Pathiraja A Gunatillake

List of Publications by Year
in descending order

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65 papers	4,090 citations	172207 29 h-index	114278 63 g-index
65 all docs	65 docs citations	65 times ranked	4943 citing authors

#	Article	IF	Citations
1	Electrically conductive polymers and composites for biomedical applications. RSC Advances, 2015, 5, 37553-37567.	1.7	655
2	Recent developments in biodegradable synthetic polymers. Biotechnology Annual Review, 2006, 12, 301-347.	2.1	334
3	Thermoplastic biodegradable polyurethanes: The effect of chain extender structure on properties and in-vitro degradation. Biomaterials, 2007, 28, 5407-5417.	5.7	231
4	Long-term in vivo biostability of poly(dimethylsiloxane)/poly(hexamethylene oxide) mixed macrodiol-based polyurethane elastomers. Biomaterials, 2004, 25, 4887-4900.	5.7	171
5	The effect of average soft segment length on morphology and properties of a series of polyurethane elastomers. II. SAXS-DSC annealing study. Journal of Applied Polymer Science, 1997, 64, 803-817.	1.3	166
6	Polydimethylsiloxane/polyether-mixed macrodiol-based polyurethane elastomers: biostability. Biomaterials, 2000, 21, 1021-1029.	5.7	158
7	Designing Biostable Polyurethane Elastomers for Biomedical Implants. Australian Journal of Chemistry, 2003, 56, 545.	0.5	147
8	Synthesis of two-component injectable polyurethanes for bone tissue engineering. Biomaterials, 2007, 28, 423-433.	5.7	147
9	In-vivo degradation of polyurethanes: transmission-FTIR microscopic characterization of polyurethanes sectioned by cryomicrotomy. Biomaterials, 1997, 18, 1387-1409.	5.7	135
10	Effect of soft-segment CH2/O ratio on morphology and properties of a series of polyurethane elastomers. Journal of Applied Polymer Science, 1996, 60, 557-571.	1.3	133
11	Biodegradable injectable polyurethanes: Synthesis and evaluation for orthopaedic applications. Biomaterials, 2008, 29, 3762-3770.	5.7	125
12	The effect of average soft segment length on morphology and properties of a series of polyurethane elastomers. I. Characterization of the series. Journal of Applied Polymer Science, 1996, 62, 1377-1386.	1.3	123
13	Biomedical applications of polymers derived by reversible addition â€“ fragmentation chain-transfer (RAFT). Advanced Drug Delivery Reviews, 2015, 91, 141-152.	6.6	119
14	Chemosynthesis of bioresorbable poly(Î³-butyrolactone) by ring-opening polymerisation: a review. Biomaterials, 2005, 26, 3771-3782.	5.7	112
15	Poly(dimethylsiloxane)/poly(hexamethylene oxide) mixed macrodiol based polyurethane elastomers. I. Synthesis and properties. Journal of Applied Polymer Science, 2000, 76, 2026-2040.	1.3	103
16	Mixed macrodiol-based siloxane polyurethanes: Effect of the comacrodiol structure on properties and morphology. Journal of Applied Polymer Science, 2000, 78, 1071-1082.	1.3	74
17	The influence of composition ratio on the morphology of biomedical polyurethanes. Journal of Applied Polymer Science, 1999, 71, 937-952.	1.3	67
18	Salt Induced Lamellar to Bicontinuous Cubic Phase Transitions in Cationic Nanoparticles. Journal of Physical Chemistry B, 2012, 116, 3551-3556.	1.2	67

