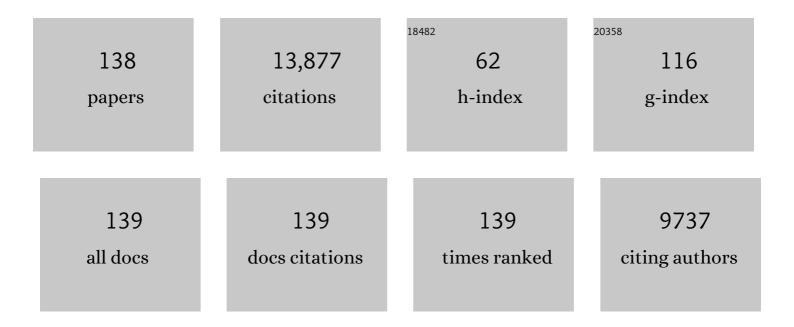
## Patrick T Mather

List of Publications by Year in descending order

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**ΔΑΤDICK Τ ΜΑΤΗΕD** 

#	Article	IF	CITATIONS
1	Profiling the responsiveness of focal adhesions of human cardiomyocytes to extracellular dynamic nano-topography. Bioactive Materials, 2022, 10, 367-377.	15.6	4
2	Dynamic covalent exchange in poly(thioether anhydrides). Polymer Chemistry, 2020, 11, 7551-7561.	3.9	8
3	Synthesis and Characterization of Zwitterionic Polymer Brush Functionalized Hydrogels with Ionic Responsive Coefficient of Friction. Langmuir, 2020, 36, 3932-3940.	3.5	14
4	Mechanics and tribology of a zwitterionic polymer blend: Impact of molecular weight. Materials Science and Engineering C, 2020, 111, 110736.	7.3	8
5	Progressive Myofibril Reorganization of Human Cardiomyocytes on a Dynamic Nanotopographic Substrate. ACS Applied Materials & amp; Interfaces, 2020, 12, 21450-21462.	8.0	20
6	Non-uniform curvature and anisotropic deformation control wrinkling patterns on tori. Soft Matter, 2019, 15, 5204-5210.	2.7	15
7	Enzymatically triggered shape memory polymers. Acta Biomaterialia, 2019, 84, 88-97.	8.3	44
8	Entanglement-Based Thermoplastic Shape Memory Polymeric Particles with Photothermal Actuation for Biomedical Applications. ACS Applied Materials & amp; Interfaces, 2018, 10, 13333-13341.	8.0	56
9	Tuning of reversible actuation via ROMP-based copolymerization semicrystalline polymers. Polymer, 2018, 156, 228-239.	3.8	9
10	A latent crosslinkable PCL-based polyurethane: Synthesis, shape memory, and enzymatic degradation. Journal of Materials Research, 2018, 33, 2463-2476.	2.6	18
11	Ternary Polymeric Composites Exhibiting Bulk and Surface Quadrupleâ€ <del>S</del> hape Memory Properties. ChemPhysChem, 2018, 19, 2014-2024.	2.1	4
12	The shape-memory effect in ionic elastomers: fixation through ionic interactions. Soft Matter, 2017, 13, 2983-2994.	2.7	26
13	Comparative analysis of shape memoryâ€based selfâ€healing coatings. Journal of Polymer Science, Part B: Polymer Physics, 2016, 54, 1415-1426.	2.1	20
14	A hydrogelâ€forming liquid crystalline elastomer exhibiting soft shape memory. Journal of Polymer Science, Part B: Polymer Physics, 2016, 54, 38-52.	2.1	40
15	Biodegradable Thermoplastic Elastomers Incorporating POSS: Synthesis, Microstructure, and Mechanical Properties. Macromolecules, 2016, 49, 3769-3779.	4.8	36
16	Synthesis and characterization of a zwitterionic hydrogel blend with low coefficient of friction. Acta Biomaterialia, 2016, 46, 245-255.	8.3	38
17	Hot-compacted interwoven webs of biodegradable polymers. Polymer, 2016, 101, 127-138.	3.8	9
18	Osteogenic Capacity of Human Adipose-Derived Stem Cells is Preserved Following Triggering of Shape Memory Scaffolds. Tissue Engineering - Part A, 2016, 22, 1026-1035.	3.1	22

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19	Anhydride-Based Reconfigurable Shape Memory Elastomers. ACS Macro Letters, 2016, 5, 203-207.	4.8	66
20	Interwoven polymer composites via dual-electrospinning with shape memory and self-healing properties. MRS Communications, 2015, 5, 211-221.	1.8	24
21	Fabrication of Polymeric Coatings with Controlled Microtopographies Using an Electrospraying Technique. PLoS ONE, 2015, 10, e0129960.	2.5	29
22	Mechanically programmed shape change in laminated elastomeric composites. Soft Matter, 2015, 11, 5754-5764.	2.7	31
