Toshikazu Miyoshi

List of Publications by Year
in descending order

90	2,677	147801 31	214800 47
papers	citations	h-index	g-index

91	91	91	2707
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	50th Anniversary Perspective: Polymer Crystals and Crystallization: Personal Journeys in a Challenging Research Field. Macromolecules, 2017, 50, 5995-6025.	4.8	155
2	Quantitative and Qualitative Aspects of Dissolved Organic Carbon Leached from Senescent Plants in an Oligotrophic Wetland. Biogeochemistry, 2006, 78, 285-314.	3.5	114
3	Photoresponsive Coumarin Polyesters That Exhibit Cross-Linking and Chain Scission Properties. Macromolecules, 2013, 46, 5133-5140.	4.8	82
4	High-resolution solid state 13C n.m.r. study of the interpolymer interaction, morphology and chain dynamics of the poly(acrylic acid)/poly(ethylene oxide) complex. Polymer, 1997, 38, 2315-2320.	3.8	81
5	Hybrid fillers of lignin and carbon black for lowering of viscoelastic loss in rubber compounds. Polymer, 2014, 55, 3825-3835.	3.8	81
6	Hierarchical Self-Organization of AB_n Dendron-like Molecules into a Supramolecular Lattice Sequence. ACS Central Science, 2017, 3, 860-867.	11.3	69
7	Self-Assembly of the Mesoporous Electrode Material Li3Fe2(PO4)3 Using a Cationic Surfactant as the Template. Advanced Materials, 2004, 16, 2012-2017.	21.0	67
8	Chemical characteristics of dissolved organic matter in an oligotrophic subtropical wetland/estuarine. Limnology and Oceanography, 2005, 50, 23-35.	3.1	65
9	Direct Solvation of Glycoproteins by Salts in Spider Silk Glues Enhances Adhesion and Helps To Explain the Evolution of Modern Spider Orb Webs. Biomacromolecules, 2014, 15, 1225-1232.	5.4	65
10	Chain Trajectory and Crystallization Mechanism of a Semicrystalline Polymer in Melt- and Solution-Grown Crystals As Studied Using ¹³Câ€“¹³C Double-Quantum NMR. Macromolecules, 2015, 48, 3282-3293.	4.8	65
11	Fast Dynamics and Conformations of Polymer in a Conformational Disordered Crystal Characterized by ¹Hâ€™¹³C WISE NMR. Macromolecules, 2010, 43, 3986-3989.	4.8	61
12	High-resolution solid-state 13C nuclear magnetic resonance study of a polymer complex: poly(methacrylic acid)/poly(ethylene oxide). Polymer, 1996, 37, 11-18.	3.8	58
13	Stabilization of Atactic-Polyacrylonitrile under Nitrogen and Air As Studied by Solid-State NMR. Macromolecules, 2015, 48, 5300-5309.	4.8	57
14	Critical roles of molecular dynamics in the superior mechanical properties of isotactic-poly(1-butene) elucidated by solid-state NMR. Polymer Journal, 2012, 44, 65-71.	2.7	56
15	Chain-Folding Structure of a Semicrystalline Polymer in Bulk Crystals Determined by ¹³Câ€“¹³C Double Quantum NMR. ACS Macro Letters, 2013, 2, 501-505.	4.8	56
16	Chemical cross-linking of conducting poly(3,4-ethylenedioxythiophene):poly(styrenesulfonate) (PEDOT:PSS) using poly(ethylene oxide) (PEO). Polymer, 2013, 54, 6455-6462.	3.8	54
17	Probe diffusion in gels. Physical Review E, 1996, 53, 1823-1827.	2.1	52
18	Side-Chain Conformation and Dynamics for the Form II Polymorph of Isotactic Poly(1-butene) Investigated by High-Resolution Solid-State 13C NMR Spectroscopy. Macromolecules, 2002, 35, 6060-6063.	4.8	51

