Benjamin S Hsiao

List of Publications by Citations

462 papers	32,656 citations	97 h-index	159 g-index
477 ext. papers	35,245 ext. citations	5.8 avg, IF	7.23 L-index

#	Paper	IF	Citations
462	Structure and process relationship of electrospun bioabsorbable nanofiber membranes. *Polymer*, **2002**, 43, 4403-4412	3.9	1487
461	Functional electrospun nanofibrous scaffolds for biomedical applications. *Advanced Drug Delivery Reviews*, **2007**, 59, 1392-412	18.5	771
460	Incorporation and controlled release of a hydrophilic antibiotic using poly(lactide-co-glycolide)-based electrospun nanofibrous scaffolds. *Journal of Controlled Release*, **2004**, 98, 47-56	11.7	633
459	Electrospun fine-textured scaffolds for heart tissue constructs. *Biomaterials*, **2005**, 26, 5330-8	15.6	542
458	NANOFIBROUS MATERIALS AND THEIR APPLICATIONS. *Annual Review of Materials Research*, **2006**, 36, 333-368	12.8	520
457	Control of degradation rate and hydrophilicity in electrospun non-woven poly(D,L-lactide) nanofiber scaffolds for biomedical applications. *Biomaterials*, **2003**, 24, 4977-85	15.6	476
456	High flux ultrafiltration membranes based on electrospun nanofibrous PAN scaffolds and chitosan coating. *Polymer*, **2006**, 47, 2434-2441	3.9	452
455	Structure Development during Shear Flow-Induced Crystallization of i-PP: In-Situ Small-Angle X-ray Scattering Study. *Macromolecules*, **2000**, 33, 9385-9394	5.5	434
454	Flow-induced shish-kebab precursor structures in entangled polymer melts. *Polymer*, **2005**, 46, 8587-8623	3.9	378
453	Crystallization Temperature-Dependent Crystal Orientations within Nanoscale Confined Lamellae of a Self-Assembled Crystalline−Amorphous Diblock Copolymer. *Journal of the American Chemical Society*, **2000**, 122, 5957-5967	16.4	365
452	Structure Development during Shear Flow Induced Crystallization of i-PP: In Situ Wide-Angle X-ray Diffraction Study. *Macromolecules*, **2001**, 34, 5902-5909	5.5	352
451	Functional nanofibers for environmental applications. *Journal of Materials Chemistry*, **2008**, 18, 5326		346
450	Antithrombogenic property of bone marrow mesenchymal stem cells in nanofibrous vascular grafts. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 11915-20	11.5	322
449	Bioactive nanofibers: synergistic effects of nanotopography and chemical signaling on cell guidance. *Nano Letters*, **2007**, 7, 2122-8	11.5	315
448	High flux filtration medium based on nanofibrous substrate with hydrophilic nanocomposite coating. *Environmental Science & Technology*, **2005**, 39, 7684-91	10.3	308
447	Small-angle X-ray scattering of polymers. *Chemical Reviews*, **2001**, 101, 1727-61	68.1	293
446	Isothermal Crystallization of Poly(l-lactide) Induced by Graphene Nanosheets and Carbon Nanotubes: A Comparative Study. *Macromolecules*, **2010**, 43, 5000-5008	5.5	283