23	Dual-Spun Shape Memory Elastomeric Composites. ACS Macro Letters, 2015, 4, 436-440.	4.8	41
24	Photo-induced bending in a light-activated polymer laminated composite. Soft Matter, 2015, 11, 2673-2682.	2.7	55
25	Molecular Composite Coatings on Nafion Using Layer-by-Layer Self-Assembly. ACS Applied Materials & Interfaces, 2015, 7, 10365-10373.	8.0	12
26	Nanoscale Order and Crystallization in POSS–PCL Shape Memory Molecular Networks. Macromolecules, 2015, 48, 5770-5779.	4.8	52
27	Thermoviscoplastic behaviors of anisotropic shape memory elastomeric composites for cold programmed non-affine shape change. Journal of the Mechanics and Physics of Solids, 2015, 85, 219-244.	4.8	36
28	Reversible actuation in main-chain liquid crystalline elastomers with varying crosslink densities. Polymer, 2014, 55, 5897-5907.	3.8	50
29	Preparation and characterization of triple shape memory composite foams. Soft Matter, 2014, 10, 8066-8074.	2.7	28
30	Properties of triple shape memory composites prepared via polymerization-induced phase separation. Soft Matter, 2014, 10, 3112-3121.	2.7	62
31	A finite deformation thermomechanical constitutive model for triple shape polymeric composites based on dual thermal transitions. International Journal of Solids and Structures, 2014, 51, 2777-2790.	2.7	50
32	Abstract 321: A Biomimetic Approach to Developing Antithrombotic Small-Caliber Prosthetic Vascular Grafts. Arteriosclerosis, Thrombosis, and Vascular Biology, 2014, 34, .	2.4	0
33	Thermally modulated nanostructure of poly(ε-caprolactone)–POSS multiblock thermoplastic polyurethanes. Polymer, 2013, 54, 3350-3362.	3.8	46
34	Mechanisms of triple-shape polymeric composites due to dual thermal transitions. Soft Matter, 2013, 9, 2212.	2.7	69
35	Shape-memory-actuated change in scaffold fiber alignment directs stem cell morphology. Acta Biomaterialia, 2013, 9, 8790-8801.	8.3	129
36	Water-triggered shape memory of multiblock thermoplastic polyurethanes (TPUs). RSC Advances, 2013, 3, 15783.	3.6	86

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37	In vitro wrinkle formation via shape memory dynamically aligns adherent cells. Soft Matter, 2013, 9, 4705.	2.7	59
38	Shape Memory Assisted Self-Healing Coating. ACS Macro Letters, 2013, 2, 152-156.	4.8	346
39	Evolution of microstructure during shape memory cycling of a main-chain liquid crystalline elastomer. Polymer, 2013, 54, 2808-2820.	3.8	22
40	Design strategies for shape memory polymers. Current Opinion in Chemical Engineering, 2013, 2, 103-111.	7.8	26
41	Anisotropic Shapeâ€Memory Elastomeric Composites: Fabrication and Testing. Macromolecular Chemistry and Physics, 2013, 214, 1247-1257.	2.2	21
42	Shape memory poly(ε-caprolactone)-co-poly(ethylene glycol) foams with body temperature triggering and two-way actuation. Journal of Materials Chemistry B, 2013, 1, 4916.	5.8	83
43	A programmable shape-changing scaffold for regenerative medicine. , 2012, , .		2
44	Crosslinkable liquid crystalline copolymers with variable isotropization temperature. Journal of Materials Chemistry, 2012, 22, 14518.	6.7	12
45	Entanglement-based shape memory polyurethanes: Synthesis and characterization. Polymer, 2012, 53, 5924-5934.	3.8	100
46	Soft bacterial polyesterâ€based shape memory nanocomposites featuring reconfigurable nanostructure. Journal of Polymer Science, Part B: Polymer Physics, 2012, 50, 387-393.	2.1	41