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19	Molecular Ordering and Molecular Dynamics in Isotactic-Polypropylene Characterized by Solid State NMR. Journal of Physical Chemistry B, 2010, 114, 92-100.	2.6	48
20	Elucidation of the hierarchical structure of natural eumelanins. Journal of the Royal Society Interface, 2018, 15, 20180045.	3.4	47
21	Chain Trajectory of Semicrystalline Polymers As Revealed by Solid-State NMR Spectroscopy. ACS Macro Letters, 2016, 5, 355-358.	4.8	45
22	Chain Dynamics, Conformations, and Phase Transformations for Form III Polymorph of Isotactic Poly(1-butene) Investigated by High-Resolution Solid-State13C NMR Spectroscopy and Molecular Mechanics Calculations. Macromolecules, 2002, 35, 2624-2632.	4.8	40
23	Giant spontaneous polarization for enhanced ferroelectric properties of biaxially oriented poly(vinylidene fluoride) by mobile oriented amorphous fractions. Journal of Materials Chemistry C, 2021, 9, 894-907.	5.5	40
24	Three-Dimensional Conformation of Folded Polymers in Single Crystals. Physical Review Letters, 2015, 115, 168301.	7.8	39
25	Chemical Reactions and Their Kinetics of atactic-Polyacrylonitrile As Revealed by Solid-State ¹³C NMR. Macromolecules, 2017, 50, 244-253.	4.8	39
26	Elucidation of the Chain-Folding Structure of a Semicrystalline Polymer in Single Crystals by Solid-State NMR. ACS Macro Letters, 2014, 3, 556-559.	4.8	38
27	Slow Chain Dynamics inIsotactic-poly(4-methyl-1-pentene) Crystallites near the Glass Transition Temperature Characterized by Solid-State13C MAS Exchange NMR. Macromolecules, 2004, 37, 6460-6471.	4.8	37
28	Folding of Polymer Chains in the Early Stage of Crystallization. ACS Macro Letters, 2015, 4, 1382-1385.	4.8	37
29	Determination of Local Packing Structure of Mesomorphic Form of Isotactic Polypropylene by Solid-State NMR. ACS Macro Letters, 2015, 4, 143-146.	4.8	34
30	Effects of Rigid Amorphous Fraction and Lamellar Crystal Orientation on Electrical Insulation of Poly(ethylene terephthalate) Films. Macromolecules, 2020, 53, 3967-3977.	4.8	34
31	NMR spectroscopy reveals the presence and association of lipids and keratin in adhesive gecko setae. Scientific Reports, 2015, 5, 9594.	3.3	33
32	Intramolecular and Intermolecular Packing in Polymer Crystallization. Macromolecules, 2019, 52, 4739-4748.	4.8	33
33	Molecular Structural Basis for Stereocomplex Formation of Polylactide Enantiomers in Dilute Solution. ACS Macro Letters, 2015, 4, 1264-1267.	4.8	32
34	Polybenzoxazine aerogels with controllable pore structures. RSC Advances, 2015, 5, 26801-26805.	3.6	30
35	Helical Jump Motions of Poly(<scp>l</scp>-Lactic Acid) Chains in the Î± Phase As Revealed by Solid-State NMR. Journal of Physical Chemistry B, 2015, 119, 4552-4563.	2.6	29
36	Determination of Chain-Folding Structure of Isotactic Polypropylene in Melt-Grown Î± Crystals by ¹³Câ€“¹³C Double Quantum NMR and Selective Isotopic Labeling. Macromolecules, 2015, 48, 5752-5760.	4.8	29

