiazine based A TM -D-A featured organic dyes for dye sensitized solar cell applications. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2021, 404, 112820.	2.0	19
45	Facile preparation of biocompatible macroporous chitosan hydrogel by hydrothermal reaction of a mixture of chitosan-succinic acid-urea. <i>Materials Science and Engineering C</i> , 2019, 104, 109845.	3.8	18
46	Concentration Profiles of End-Grafted, Diblock and Triblock Polymers in the Melt: Near-Wall Structure and Effects of Segment-Wall Interaction. <i>Europhysics Letters</i> , 1995, 32, 211-216.	0.7	17
47	A study of the photopolymerization kinetics of methyl methacrylate using novel benzophenone initiators. <i>Polymer International</i> , 2001, 50, 897-905.	1.6	17
48	Giant magnetoresistance of Fe ₃ O ₄ -polymethylmethacrylate nanocomposite aligned fibers via electrospinning. <i>Journal of Applied Physics</i> , 2007, 101, 114317.	1.1	17
49	Synthesis and Morphological Study of Thick Benzyl Methacrylate-Styrene Diblock Copolymer Brushes. <i>Langmuir</i> , 2011, 27, 13284-13292.	1.6	17
50	Hydrophobic nanocomposites of PBAT with Cl-POSS nanofiller as compostable food packaging films. <i>Polymer Engineering and Science</i> , 2021, 61, 314-326.	1.5	17
51	Trends in adsorption of end-functionalized polystyrenes by thin-layer chromatography. <i>Macromolecules</i> , 1990, 23, 4344-4346.	2.2	15
52	Intercalative redox polymerization and characterization of poly(4-vinylpyridine)-vermiculite nanocomposite. <i>Journal of Applied Polymer Science</i> , 2001, 82, 555-561.	1.3	15
53	Surface-Initiated Atom Transfer Radical Polymerization of Methyl Methacrylate from Magnetite Nanoparticles at Ambient Temperature. <i>Journal of Nanoscience and Nanotechnology</i> , 2006, 6, 2018-2024.	0.9	15
54	White light emission from fluorene-EDOT and phenothiazine-hydroquinone based D-A conjugated systems in solution, gel and film forms. <i>New Journal of Chemistry</i> , 2017, 41, 9741-9751.	1.4	15

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55	Rapid, Solvent-Free Synthesis of Amorphous, Photoluminescent, Carbon Nanodots from Imidazole and Maleic Anhydride Solids. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 13206-13216.	3.2	15
56	Intercalative redox polymerization and characterization of poly(<i>n</i> -vinyl-2-pyrrolidinone) in the gallery of vermiculite: A novel inorganic-organic hybrid material. <i>Journal of Applied Polymer Science</i> , 2000, 76, 1825-1830.	1.3	14
57	A solvent-free method for the synthesis of block copolymers with fluorinated pendant groups by a hydrosilylation reaction. <i>Journal of Polymer Science Part A</i> , 2000, 38, 1179-1183.	2.5	14
58	Investigation of the Mercat Reaction as a Tool for the Introduction of Nitrogen Surface Functionality on Linear Low-Density Polyethylene (LLDPE) and Polypropylene (PP). <i>Langmuir</i> , 2001, 17, 3368-3374.	1.6	14
59	Ambient temperature ATRP of benzyl methacrylate as a tool for the synthesis of block copolymers with styrene. <i>Journal of Polymer Science Part A</i> , 2006, 44, 2848-2861.	2.5	14
60	Green, Seed-Mediated Synthesis of Au Nanowires and Their Efficient Electrocatalytic Activity in Oxygen Reduction Reaction. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 28876-28886.	4.0	14
61	Adsorption of Alginate Acid and Chondroitin Sulfate-A to Amine Functionality Introduced on Polychlorotrifluoroethylene and Glass Surfaces. <i>Macromolecules</i> , 1999, 32, 4106-4112.	2.2	13
62	Wear-induced mechanical degradation of plastics by low-energy wet-grinding. <i>Polymer Degradation and Stability</i> , 2018, 158, 212-219.	2.7	13
63	Sustainable Process for Separating Chitin and Simultaneous Synthesis of Carbon Nanodots from Shellfish Waste Using 2% Aqueous Urea Solution. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 11313-11325.	3.2	13