47	Thermomechanical behavior of shape memory elastomeric composites. Journal of the Mechanics and Physics of Solids, 2012, 60, 67-83.	4.8	91
48	A functionally graded shape memory polymer. Soft Matter, 2011, 7, 68-74.	2.7	97
49	Shape Memory RGD ontaining Networks: Synthesis, Characterization, and Application in Cell Culture. Macromolecular Symposia, 2011, 309-310, 162-172.	0.7	18
50	Microstructure and Phase Behavior of POSS/PCL Shape Memory Nanocomposites. Macromolecules, 2011, 44, 5682-5692.	4.8	82
51	Linear/Network Poly(ε-caprolactone) Blends Exhibiting Shape Memory Assisted Self-Healing (SMASH). ACS Applied Materials & Interfaces, 2011, 3, 152-161.	8.0	346
52	Metallo-Responsive Liquid Crystalline Monomers and Polymers. Chemistry of Materials, 2011, 23, 3525-3533.	6.7	39
53	Two-way reversible shape memory effects in a free-standing polymer composite. Smart Materials and Structures, 2011, 20, 065010.	3.5	128
54	Polyhedral Oligomeric Silsesquioxane (POSS) Suppresses Enzymatic Degradation of PCL-Based Polyurethanes. Biomacromolecules, 2011, 12, 3066-3077.	5.4	63

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55	Dynamic cell behavior on shape memory polymer substrates. Biomaterials, 2011, 32, 2285-2293.	11.4	208
56	<i>In vivo</i> kinetic degradation analysis and biocompatibility of aliphatic polyester polyurethanes. Journal of Biomedical Materials Research - Part A, 2010, 94A, 333-343.	4.0	10
57	High Conductivity Perfluorosulfonic Acid Nanofiber Composite Fuelâ€Cell Membranes. ChemSusChem, 2010, 3, 1245-1248.	6.8	69
58	Triple‧hape Polymeric Composites (TSPCs). Advanced Functional Materials, 2010, 20, 2649-2656.	14.9	255
59	A thermally responsive, rigid, and reversible adhesive. Polymer, 2010, 51, 1169-1175.	3.8	66
60	Constitutive Modeling of Shape Memory Effects in Semicrystalline Polymers With Stretch Induced Crystallization. Journal of Engineering Materials and Technology, Transactions of the ASME, 2010, 132,	1.4	96
61	PEGâ "POSS Multiblock Polyurethanes: Synthesis, Characterization, and Hydrogel Formation. Macromolecules, 2010, 43, 7637-7649.	4.8	111
62	Conductive shape memory nanocomposites for high speed electrical actuation. Soft Matter, 2010, 6, 2146.	2.7	215
63	Sulfonated Polysulfone/POSS Nanofiber Composite Membranes for PEM Fuel Cells. Journal of the Electrochemical Society, 2010, 157, B914.	2.9	80
64	Blends of Paclitaxel with POSS-Based Biodegradable Polyurethanes: Morphology, Miscibility, and Specific Interactions. Macromolecules, 2010, 43, 4991-4999.	4.8	30
65	Nanofiber composite membranes with low equivalent weight perfluorosulfonic acid polymers. Journal of Materials Chemistry, 2010, 20, 6282.	6.7	89
66	Soft shape memory in main-chain liquid crystalline elastomers. Journal of Materials Chemistry, 2010, 20, 3449.	6.7	121
67	In vivo kinetic degradation analysis and biocompatibility of aliphatic polyester polyurethanes. Journal of Biomedical Materials Research - Part A, 2010, 94, 333-43.	4.0	6
68	POSS Polymers: Physical Properties and Biomaterials Applications. Polymer Reviews, 2009, 49, 25-63.	10.9	332
69	Nafion Nanofiber Membranes. ECS Transactions, 2009, 25, 1451-1458.	0.5	25
70	Polypeptide-catalyzed Biosilicification of Dentin Surfaces. Journal of Dental Research, 2009, 88, 377-381.	5.2	8
71	Tailored drug release from biodegradable stent coatings based on hybrid polyurethanes. Journal of Controlled Release, 2009, 137, 224-233.	9.9	113