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37	Unfolding of Isotactic Polypropylene under Uniaxial Stretching. ACS Macro Letters, 2016, 5, 65-68.	4.8	29
38	Intracrystalline Jump Motion in Poly(ethylene oxide) Lamellae of Variable Thickness: A Comparison of NMR Methods. Macromolecules, 2017, 50, 3890-3902.	4.8	28
39	Structural analysis of polyacenic semiconductor (PAS) materials with 129 Xenon NMR measurements. Carbon, 1997, 35, 1781-1787.	10.3	27
40	Solid-State NMR Characterization of the Chemical Defects and Physical Disorders in Î± Form of Isotactic Poly(propylene) Synthesized by Zieglerâ€“Natta Catalysts. Macromolecules, 2013, 46, 6507-6519.	4.8	27
41	13C High-Pressure CPMAS NMR Characterization of the Molecular Motion of Polystyrene Plasticized by CO2Gas. Macromolecules, 1997, 30, 6582-6585.	4.8	26
42	129Xe n.m.r. study of free volume and phase separation of the polystyrene/poly(vinyl methyl ether) blend. Polymer, 1997, 38, 5475-5480.	3.8	26
43	Dynamic Alternation between Inter- and Intra-Polymer Hydrogen Bonds in a Polymer Complex As Studied by Solid-State13C 2D Exchange NMR. Macromolecules, 1999, 32, 8914-8917.	4.8	26
44	Structural Unit of Polymer Crystallization in Dilute Solution As Studied by Solid-State NMR and ¹³C Isotope Labeling. Macromolecules, 2018, 51, 8729-8737.	4.8	26
45	Solid-State NMR Study of the Chain Trajectory and Crystallization Mechanism of Poly(<scp>l</scp>-lactic acid) in Dilute Solution. Macromolecules, 2017, 50, 6404-6414.	4.8	25
46	Stoichiometry and Packing Structure of Poly(lactic acid) Stereocomplex as Revealed by Solid-State NMR and ¹³C Isotope Labeling. ACS Macro Letters, 2018, 7, 667-671.	4.8	25
47	Composition and Function of Spider Glues Maintained During the Evolution of Cobwebs. Biomacromolecules, 2015, 16, 3373-3380.	5.4	24
48	Helical Jump Motions in Isotactic Poly(4-methyl-1-pentene) Crystallites Revealed by 1D MAS Exchange NMR Spectroscopy. Macromolecules, 2002, 35, 7178-7181.	4.8	23
49	Non-thermal plasma-assisted rapid hydrogenolysis of polystyrene to high yield ethylene. Nature Communications, 2022, 13, 885.	12.8	23
50	Effects of Chemical Modification on the Molecular Dynamics of Complex Polyrotaxanes Investigated by Solid-State NMR. Macromolecules, 2013, 46, 6898-6907.	4.8	22
51	Modification of a conventional polyurethane composition provides significant anti-biofilm activity against Escherichia coli. Polymer Chemistry, 2018, 9, 3195-3198.	3.9	22
52	Characterization of the Slow Molecular Dynamics of Poly(<scp>l</scp>â€Lactic Acid) in Î± and Î±â€² Phases, in a Glassy State, and in a Complex with Poly(<scp>d</scp>â€Lactic Acid) by Solidâ€State NMR. Macromolecular Chemistry and Physics, 2018, 219, 1700451.	2.2	21
53	Isoexergonic Conformations of Surface-Bound Citrate Regulated Bioinspired Apatite Nanocrystal Growth. ACS Applied Materials & Interfaces, 2016, 8, 28116-28123.	8.0	20
54	Two Chain-Packing Transformations and Their Effects on the Molecular Dynamics and Thermal Properties of Î±-Form Isotactic Poly(propylene) under Hot Drawing: A Solid-State NMR Study. Macromolecules, 2014, 47, 2993-3004.	4.8	19

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55	Mechanism of UVA Degradation of Synthetic Eumelanin. Biomacromolecules, 2019, 20, 4593-4601.	5.4	19
56	Investigation of a non-isocyanate urethane functional monomer in latexes by emulsion polymerization. Polymer, 2017, 119, 83-97.	3.8	17
57	Formation of crosslinked PTFE by radiation-induced solid-state polymerization of tetrafluoroethylene at low temperatures. Radiation Physics and Chemistry, 2008, 77, 401-408.	2.8	15
58	Nonenzymatic RNA Oligomerization at the Mineralâ€“Water Interface: An Insight into the Adsorptionâ€“Polymerization Relationship. Journal of Physical Chemistry C, 2018, 122, 29386-29397.	3.1	15
59	Modulating the crystallinity, mechanical properties, and degradability of poly(Îµ-caprolactone) derived polyesters by statistical and alternating copolymerization. Polymer Chemistry, 2019, 10, 2579-2588.	3.9	15
60	Local Packing Disorders in a Polymer Crystal by Two Dimensional Solid-State NMR. Macromolecules, 2007, 40, 6789-6792.	4.8	14
61	Isolation and Characterization of Allomelanin from Pathogenic Black Knot Fungusâ”€a Sustainable Source of Melanin. ACS Omega, 2021, 6, 35514-35522.	3.5	14
62	Polymer Chains Fold Prior to Crystallization. ACS Macro Letters, 2022, 11, 284-288.	4.8	13
63	Microstructure and Thermal Property of Isotactic Poly(3-methyl-1-butene) Obtained Using theC2-Symmetrical Zirconocene/MAO Catalyst System. Macromolecules, 2007, 40, 1763-1766.	4.8	12
64	Dynamic Geometry and Kinetics of Polymer Confined in Self-Assembly via Cooperative Hydrogen Bonding: A Solid-State NMR Study under Paramagnetic Doping. Macromolecules, 2010, 43, 4435-4437.	4.8	12
65	Large-Amplitude Motions of Form III of Isotactic Poly(4-methyl-1-pentene) Crystallites Prior to Crystalâ”Crystal Transformation. Macromolecules, 2004, 37, 6653-6656.	4.8	11
66	Compositional aspects of herbaceous litter decomposition in the freshwater marshes of the Florida Everglades. Plant and Soil, 2018, 423, 87-98.	3.7	11
67	Tuning the Intercage Distance in Chargeâ€Regulated Blackberryâ€Type Assemblies through Hostâ€“Guest Chemistry. Chemistry - A European Journal, 2019, 25, 5803-5808.	3.3	11
68	Roles of Conformational Flexibility in the Crystallization of Stereoirregular Polymers. Macromolecules, 2021, 54, 5705-5718.	4.8	11
69	Microstructural Analysis of Insoluble Polyolefins by Melt-State13C NMR at Very High Temperatures. Macromolecules, 2007, 40, 3505-3509.	4.8	10
70	Controlling the enthalpyâ€“entropy competition in supramolecular fullerene liquid crystals by tuning the flexible chain length. Chemical Communications, 2017, 53, 8336-8339.	4.1	9
71	Effects of Xe Gas on Segmental Motion in a Polymer Blend As Studied by13C and129Xe High-Pressure MAS NMR. Macromolecules, 2002, 35, 151-154.	4.8	8
72	Chain Trajectory, Chain Packing, and Molecular Dynamics of Semicrystalline Polymers as Studied by Solid-State NMR. Polymers, 2018, 10, 775.	4.5	7