64	Statistical augmentation of polyhydroxybutyrate production by <i>Isoptericola variabilis</i> : Characterization, moulding, in vitro cytocompatibility and biodegradability evaluation. <i>International Journal of Biological Macromolecules</i> , 2021, 166, 80-97.	3.6	13
65	Synthesis and characterization of nitroglycerin-functionalized polystyrene. <i>Journal of Polymer Science Part A</i> , 2001, 39, 1203-1215.	2.5	12
66	Facile Aqueous Phase Synthesis of (200) Faceted Au-AgCl Cubes Using Bael Gum and Its Activity Toward Oxidation and Detection of <i>o</i> -PDA. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 2960-2968.	3.2	12
67	Biocompatible Porous Scaffolds of Chitosan/Poly(EG- <i>ran</i> -PG) Blends with Tailored Pore Size and Nontoxic to <i>Mesenchymal</i> Stem Cells: Preparation by Controlled Evaporation from Aqueous Acetic Acid Solution. <i>ACS Omega</i> , 2018, 3, 10286-10295.	1.6	12
68	Synthesis and characterization of water-soluble barbiturate- and thiobarbiturate-functionalized polystyrene. <i>Journal of Polymer Science Part A</i> , 2002, 40, 731-737.	2.5	11
69	Spontaneous Cu(I)Br ⁺ PMDETA ⁻ mediated polymerization of isobornyl methacrylate in heterogeneous aqueous medium at ambient temperature. <i>Journal of Polymer Science Part A</i> , 2011, 49, 2165-2172.	2.5	11
70	Rapid ambient temperature atom transfer radical polymerization of <i>tert</i> -butyl acrylate. <i>Polymer International</i> , 2008, 57, 479-487.	1.6	10
71	Reversible addition-fragmentation chain transfer (RAFT) polymerization of styrene using novel heterocycle-containing chain transfer agents. <i>Polymer International</i> , 2008, 57, 365-371.	1.6	10
72	Conjugated polymers with carbazole, fluorene, and ethylene dioxythiophene in the main chain and a pendant cyano group: Synthesis, photophysical, and electrochemical studies. <i>Journal of Polymer Science Part A</i> , 2016, 54, 2774-2784.	2.5	10

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73	Facile, shear-induced, rapid formation of stable gels of chitosan through <i>in situ</i> generation of colloidal metal salts. <i>Chemical Communications</i> , 2018, 54, 11582-11585.	2.2	10
74	Scale-up of non-toxic poly(butylene adipate-co-terephthalate)-Chitin based nanocomposite articles by injection moulding and 3D printing. <i>International Journal of Biological Macromolecules</i> , 2020, 165, 3145-3155.	3.6	10
75	Super water-absorbing hydrogel based on chitosan, itaconic acid and urea: preparation, characterization and reversible water absorption. <i>Polymer Bulletin</i> , 2022, 79, 3013-3030.	1.7	10
76	Synthesis of poly (benzyl methacrylate)/Mg-phyllsilicate nanocomposites by surface-initiated ambient temperature ATRP. <i>Applied Clay Science</i> , 2010, 48, 300-306.	2.6	8
77	Synthesis of fluorescent, dansyl end-functionalized PMMA and poly(methyl Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 587 Td (me Journal of Polymer Science Part A, 2012, 50, 1491-1502.	2.5	8
78	A new route to polymeric materials derived from chitosan and natural rubber. <i>Polymer Bulletin</i> , 2015, 72, 2311-2330.	1.7	8
79	Green Synthesis of Triangular Au Nanoplates: Role of Small Molecules Present in Bael Gum. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 10317-10326.	3.2	8
80	Spontaneous adsorption of polystyrene from solution to the cyclohexane-poly(vinylidene fluoride) interface. <i>Macromolecules</i> , 1991, 24, 5886-5888.	2.2	7
81	Synthesis and Characterization of Block Copolymers of P(MMA- <i>b</i> - <i>n</i> -BMA- <i>b</i> -MMA) via Ambient Temperature ATRP of MMA. <i>Journal of Macromolecular Science - Pure and Applied Chemistry</i> , 2005, 42, 471-484.	1.2	7
82	Synthesis of graft copolymers onto styrenic polymer backbone via α -grafting from-raft process. <i>Journal of Polymer Science Part A</i> , 2012, 50, 4772-4782.	2.5	6
83	Controlled radical polymerization of <i>tert</i> -butyl acrylate at ambient temperature: Effect of initiator structure and synthesis of amphiphilic block copolymers. <i>Journal of Polymer Science Part A</i> , 2012, 50, 996-1007.	2.5	6