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19	Glycerol Monooleate-Based Nanocarriers for siRNA Delivery in Vitro. Molecular Pharmaceutics, 2012, 9, 2450-2457.	2.3	61
20	The effect of RAFT-derived cationic block copolymer structure on gene silencing efficiency. Biomaterials, 2012, 33, 7631-7642.	5.7	53
21	Polyurethane elastomers based on novel polyether macrodiols and MDI: Synthesis, mechanical properties, and resistance to hydrolysis and oxidation. Journal of Applied Polymer Science, 1992, 46, 319-328.	1.3	51
22	Graphene/polyurethane composites: fabrication and evaluation of electrical conductivity, mechanical properties and cell viability. RSC Advances, 2015, 5, 98762-98772.	1.7	51
23	Thermal polymerization of a 2-(carboxyalkyl)-2-oxazoline. Macromolecules, 1988, 21, 1556-1562.	2.2	47
24	Synthesis and characterization of a series of poly(alkylene carbonate) macrodiols and the effect of their structure on the properties of polyurethanes. Journal of Applied Polymer Science, 1998, 69, 1621-1633.	1.3	45
25	Zwitterion polymerization of 2-methyl-2-oxazoline and acrylic acid. Macromolecules, 1984, 17, 1297-1307.	2.2	40
26	Core Degradable Star RAFT Polymers: Synthesis, Polymerization, and Degradation Studies. Macromolecules, 2013, 46, 9181-9188.	2.2	36
27	Antimicrobial Honey-Inspired Glucose-Responsive Nanoreactors by Polymerization-Induced Self-Assembly. ACS Applied Materials & Interfaces, 2020, 12, 11353-11362.	4.0	36
28	Effect of polydimethylsiloxane macrodiol molecular weight on properties and morphology of polyurethane and polyurethaneurea. Journal of Applied Polymer Science, 2003, 90, 1565-1573.	1.3	35
29	Effect of chain extender structure on the properties and morphology of polyurethanes based on H12MDI and mixed macrodiols (PDMS-PHMO). Journal of Applied Polymer Science, 1999, 74, 2979-2989.	1.3	33
30	Zwitterion polymerization of 2-methyl-2-oxazoline and methacrylic acid. Macromolecules, 1985, 18, 605-611.	2.2	29
31	Low-modulus siloxane-based polyurethanes. I. Effect of the chain extender 1,3-bis(4-hydroxybutyl)1,1,3,3-tetramethyldisiloxane (BHTD) on properties and morphology. Journal of Applied Polymer Science, 2002, 83, 736-746.	1.3	29
32	Morphology and surface properties of high strength siloxane poly(urethaneâ€urea)s developed for heart valve application. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2019, 107, 112-121.	1.6	28
33	New methods for the assessment of in vitro and in vivo stress cracking in biomedical polyurethanes. Biomaterials, 2001, 22, 973-978.	5.7	27
34	Advancements in the Development of Biostable Polyurethanes. Polymer Reviews, 2019, 59, 391-417.	5.3	27
35	Synthesis and characterization of hydroxy-terminated poly(alkylene oxides) by condensation polymerization of diols. Polymer International, 1992, 27, 275-283.	1.6	25
36	Development of high strength siloxane poly(urethaneâ€urea) elastomers based on linked macrodiols for heart valve application. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2018, 106, 1712-1720.	1.6	25

