

Akihiko Toda

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ext. citations

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L-index

#	Paper	IF	Citations
133	Insights into polymer crystallization and melting from fast scanning chip calorimetry. <i>Polymer</i> , 2016 , 91, 239-263	3.9	171
132	Superheating of the melting kinetics in polymer crystals: a possible nucleation mechanism. <i>Polymer</i> , 2002 , 43, 1667-1679	3.9	117
131	Equilibrium Melting Temperature of Isotactic Polypropylene with High Tacticity: 1. Determination by Differential Scanning Calorimetry. <i>Macromolecules</i> , 2003 , 36, 4790-4801	5.5	113
130	Three-dimensional morphology of PVDF single crystals forming banded spherulites. <i>Polymer</i> , 2001 , 42, 2223-2233	3.9	82
129	Lamellar Thickening in Isotactic Polypropylene with High Tacticity Crystallized at High Temperature. <i>Macromolecules</i> , 2000 , 33, 9069-9075	5.5	81
128	Branching and Higher Order Structure in Banded Polyethylene Spherulites. <i>Macromolecules</i> , 2008 , 41, 2484-2493	5.5	75
127	Melting of polymer crystals observed by temperature modulated d.s.c. and its kinetic modelling. <i>Polymer</i> , 1998 , 39, 5093-5104	3.9	74
126	Equilibrium Melting Temperature of Isotactic Polypropylene with High Tacticity. 2. Determination by Optical Microscopy. <i>Macromolecules</i> , 2003 , 36, 4802-4812	5.5	71
125	A new method of analysing transformation kinetics with temperature modulated differential scanning calorimetry: application to polymer crystal growth. <i>Polymer</i> , 1997 , 38, 231-233	3.9	69
124	Role of epitaxy of nucleating agent (NA) in nucleation mechanism of polymers. <i>Polymer</i> , 2007 , 48, 401-408	3.9	65
123	Melting behaviors of polyethylene crystals: An application of fast-scan DSC. <i>Polymer</i> , 2014 , 55, 3186-3194	3.9	61
122	Growth mode and curved lateral habits of polyethylene single crystals. <i>Faraday Discussions</i> , 1993 , 95, 129	3.6	58
121	An evaluation of thermal lags of fast-scan microchip DSC with polymer film samples. <i>Thermochimica Acta</i> , 2014 , 589, 262-269	2.9	56
120	Two-step formation of entanglement from disentangled polymer melt detected by using nucleation rate. <i>Polymer</i> , 2006 , 47, 6422-6428	3.9	56
119	A new analyzing method of temperature modulated DSC of exo- or endo-thermic process: Application to polyethylene crystallization. <i>Thermochimica Acta</i> , 1997 , 293, 47-63	2.9	55
118	Kinetic study of the III β phase transition of isotactic polybutene-1. <i>Polymer</i> , 2010 , 51, 5532-5538	3.9	54
117	Melting Kinetics of Polymer Crystals with an Entropic Barrier. <i>Macromolecules</i> , 2008 , 41, 120-127	5.5	54