84	Tough Gels and Macroporous Foams Based on Chitosan through Hydrothermal Synthesis of Chitosan, Tartaric Acid, and Urea. <i>ACS Applied Polymer Materials</i> , 2022, 4, 1764-1774.	2.0	6
85	Selective Hydrogenation of Phenylacetylene Using Block Copolymer Additional Poisoning Agent. <i>Chemistry Letters</i> , 1996, 25, 235-236.	0.7	5
86	Kinetic Studies on Star Polymerization of Styrene, MA and MMA Using New Three and Four Arm Chain Transfer Agents (CTAs): The Role of R-Group Structure Present in the CTA on RAFT Polymerization. <i>Journal of Macromolecular Science - Pure and Applied Chemistry</i> , 2011, 48, 722-736.	1.2	5
87	Photochemical attachment of polymers on planar surfaces with a covalently anchored monolayer of a novel naphthyl ketone photochemical radical generator. <i>Journal of Polymer Science Part A</i> , 2004, 42, 5413-5423.	2.5	4
88	Fabrication of macroporous soft hydrogels of Chitosan scaffolds by hydrothermal reaction and cytotoxicity to 3T3 L1 cells. <i>Journal of Polymer Research</i> , 2021, 28, 1.	1.2	4
89	Non-universal behavior well above the percolation threshold and thermal properties of core-shell-magnetite-polymer fibers. <i>Journal of Applied Physics</i> , 2011, 110, 113718.	1.1	3
90	PHOTOCHEMICAL SYNTHESIS AND CHARACTERIZATION OF HYPERCROSSLINKED POLYSTYRENE, A NOVEL POROUS ORGANIC MATERIAL. <i>Journal of Macromolecular Science - Pure and Applied Chemistry</i> , 1999, 36, 1923-1933.	1.2	2

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91	Synthesis and characterization of statistical copolymers of styrene and 4-(1-hydroxyalkyl)styrene. Journal of Applied Polymer Science, 2004, 92, 1902-1914.	1.3	2
92	Valorization of agro-wastes for the biosynthesis and characterization of polyhydroxybutyrate by Bacillus sp. isolated from rice bran dumping yard. 3 Biotech, 2021, 11, 202.	1.1	2
93	Preparation of gels of Chitosan through Hydrothermal Reaction in the Presence of Malonic Acid and Cinnamaldehyde: Characterization and Antibacterial Activity. New Journal of Chemistry, 0, , .	1.4	2
94	Synthesis and Characterization of a Novel, Water-soluble Polymer with Pendant Groups Carrying cis-platinum Complex. Journal of Macromolecular Science - Pure and Applied Chemistry, 2004, 41, 859-871.	1.2	1
95	Synthesis and Properties of Polystyrene Carrying Pendant Hydroxybarbiturate Groups. Journal of Macromolecular Science - Pure and Applied Chemistry, 2005, 42, 189-202.	1.2	1
96	Microwave hall mobility studies on polymer-metal oxide nanocomposites. Journal of Applied Polymer Science, 2008, 107, 1967-1972.	1.3	1
97	2-Oxo-4-trifluoromethyl-2H-chromen-7-yl 2-bromo-2-methylpropanoate. Acta Crystallographica Section E: Structure Reports Online, 2010, 66, o1606-o1606.	0.2	1
98	2-Bromo-2-methyl-N-(4-methyl-2-oxo-2H-chromen-7-yl)propanamide. Acta Crystallographica Section E: Structure Reports Online, 2010, 66, o2007-o2007.	0.2	1
99	2,4,6-Trimethyl-3,5-bis[(phenylcarbonothioyl)sulfanylmethyl]benzyl benzenecarbodithioate. Acta Crystallographica Section E: Structure Reports Online, 2010, 66, o1382-o1382.	0.2	1
100	Exploration of Novel Pyrene Labeled Amphiphilic Block Copolymers: Synthesis Via ATRP, Characterization and Properties. Journal of Macromolecular Science - Pure and Applied Chemistry, 2010, 47, 918-926.	1.2	1
101	3-([(1-Phenylethyl)sulfanyl]methanethioyl)sulfanyl)propanoic acid. Acta Crystallographica Section E: Structure Reports Online, 2011, 67, o3352-o3352.	0.2	1
102	2-(1,4-Phenylene)bis(2-bromo-2-methylpropanamide). Acta Crystallographica Section E: Structure Reports Online, 2012, 68, o811-o811.	0.2	1
103	Atom Transfer Radical Polymerization: A Key Tool Towards the Design and Synthesis of Functional Polymers. , 2017, , 57-126.		1
104	End group effect in polymer adsorption: Competitive adsorption of carboxylic acid-terminated and unfunctionalized polystyrene. Journal of Chemical Physics, 1990, 92, 6970-6971.	1.2	0
105			