445	Myotube assembly on nanofibrous and micropatterned polymers. *Nano Letters*, **2006**, 6, 537-42	11.5	272
444	Electro-spinning and electro-blowing of hyaluronic acid. *Biomacromolecules*, **2004**, 5, 1428-36	6.9	272
443	Effects of organoclays on morphology and thermal and rheological properties of polystyrene and poly(methyl methacrylate) blends. *Journal of Polymer Science, Part B: Polymer Physics*, **2003**, 41, 44-54	2.6	234
442	Unexpected shish-kebab structure in a sheared polyethylene melt. *Physical Review Letters*, **2005**, 94, 117802	7.4	232
441	Orientation and Crystallization of Natural Rubber Network As Revealed by WAXD Using Synchrotron Radiation. *Macromolecules*, **2004**, 37, 3299-3309	5.5	231
440	Structure and morphology changes during in vitro degradation of electrospun poly(glycolide-co-lactide) nanofiber membrane. *Biomacromolecules*, **2003**, 4, 416-23	6.9	227
439	Optimization and characterization of dextran membranes prepared by electrospinning. *Biomacromolecules*, **2004**, 5, 326-33	6.9	223
438	Temperature dependence of polymer crystalline morphology in nylon 6/montmorillonite nanocomposites. *Polymer*, **2001**, 42, 09975-09985	3.9	221
437	High flux nanofiltration membranes based on interfacially polymerized polyamide barrier layer on polyacrylonitrile nanofibrous scaffolds. *Journal of Membrane Science*, **2009**, 326, 484-492	9.6	219
436	Ultra-fine cellulose nanofibers: new nano-scale materials for water purification. *Journal of Materials Chemistry*, **2011**, 21, 7507		216
435	Electrospun nanofibrous membranes for high flux microfiltration. *Journal of Membrane Science*, **2012**, 392-393, 167-174	9.6	214
434	Micro-nano structure poly(ether sulfones)/poly(ethyleneimine) nanofibrous affinity membranes for adsorption of anionic dyes and heavy metal ions in aqueous solution. *Chemical Engineering Journal*, **2012**, 197, 88-100	14.7	213
433	New Insights into Structural Development in Natural Rubber during Uniaxial Deformation by In Situ Synchrotron X-ray Diffraction. *Macromolecules*, **2002**, 35, 6578-6584	5.5	213
432	Polymeric nanostructured materials for biomedical applications. *Progress in Polymer Science*, **2016**, 60, 86-128	29.6	209
431	Shear-Induced Precursor Structures in Isotactic Polypropylene Melt by in-Situ Rheo-SAXS and Rheo-WAXD Studies. *Macromolecules*, **2002**, 35, 9096-9104	5.5	209
430	Mineralization of hydroxyapatite in electrospun nanofibrous poly(L-lactic acid) scaffolds. *Journal of Biomedical Materials Research - Part A*, **2006**, 79, 307-17	5.4	206
429	High performance ultrafiltration composite membranes based on poly(vinyl alcohol) hydrogel coating on crosslinked nanofibrous poly(vinyl alcohol) scaffold. *Journal of Membrane Science*, **2006**, 278, 261-268	9.6	206
428	Shear-Enhanced Crystallization in Isotactic Polypropylene. 3. Evidence for a Kinetic Pathway to Nucleation. *Macromolecules*, **2002**, 35, 1762-1769	5.5	204

427	In-Situ Studies of Structure Development during Deformation of a Segmented Poly(urethane□urea) Elastomer. *Macromolecules*, **2003**, 36, 1940-1954	5.5	201
426	Control of structure, morphology and property in electrospun poly(glycolide-co-lactide) non-woven membranes via post-draw treatments. *Polymer*, **2003**, 44, 4959-4967	3.9	195
425	Ultrafine polysaccharide nanofibrous membranes for water purification. *Biomacromolecules*, **2011**, 12, 970-6	6.9	189
424	Shear-Induced Crystallization Precursor Studies in Model Polyethylene Blends by in-Situ Rheo-SAXS and Rheo-WAXD. *Macromolecules*, **2004**, 37, 4845-4859	5.5	182
423	Nanofibrous microfiltration membranes capable of removing bacteria, viruses and heavy metal ions. *Journal of Membrane Science*, **2013**, 446, 376-382	9.6	180
422	Thiol-modified cellulose nanofibrous composite membranes for chromium (VI) and lead (II) adsorption. *Polymer*, **2014**, 55, 1167-1176	3.9	175
421	Nanoscale reinforcement of polyhedral oligomeric silsesquioxane (POSS) in polyurethane elastomer. *Polymer International*, **2000**, 49, 437-440	3.3	170
420	Nanofibrous microfiltration membrane based on cellulose nanowhiskers. *Biomacromolecules*, **2012**, 13, 180-6	6.9	169
419	Shear-Induced Molecular Orientation and Crystallization in Isotactic Polypropylene: Effects of the Deformation Rate and Strain. *Macromolecules*, **2005**, 38, 1244-1255	5.5	165
418	Hard and soft confinement effects on polymer crystallization in microphase separated cylinder-forming PEO-b-PS/PS blends. *Polymer*, **2001**, 42, 9121-9131	3.9	162
417	Structural and Morphological Studies of Isotactic Polypropylene Fibers during Heat/Draw Deformation by in-Situ Synchrotron SAXS/WAXD. *Macromolecules*, **2001**, 34, 2569-2578	5.5	162
416	Ultrafine Cellulose Nanofibers as Efficient Adsorbents for Removal of UO in Water.. *ACS Macro Letters*, **2012**, 1, 213-216	6.6	159
415	The role of interlamellar chain entanglement in deformation-induced structure changes during uniaxial stretching of isotactic polypropylene. *Polymer*, **2007**, 48, 6867-6880	3.9	153
414	Electrospun nanofiber membranes. *Current Opinion in Chemical Engineering*, **2016**, 12, 62-81	5.4	152
413	Crystal Orientation Changes in Two-Dimensionally Confined Nanocylinders in a Poly(ethylene oxide)-b-polystyrene/Polystyrene Blend. *Macromolecules*, **2001**, 34, 6649-6657	5.5	151
412	Physical gelation in ethylene□propylene copolymer melts induced by polyhedral oligomeric silsesquioxane (POSS) molecules. *Polymer*, **2003**, 44, 1499-1506	3.9	149
411	Graphene Nanosheets and Shear Flow Induced Crystallization in Isotactic Polypropylene Nanocomposites. *Macromolecules*, **2011**, 44, 2808-2818	5.5	143
410	Formation and Stability of Shear-Induced Shish-Kebab Structure in Highly Entangled Melts of UHMWPE/HDPE Blends. *Macromolecules*, **2008**, 41, 4766-4776	5.5	143