116	Role of entanglement in nucleation and melt relaxation of polyethylene. <i>Polymer</i> , 2002 , 43, 6585-6593	3.9	50
115	Influence of Amorphous Component on Melting of Semicrystalline Polymers. <i>Macromolecules</i> , 2011 , 44, 8042-8055	5.5	49
114	Molecular weight dependence of the lateral growth rate of polyethylene 2. Folded-chain crystals. <i>Polymer</i> , 1998 , 39, 4535-4539	3.9	45
113	Instability-Driven Branching of Lamellar Crystals in Polyethylene Spherulites. <i>Macromolecules</i> , 2008 , 41, 7505-7512	5.5	44
112	Melting and recrystallization kinetics of poly(butylene terephthalate). <i>Polymer</i> , 2017 , 109, 307-314	3.9	41
111	Formation mechanism of shish in the oriented melt (I) Bundle nucleus becomes to shish. <i>Polymer</i> , 2005 , 46, 1675-1684	3.9	41
110	Melting kinetics of polypropylene crystals over wide heating rates. <i>Journal of Thermal Analysis and Calorimetry</i> , 2013 , 113, 1231-1237	4.1	37
109	An application of temperature modulated differential scanning calorimetry to the exothermic process of poly(ethylene terephthalate) crystallization. <i>Polymer</i> , 1997 , 38, 2849-2852	3.9	37
108	Combining fast-scan chip-calorimeter with molecular simulations to investigate superheating behaviors of lamellar polymer crystals. <i>Polymer</i> , 2014 , 55, 4307-4312	3.9	36
107	Method for Calculation of the Lamellar Thickness Distribution of Not-Reorganized Linear Polyethylene Using Fast Scanning Calorimetry in Heating. <i>Macromolecules</i> , 2015 , 48, 8831-8837	5.5	36
106	Kinetics of irreversible melting of polyethylene crystals revealed by temperature modulated DSC. <i>Thermochimica Acta</i> , 1998 , 324, 95-107	2.9	35
105	Heating rate dependence of melting peak temperature examined by DSC of heat flux type. <i>Journal of Thermal Analysis and Calorimetry</i> , 2016 , 123, 1795-1808	4.1	34
104	Two crystal populations with different melting/reorganization kinetics of isothermally crystallized polyamide 6. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2016 , 54, 2126-2138	2.6	33
103	Crystal Growth of Isotactic Polystyrene in Ultrathin Films: Thickness and Temperature Dependence. <i>Journal of Macromolecular Science - Physics</i> , 2006 , 45, 1141-1147	1.4	32
102	Three-dimensional shape of polyethylene single crystals grown from dilute solutions and from the melt. <i>Polymer</i> , 2005 , 46, 8708-8716	3.9	32
101	Thermo-mechanical coupling and self-excited oscillation in the neck propagation of PET films. <i>Polymer</i> , 2002 , 43, 947-951	3.9	30
100	Quantitative understanding of two distinct melting kinetics of an isothermally crystallized poly(ether ether ketone). <i>Polymer</i> , 2016 , 99, 97-104	3.9	30
99	Branching and re-orientation of lamellar crystals in non-banded poly(butene-1) spherulites. <i>Polymer</i> , 2008 , 49, 1685-1692	3.9	29

98	Power Law of Molecular Weight of the Nucleation Rate of Folded Chain Crystals of Polyethylene. <i>Macromolecules</i> , 2002 , 35, 6985-6991	5.5	29
97	Molecular Weight Dependence of Primary Nucleation Rate of Polyethylene I. An Extended Chain Single Crystal. <i>Polymer Journal</i> , 1999 , 31, 749-758	2.7	27
96	Second-order phase transition of high isotactic polypropylene at high temperature. <i>Polymer</i> , 2002 , 43, 1473-1481	3.9	25
95	AFM observation of polyethylene single crystals: selective handedness of screw dislocations in a chair type. <i>Polymer</i> , 2003 , 44, 6135-6138	3.9	25
94	Size distribution and shape of nano-nucleus of polyethylene simultaneously determined by SAXS. <i>Polymer</i> , 2007 , 48, 382-392	3.9	23
93	The Impurity Effect on the Growth Mode and Lateral Habit of Polymer Single Crystals. <i>Journal of the Physical Society of Japan</i> , 1986 , 55, 3419-3427	1.5	23
92	Growth of banded spherulites of poly(ϵ -caprolactone) from the blends: An examination of the modeling of spherulitic growth. <i>Polymer</i> , 2012 , 53, 1765-1771	3.9	22
91	Morphology and Crystallization Kinetics of <i>it</i> -Polystyrene Spherulites. <i>Macromolecules</i> , 2010 , 43, 3837-3843	3.9	22
90	Acceleration Mechanism of Nucleation of Polymers by Nano-sizing of Nucleating Agent. <i>Polymer Journal</i> , 2007 , 39, 55-64	2.7	21
89	Molecular Weight Dependence of Equilibrium Melting Temperature and Lamellar Thickening of Isotactic Polypropylene with High Tacticity. <i>Journal of Macromolecular Science - Physics</i> , 2003 , 42, 733-752	1.4	21
88	Direct Evidence of Nucleation During the Induction Period of Polyethylene Crystallization by SAXS. <i>Journal of Macromolecular Science - Physics</i> , 2003 , 42, 847-865	1.4	21
87	Stability of Tunnel Structure and Relationship between Peel Load and Spatiotemporal Pattern by Deformed Adhesive during Peeling. <i>Journal of the Physical Society of Japan</i> , 2004 , 73, 2342-2346	1.5	21
86	Formation mechanism of shish in the oriented melt (II) Two different growth mechanisms along and perpendicular to the flow direction. <i>Polymer</i> , 2005 , 46, 1685-1692	3.9	21
85	Dynamical Morphological Property of Adhesive Tape in Peeling. <i>Journal of the Physical Society of Japan</i> , 2002 , 71, 1618-1621	1.5	21
84	Temperature-Modulated DSC Applied to the Transformation Kinetics of Polymer Crystallization. <i>Polymer Journal</i> , 1999 , 31, 790-794	2.7	21
83	Branching and Higher Order Structure in Banded Poly(vinylidene fluoride) Spherulites. <i>Polymer Journal</i> , 2008 , 40, 905-909	2.7	20
82	Pattern formation and spatiotemporal behavior of adhesive in peeling. <i>Physica D: Nonlinear Phenomena</i> , 2006 , 214, 120-131	3.3	20
81	Oscillatory neck propagation in polymer films: 2. <i>Polymer</i> , 1994 , 35, 3638-3642	3.9	20