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37	Low-modulus siloxane-polyurethanes. Part II. Effect of chain extender structure on properties and morphology. Journal of Applied Polymer Science, 2003, 87, 1092-1100.	1.3	24
38	Assessment of a Siloxane Poly(urethaneâ€urea) Elastomer Designed for Implantable Heart Valve Leaflets. Advanced NanoBiomed Research, 2021, 1, 2000032.	1.7	22
39	Applying â€œclickâ€•chemistry to polyurethanes: a straightforward approach for glycopolymer synthesis. Polymer Chemistry, 2011, 2, 2782.	1.9	20
40	In vivo evaluation of polyurethanes based on novel macrodiols and MDI. Journal of Biomaterials Science, Polymer Edition, 1995, 6, 41-54.	1.9	19
41	Surface modification of kaolin. 1. Covalent attachment of polyethylene glycol using a urethane linker. Polymer International, 1994, 34, 425-431.	1.6	18
42	Synthesis and evaluation of degradable polyurea block copolymers as siRNA delivery agents. Acta Biomaterialia, 2013, 9, 8299-8307.	4.1	18
43	Hydrophobicâ€hydrophilic surface switching properties of nonchain extended poly(urethane)s for use in agriculture to minimize soil water evaporation and permit water infiltration. Journal of Applied Polymer Science, 2017, 134, 44756.	1.3	18
44	Properties and in vitro evaluation of high modulus biodegradable polyurethanes for applications in cardiovascular stents. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2014, 102, 1711-1719.	1.6	17
45	Synthesis of cleavable multi-functional mikto-arm star polymer by RAFT polymerization: example of an anti-cancer drug 7-ethyl-10-hydroxycamptothecin (SN-38) as functional moiety. Science China Chemistry, 2014, 57, 995-1001.	4.2	17
46	Preparation and characterization of highly conductive polyurethane composites containing graphene and gold nanoparticles. Journal of Materials Science, 2017, 52, 11774-11784.	1.7	17
47	The effect of diisocyanate isomer composition on properties and morphology of polyurethanes based on 4,4â€²-dicyclohexyl methane diisocyanate and mixed macrodiols (PDMS-PHMO). Journal of Applied Polymer Science, 1999, 73, 573-582.	1.3	16
48	Comparing Gene Silencing and Physiochemical Properties in siRNA Bound Cationic Star-Polymer Complexes. Biomacromolecules, 2016, 17, 3532-3546.	2.6	16
49	Evaluation of in situ curable biodegradable polyurethanes containing zwitterion components. Journal of Materials Science: Materials in Medicine, 2010, 21, 1081-1089.	1.7	13
50	Inhibition of influenza virusin vivoby siRNA delivered using ABA triblock copolymer synthesized by reversible addition-fragmentation chain-transfer polymerization. Nanomedicine, 2014, 9, 1141-1154.	1.7	13
51	High Modulus Biodegradable Polyurethanes for Vascular Stents: Evaluation of Accelerated in vitro Degradation and Cell Viability of Degradation Products. Frontiers in Bioengineering and Biotechnology, 2015, 3, 52.	2.0	12
52	Thermal polymerization of 2-(mercaptoalkyl)-2-oxazolines. Macromolecules, 1987, 20, 2356-2362.	2.2	11
53	Surface modification of kaolin. 2. Enhanced steric stabilisation of polymer-modified kaolin. Polymer International, 1995, 37, 53-61.	1.6	10
54	In vitro oxidative stability of high strength siloxane poly(urethaneâ€urea) elastomers based on linkedâ€macrodiol. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2019, 107, 2557-2565.	1.6	10

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55	Synthesis, characterization, and stability of poly[(alkylene oxide) ester] thermoplastic elastomers. Journal of Applied Polymer Science, 1997, 65, 1319-1332.	1.3	9
56	Hard segment composition, morphology, tensile properties and biostability of linked-macrodiol based siloxane poly(urethane urea). Materials Today Communications, 2019, 18, 110-118.	0.9	9
57	Polyurethane elastomers with low modulus and hardness based on novel copolyether macrodiols. Journal of Applied Polymer Science, 1997, 63, 1373-1384.	1.3	8
58	Honey-inspired antimicrobial hydrogels resist bacterial colonization through twin synergistic mechanisms. Scientific Reports, 2020, 10, 15796.	1.6	8
59	Zwitterion polymerization of 2-methyl-2-oxazoline and acrylic acid: characterization of ether-soluble products. Macromolecules, 1984, 17, 2236-2240.	2.2	5
60	Glycosylated Reversible Additionâ€“Fragmentation Chain Transfer Polymers with Varying Polyethylene Glycol Linkers Produce Different Short Interfering RNA Uptake, Gene Silencing, and Toxicity Profiles. Biomacromolecules, 2017, 18, 4099-4112.	2.6	5
61	Silver nanowire as an efficient filler for high conductive polyurethane composites. Materials Science and Technology, 2019, 35, 462-468.	0.8	4
62	Novel polyetherurethaneurea elastomers based on Î±,Î±,Î±â€²,Î±â€²-tetramethyl-m-xylenediisocyanate: Synthesis, characterization, processability, and hydrolytic stability. Journal of Applied Polymer Science, 1993, 47, 199-210.	1.3	3
63	Effect of chain extender structure on the properties and morphology of polyurethanes based on H12MDI and mixed macrodiols (PDMSâ€“PHMO). Journal of Applied Polymer Science, 1999, 74, 2979.	1.3	1
64	Designing Biostable Polyurethane Elastomers for Biomedical Implants.. ChemInform, 2003, 34, no.	0.1	1
65	Ternary polyurethane nanocomposites with remarkable electrical conductivity. Materials Science and Technology, 2020, 36, 540-547.	0.8	1