409	Prevention of postsurgery-induced abdominal adhesions by electrospun bioabsorbable nanofibrous poly(lactide-co-glycolide)-based membranes. *Annals of Surgery*, **2004**, 240, 910-5	7.8	142
408	Probing the Early Stages of Melt Crystallization in Polypropylene by Simultaneous Small- and Wide-Angle X-ray Scattering and Laser Light Scattering. *Macromolecules*, **2000**, 33, 978-989	5.5	142
407	Improved barrier properties of poly(lactic acid) with randomly dispersed graphene oxide nanosheets. *Journal of Membrane Science*, **2014**, 464, 110-118	9.6	141
406	Time-resolved X-ray study of poly(aryl ether ether ketone) crystallization and melting behaviour: 1. Crystallization. *Polymer*, **1993**, 34, 3986-3995	3.9	140
405	Highly Permeable Polymer Membranes Containing Directed Channels for Water Purification. *ACS Macro Letters*, **2012**, 1, 723-726	6.6	139
404	Initial-Stage Growth Controlled Crystal Orientations in Nanoconfined Lamellae of a Self-Assembled Crystalline/Amorphous Diblock Copolymer. *Macromolecules*, **2001**, 34, 1244-1251	5.5	139
403	Formation of functional polyethersulfone electrospun membrane for water purification by mixed solvent and oxidation processes. *Polymer*, **2009**, 50, 2893-2899	3.9	137
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401	Fabrication and characterization of cellulose nanofiber based thin-film nanofibrous composite membranes. *Journal of Membrane Science*, **2014**, 454, 272-282	9.6	132
400	Effect of Nanoclay on Natural Rubber Microstructure. *Macromolecules*, **2008**, 41, 6763-6772	5.5	131
399	Continuous polymer nanofiber yarns prepared by self-bundling electrospinning method. *Polymer*, **2008**, 49, 2755-2761	3.9	130
398	Shear-Induced Crystallization in Novel Long Chain Branched Polypropylenes by in Situ Rheo-SAXS and -WAXD. *Macromolecules*, **2003**, 36, 5226-5235	5.5	128
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394	Mesophase as the Precursor for Strain-Induced Crystallization in Amorphous Poly(ethylene terephthalate) Film. *Macromolecules*, **2002**, 35, 10102-10107	5.5	125
393	Low-dimensional carbonaceous nanofiller induced polymer crystallization. *Progress in Polymer Science*, **2014**, 39, 555-593	29.6	124
392	Confinement Size Effect on Crystal Orientation Changes of Poly(ethylene oxide) Blocks in Poly(ethylene oxide)-b-polystyrene Diblock Copolymers. *Macromolecules*, **2004**, 37, 3689-3698	5.5	124