80	Microbeam X-ray diffraction of non-banded polymer spherulites of it-polystyrene and it-poly(butene-1). <i>Polymer</i> , 2010 , 51, 1837-1844	3.9	19
79	Computer simulation of the melting kinetics of polymer crystals under condition of modulated temperature. <i>Thermochimica Acta</i> , 1999 , 330, 75-83	2.9	19
78	Atomic Force Microscopy of Solution Grown Polyethylene Single Crystals. <i>Japanese Journal of Applied Physics</i> , 1994 , 33, 3771-3774	1.4	19
77	Growth kinetics of polyethylene single crystals from dilute solution at low supercoolings. <i>Polymer</i> , 1987 , 28, 1645-1651	3.9	19
76	Acceleration Mechanism in Critical Nucleation of Polymers by Epitaxy of Nucleating Agent. <i>Polymer Journal</i> , 2009 , 41, 228-236	2.7	18
75	An Atomic Force Microscopy Observation of Poly(Vinylidene Fluoride) Banded Spherulites. <i>Journal of Macromolecular Science - Physics</i> , 2003 , 42, 753-760	1.4	18
74	Nucleation and Morphology of Polyethylene Under Shear Flow. <i>Journal of Macromolecular Science - Physics</i> , 2003 , 42, 499-514	1.4	18
73	A Kinetic Theory on the Growth Rate of Polymer Single Crystals. <i>Journal of the Physical Society of Japan</i> , 1985 , 54, 1411-1422	1.5	18
72	Crystallization kinetics of poly(butylene terephthalate) and its talc composites. <i>Journal of Applied Polymer Science</i> , 2017 , 134,	2.9	17
71	Crystallization, recrystallization, and melting of polymer crystals on heating and cooling examined with fast scanning calorimetry. <i>Polymer Crystallization</i> , 2018 , 1, e10005	0.9	17
70	Temperature modulated d.s.c. study of poly(ethylene terephthalate) crystallization: 2. Applicability to non-isothermal process. <i>Polymer</i> , 1998 , 39, 1439-1443	3.9	17
69	Crystallization and melting of poly(butylene terephthalate) and poly(ethylene terephthalate) investigated by fast-scan chip calorimetry and small angle X-ray scattering. <i>Polymer</i> , 2020 , 192, 122303	3.9	16
68	Molecular weight dependence of lateral growth rate of polyethylene (I) in an extended chain single crystal. <i>Polymer</i> , 1998 , 39, 1591-1596	3.9	16
67	Kinetic barrier of pinning in polymer crystallization: Rate equation approach. <i>Journal of Chemical Physics</i> , 2003 , 118, 8446-8455	3.9	16
66	A calibration of complex heat capacity obtained by temperature-modulated DSC in the melting region of polymer crystals. <i>Polymer</i> , 2000 , 41, 8941-8951	3.9	16
65	Crystal growth of polyethylene from dilute solution: Growth kinetics of {110} twins and diffusion-limited growth of single crystals. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1989 , 27, 53-70	2.6	15
64	Defects in banded spherulites of polymers. <i>Polymer</i> , 2005 , 46, 8717-8722	3.9	14
63	Effect of Entanglement on Nucleation Rate of Polyethylene.. <i>Polymer Journal</i> , 2001 , 33, 906-908	2.7	14