72	Rapid synthesis of polymer-silica hybrid nanofibers by biomimetic mineralization. Polymer, 2009, 50, 1214-1222.	3.8	32

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73	PLGAâ^'POSS End-Linked Networks with Tailored Degradation and Shape Memory Behavior. Macromolecules, 2009, 42, 6596-6605.	4.8	70
74	Vertex Group Effects in Entangled Polystyreneâ^'Polyhedral Oligosilsesquioxane (POSS) Copolymers. Macromolecules, 2009, 42, 1142-1152.	4.8	85
75	Combined One-Way and Two-Way Shape Memory in a Glass-Forming Nematic Network. Macromolecules, 2009, 42, 273-280.	4.8	167
76	Shape Memory Polymer Research. Annual Review of Materials Research, 2009, 39, 445-471.	9.3	822
77	Antimicrobial Properties of Nanostructured Hydrogel Webs Containing Silver. Biomacromolecules, 2009, 10, 2686-2693.	5.4	101
78	A Thermoplastic/Thermoset Blend Exhibiting Thermal Mending and Reversible Adhesion. ACS Applied Materials & Interfaces, 2009, 1, 612-620.	8.0	176
79	Preparation and Characterization of Shape Memory Elastomeric Composites. Macromolecules, 2009, 42, 7251-7253.	4.8	145
80	Improved synthesis of functionalized mesogenic 2,6-bisbenzimidazolylpyridine ligands. Tetrahedron, 2008, 64, 8488-8495.	1.9	30
81	Nanofiber Network Ion-Exchange Membranes. Macromolecules, 2008, 41, 4569-4572.	4.8	169
82	Biodegradable Thermoplastic Polyurethanes Incorporating Polyhedral Oligosilsesquioxane. Biomacromolecules, 2008, 9, 2458-2467.	5.4	141
83	Shape memory polymers with built-in threshold temperature sensors. Journal of Materials Chemistry, 2008, 18, 1082.	6.7	221
84	Two-Way Reversible Shape Memory in a Semicrystalline Network. Macromolecules, 2008, 41, 184-192.	4.8	464
85	Polycaprolactoneâ^'POSS Chemical/Physical Double Networks. Macromolecules, 2008, 41, 4730-4738.	4.8	188
86	Composite Membranes for Hydrogen/Air PEM Fuel Cells. ECS Transactions, 2007, 11, 79-87.	0.5	5
87	Deformation-Induced Color Changes in Mechanochromic Polyethylene Blends. Macromolecules, 2007, 40, 2400-2408.	4.8	177
88	Telechelic Poly(ethylene glycol)â^'POSS Amphiphiles at the Air/Water Interface. Macromolecules, 2007, 40, 682-688.	4.8	70
89	Combined Effect of Spin Speed and Ionic Strength on Polyelectrolyte Spin Assembly. Langmuir, 2007, 23, 12589-12597.	3.5	36
90	Rheological Behavior of Entangled Polystyreneâ^'Polyhedral Oligosilsesquioxane (POSS) Copolymers. Macromolecules, 2007, 40, 544-554.	4.8	121

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91	Self-Assembly and Chain-Folding in Hybrid Coilâ^'Coilâ^'Cube Triblock Oligomers of Polyethylene-b-Poly(ethylene oxide)-b-Polyhedral Oligomeric Silsesquioxane. Macromolecules, 2007, 40, 5460-5470.	4.8	58
92	Review of progress in shape-memory polymers. Journal of Materials Chemistry, 2007, 17, 1543.	6.7	1,713
93	Poly(vinyl alcohol) (PVA)/sulfonated polyhedral oligosilsesquioxane (sPOSS) hybrid membranes for direct methanol fuel cell applications. Polymers for Advanced Technologies, 2007, 18, 535-543.	3.2	83
94	Soft answers for hard problems. Nature Materials, 2007, 6, 93-94.	27.5	55
95	Rheological characterization of asphalt in a temperature-gradient combinatorial squeeze-flow setup. Rheologica Acta, 2007, 46, 1075-1082.	2.4	2
96	Molecular Dynamics Simulations of Multilayer Polyelectrolyte Films:Â Effect of Electrostatic and Short-Range Interactions. Langmuir, 2006, 22, 9994-10002.	3.5	55