391	High flux ultrafiltration nanofibrous membranes based on polyacrylonitrile electrospun scaffolds and crosslinked polyvinyl alcohol coating. *Journal of Membrane Science*, **2009**, 338, 145-152	9.6	122
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388	Dual-biomimetic superhydrophobic electrospun polystyrene nanofibrous membranes for membrane distillation. *ACS Applied Materials & Interfaces*, **2014**, 6, 2423-30	9.5	121
387	Self-assembly and crystallization behavior of a double-crystalline polyethylene-block-poly(ethylene oxide) diblock copolymer. *Polymer*, **2004**, 45, 8181-8193	3.9	121
386	Competitive Growth of □and □Crystals in □Nucleated Isotactic Polypropylene under Shear Flow. *Macromolecules*, **2010**, 43, 6760-6771	5.5	119
385	Perforated layer structures in liquid crystalline rod-coil block copolymers. *Journal of the American Chemical Society*, **2005**, 127, 15481-90	16.4	119
384	Phase structures and morphologies determined by competitions among self-organization, crystallization, and vitrification in a disordered poly(ethylene oxide)-b-polystyrene diblock copolymer. *Physical Review B*, **1999**, 60, 10022-10031	3.3	119
383	Patterning polyethylene oligomers on carbon nanotubes using physical vapor deposition. *Nano Letters*, **2006**, 6, 1007-12	11.5	117
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380	Functionalized electrospun nanofibrous microfiltration membranes for removal of bacteria and viruses. *Journal of Membrane Science*, **2014**, 452, 446-452	9.6	112
379	High-flux thin-film nanofibrous composite ultrafiltration membranes containing cellulose barrier layer. *Journal of Materials Chemistry*, **2010**, 20, 4692		112
378	In-Situ Simultaneous Synchrotron Small- and Wide-Angle X-ray Scattering Measurement of Poly(vinylidene fluoride) Fibers under Deformation. *Macromolecules*, **2000**, 33, 1765-1777	5.5	112
377	Formation of shish-kebabs in injection-molded poly(L-lactic acid) by application of an intense flow field. *ACS Applied Materials & Interfaces*, **2012**, 4, 6774-84	9.5	110
376	Structure study of cellulose fibers wet-spun from environmentally friendly NaOH/urea aqueous solutions. *Biomacromolecules*, **2007**, 8, 1918-26	6.9	110
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374	High-flux microfiltration filters based on electrospun polyvinylalcohol nanofibrous membranes. *Polymer*, **2013**, 54, 548-556	3.9	106

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369	Entanglements and Networks to Strain-Induced Crystallization and Stress□Strain Relations in Natural Rubber and Synthetic Polyisoprene at Various Temperatures. *Macromolecules*, **2013**, 46, 5238-5248	5.5	101
368	Deformation-Induced Phase Transition and Superstructure Formation in Poly(ethylene terephthalate). *Macromolecules*, **2005**, 38, 91-103	5.5	101
367	Time-resolved X-ray study of poly(aryl ether ether ketone) crystallization and melting behaviour: 2. Melting. *Polymer*, **1993**, 34, 3996-4003	3.9	101
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362	Crystallization-Induced Undulated Morphology in Polystyrene-b-Poly(l-lactide) Block Copolymer. *Macromolecules*, **2004**, 37, 5985-5994	5.5	96
361	Hierarchical Assembly of a Series of Rod□Coil Block Copolymers: Supramolecular LC Phase in Nanoenviroment. *Macromolecules*, **2004**, 37, 2854-2860	5.5	95
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339	Effects of high molecular weight species on shear-induced orientation and crystallization of isotactic polypropylene. *Polymer*, **2006**, 47, 5657-5668	3.9	78
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330	Strong Shear Flow-Driven Simultaneous Formation of Classic Shish-Kebab, Hybrid Shish-Kebab, and Transcrystallinity in Poly(lactic acid)/Natural Fiber Biocomposites. *ACS Sustainable Chemistry and Engineering*, **2013**, 1, 1619-1629	8.3	73
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317	SAXS studies of lamellar level morphological changes during crystallization and melting in PEEK. *Polymer*, **1996**, 37, 5357-5365	3.9	67
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311	On the nature of multiple melting in poly(ethylene terephthalate) (PET) and its copolymers with cyclohexylene dimethylene terephthalate (PET/CT). *Polymer*, **2003**, 44, 1527-1535	3.9	62
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