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73	Radiation-induced synthesis of low molecular weight of PTFE and their crosslinking in acetone medium. Radiation Physics and Chemistry, 2008, 77, 1050-1056.	2.8	6
74	Selective Observation of Chemical Structures at Surface and Core Regions of Heat-treated Poly(Acrylonitrile) Films by Solid-State NMR Spectroscopy. Macromolecules, 2019, 52, 8384-8393.	4.8	6
75	Elucidating the Molecular Interactions of Encapsulated Doxorubicin within a Nonionic, Thermoresponsive Polyester Coacervate. ACS Applied Bio Materials, 2020, 3, 4626-4634.	4.6	6
76	Unique Molecular Dynamics of Structural Elements in an Asymmetric Janus Bisamide Supramolecule Characterized by Solid-State NMR. Journal of Physical Chemistry B, 2013, 117, 13698-13709.	2.6	5
77	Slow Dynamics of Polymer Crystallites Revealed by Solid-State MAS Exchange NMR. Kobunshi Ronbunshu, 2004, 61, 442-457.	0.2	4
78	Molecular Dynamics and Structure of the Crystalline Region of Isotactic-Polyolefins Characterized by Solid-State NMR. ACS Symposium Series, 2011, , 191-206.	0.5	4
79	Application of NMR in polymer characterization. Nuclear Magnetic Resonance, 2016, , 53-95.	0.2	4
80	1H NMR Study of Hindered Internal Rotation and Hydrogen Exchange of Amide Side Chain of Poly(acrylamide) in Aqueous Solution. Polymer Journal, 1994, 26, 485-490.	2.7	3
81	Unraveling the Design Principles of Black Widowâ€™s Gumfoot Glue. , 2016, , 303-319.		3
82	Characterization of polymers by NMR. , 2021, , 409-440.		3
83	Toughening of silane modified <scp>bisâ€phenolâ€A</scp> epoxides. Journal of Applied Polymer Science, 2022, 139, .	2.6	3
84	Asymmetric Molecular Dynamics and Anisotropic Phase Separation in the Cocrystal of the Crystalline/Crystalline Polymer Blend. ACS Macro Letters, 2022, 11, 193-198.	4.8	2
85	Effects of surface area and porosity on behavior of IL molecules in meso and macroporous polymeric networks. Polymer, 2020, 211, 123081.	3.8	1
86	Solid-State NMR Characterization of Polymer Chain Structure and Dynamics in Polymer Crystals. , 2013, , 1-17.		1
87	Nuclear Magnetic Resonance Spectroscopy for the Analysis of Soft Materials. Nippon Gomu Kyokaishi, 2015, 88, 157-163.	0.0	0
88	Chain Trajectory of Semicrystalline Polymers as Revealed by 13C-13C Double Quantum NMR. , 2018, , 783-791.		0
89	Chain Trajectory of Semicrystalline Polymers as Revealed by 13C-13C Double Quantum NMR. , 2017, , 1-9.		0
90	Structure and Molecular Dynamics of Semicrystalline Polymers as Studied by Solid-state NMR. New Developments in NMR, 2019, , 299-324.	0.1	0