97	Morphology, Microstructure, and Rheology of Amphiphilic Telechelics Incorporating Polyhedral Oligosilsesquioxane. Macromolecules, 2006, 39, 9253-9260.	4.8	77
98	Effect of stoichiometry on liquid crystalline supramolecular polymers formed with complementary nucleobase pair interactions. Journal of Polymer Science Part A, 2006, 44, 5049-5059.	2.3	18
99	Modification of bisphenol-A based bismaleimide resin (BPA-BMI) with an allyl-terminated hyperbranched polyimide (AT-PAEKI). Polymer, 2006, 47, 2813-2821.	3.8	77
100	Amphiphilic telechelics with polyhedral oligosilsesquioxane (POSS) end-groups: Dilute solution viscometry. Polymer, 2006, 47, 6202-6207.	3.8	60
101	Directed Mineralization on Polyelectrolyte Multilayer Films. Materials Research Society Symposia Proceedings, 2006, 975, 1.	0.1	0
102	Welded Electrochromic Conductive Polymer Nanofibers by Electrostatic Spinning. Advanced Materials, 2005, 17, 2177-2180.	21.0	108
103	Optically transparent self-reinforced poly(ethylene terephthalate) composites: molecular orientation and mechanical properties. Polymer, 2005, 46, 761-773.	3.8	62
104	Molecular Dynamics Simulations of Layer-by-Layer Assembly of Polyelectrolytes at Charged Surfaces:Â Effects of Chain Degree of Polymerization and Fraction of Charged Monomers. Langmuir, 2005, 21, 6113-6122.	3.5	51
105	Interfacial Tension of a Liquid Crystalline Polymer in an Isotropic Polymer Matrix. Macromolecules, 2005, 38, 7343-7351.	4.8	12
106	Tailored Phase Transitions via Mixed-Mesogen Liquid Crystalline Polymers with Silicon-Based Spacers. Macromolecules, 2005, 38, 4103-4113.	4.8	39
107	Crystallization of POSS in a PEG-Based Multiblock Polyurethane: Toward A Hybrid Hydrogel. Materials Research Society Symposia Proceedings, 2004, 847, 59.	0.1	6
108	Polyelectrolyte spin assembly: Influence of ionic strength on the growth of multilayered thin films. Journal of Polymer Science, Part B: Polymer Physics, 2004, 42, 3654-3666.	2.1	82

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109	Synthesis and Characterization of Unsaturated Thermotropic Polyesters Prepared via Acyclic Diene Metathesis Polymerization. Macromolecules, 2004, 37, 5239-5249.	4.8	18
110	Hybrid epoxy-based thermosets based on polyhedral oligosilsesquioxane: Cure behavior and toughening mechanisms. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 3299-3313.	2.1	129
111	ABA triblock copolymers containing polyhedral oligomeric silsesquioxane pendant groups: synthesis and unique properties. Polymer, 2003, 44, 2739-2750.	3.8	200
112	Shape Memory Effect Exhibited by Smectic-C Liquid Crystalline Elastomers. Journal of the American Chemical Society, 2003, 125, 15300-15301.	13.7	267
113	Oddâ``Even Effect of Flexible Spacer Length on Flow-Induced Isotropic-to-Nematic Transition in Segmented Thermotropic Polymers. Macromolecules, 2002, 35, 1326-1335.	4.8	14
114	A New Hyperbranched Poly(aryleneâ^'etherâ^'ketoneâ^'imide):Â Synthesis, Chain-End Functionalization, and Blending with a Bis(maleimide). Macromolecules, 2002, 35, 4951-4959.	4.8	53
115	Amphiphilic Telechelics Incorporating Polyhedral Oligosilsesquioxane:Â 1. Synthesis and Characterization. Macromolecules, 2002, 35, 8378-8384.	4.8	145
116	Effect of Methyl Methacrylate/Polyhedral Oligomeric Silsesquioxane Random Copolymers in Compatibilization of Polystyrene and Poly(methyl methacrylate) Blends. Macromolecules, 2002, 35, 8029-8038.	4.8	120
117	Chemically Cross-Linked Polycyclooctene:Â Synthesis, Characterization, and Shape Memory Behavior. Macromolecules, 2002, 35, 9868-9874.	4.8	257
118	Characterization of the cure-state of DGEBA-DDS epoxy using ultrasonic, dynamic mechanical, and thermal probes. Polymer Engineering and Science, 2002, 42, 51-67.	3.1	94
119	Phase Behavior, Rheology, and Morphology of Binary Blends of Semiflexible Main-Chain Thermotropic Liquid-Crystalline Polymers. Macromolecules, 2001, 34, 7152-7161.	4.8	5
120	Structural development during deformation of polyurethane containing polyhedral oligomeric silsesquioxanes (POSS) molecules. Polymer, 2001, 42, 599-611.	3.8	274
121	Reinforcement and environmental degradation of nylon-6/clay nanocomposites. Polymer, 2001, 42, 5849-5858.	3.8	294
122	Nanoscale reinforcement of polyhedral oligomeric silsesquioxane (POSS) in polyurethane elastomer. Polymer International, 2000, 49, 437-440.	3.1	182
123	Shape memory and nanostructure in poly(norbornyl-POSS) copolymers. Polymer International, 2000, 49, 453-457.	3.1	188
124	Synthesis and characterization of fluorinated benzoxazole polymers with highTg and low dielectric constant. Journal of Polymer Science Part A, 2000, 38, 1991-2003.	2.3	51
125	Optical and Mechanical Rheometry of Semiflexible Main-Chain Thermotropic Liquid-Crystalline Polymers with Varying Pendant Groups. Macromolecules, 2000, 33, 7922-7930.	4.8	11
126	Morphological and Rheological Responses to Shear Start-up and Flow Reversal of Thermotropic Liquid-Crystalline Polymers. Macromolecules, 2000, 33, 7594-7608.	4.8	41

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127	Mid-wavelength IR (MWIR) polarizers from glassy cholesteric liquid crystals. Liquid Crystals, 1999, 26, 557-565.	2.2	5
128	Rheology of highly swollen chitosan/polyacrylate hydrogels. Polymer, 1999, 40, 4593-4602.	3.8	92
129	Mesogen-jacketed liquid crystalline polymers via stable free radical polymerization. Macromolecular Chemistry and Physics, 1999, 200, 2338-2344.	2.2	50
130	Mechanical Relaxation and Microstructure of Poly(norbornyl-POSS) Copolymers. Macromolecules, 1999, 32, 1194-1203.	4.8	381
131	Viscoelastic and morphological behavior of hybrid styryl-based polyhedral oligomeric silsesquioxane (POSS) copolymers. Journal of Polymer Science, Part B: Polymer Physics, 1998, 36, 1857-1872.	2.1	239
132	Synthesis and thermal properties of thermosetting bis-benzocyclobutene-terminated arylene ether monomers. Journal of Polymer Science Part A, 1998, 36, 2637-2651.	2.3	20
133	Rheological and mechanical relaxation behavior of a thermally crosslinkable poly(ethylene) Tj ETQq1 1 0.784314	rgBT /Ove	rlock 10 Tf 5
134	Rheo-Optical Evidence of a Flow-Induced Isotropicâ ``Nematic Transition in a Thermotropic Liquid-Crystalline Polymer. Macromolecules, 1997, 30, 7977-7989.	4.8	81
135	Thermally crosslinkable thermotropic copolyesters: synthesis, characterization, and processing. Polymer, 1997, 38, 6009-6022.	3.8	10
136	The origin of stress-oscillation damping during start-up and reversal of torsional shearing of nematics. Rheologica Acta, 1997, 36, 485-497.	2.4	4
137	Phase behavior and rheology of blends containing polycarbonate and a thermotropic polyester. Journal of Applied Polymer Science, 1996, 59, 243-250.	2.6	11
138	Synthesis and characterization of a semiflexible liquid crystalline polyester with a broad nematic region. Liquid Crystals, 1994, 17, 811-826.	2.2	10