62	Kinetic Response of An Epoxy Thermosetting System Observed by TMDSC. <i>Magyar Áprilad Közlönyek</i> , 2000 , 60, 821-827	0	14
61	Analysis of transitions of liquid crystals and conformationally disordered crystals by temperature-modulated calorimetry. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1999 , 37, 1539-1544	2.6	14
60	Morphology and Growth of Single Crystals of Isotactic Polypropylene from the Melt. <i>Journal of Macromolecular Science - Physics</i> , 2010 , 50, 236-247	1.4	12
59	Atomic Force Microscopy of Isotactic Polystyrene Crystals. <i>Japanese Journal of Applied Physics</i> , 1994 , 33, L1628-L1630	1.4	12
58	Oscillation and instability of neck propagation in poly(ethylene terephthalate) films. <i>Polymer</i> , 1993 , 34, 2306-2314	3.9	12
57	Crystallization and melting behaviors of poly(vinylidene fluoride) examined by fast-scan calorimetry: Hoffman-Weeks, Gibbs-Thomson and thermal Gibbs-Thomson plots. <i>Polymer</i> , 2019 , 169, 11-20	3.9	11
56	Structure Evolution in Directional Crystallization of Polymers under Temperature Gradient. <i>Macromolecules</i> , 2012 , 45, 852-861	5.5	11
55	Acceleration Mechanism of Growth Rates under Shear Flow Due to the Oriented Melt: The Novel Morphology of Spiral Crystal (Spiralite) <i>Macromolecules</i> , 2006 , 39, 1515-1524	5.5	11
54	Full deconvolution of the instrumental coefficients in scanning calorimeter of heat flux type. <i>Thermochimica Acta</i> , 2005 , 436, 15-25	2.9	11
53	Application of periodically modulated driving force to the transition kinetics in vinylidene fluoride/trifluoroethylene copolymers. <i>Journal of Chemical Physics</i> , 2001 , 114, 6896-6905	3.9	11
52	Comment on Re-exploring the double-melting behavior of semirigid-chain polymers with an in-situ combination of synchrotron nanofocus X-ray scattering and nanocalorimetry [By Ivanov et al. [European Polymer Journal 81 (2016) 5988-606.]. <i>European Polymer Journal</i> , 2017 , 94, 511-516	5.2	10
51	Fast-scan and temperature-modulated calorimetry of recrystallization of poly(ethylene terephthalate). <i>Thermochimica Acta</i> , 2019 , 682, 178404	2.9	10
50	Cellular Crystallization in Thin Melt Film of it-Poly(butene-1): An Implication to Spherulitic Growth from Bulk Melt. <i>Macromolecules</i> , 2011 , 44, 9239-9246	5.5	10
49	Nucleation and size distribution of nucleus during induction period of polyethylene crystallization. <i>Journal of Chemical Physics</i> , 2005 , 123, 204906	3.9	10
48	Computer simulation of curved crystal habits: polymer crystallization under an anisotropic growth condition. <i>Polymer</i> , 1996 , 37, 1621-1627	3.9	10
47	Power law of molecular weight dependence of lateral growth rate of isotactic polypropylene. <i>Polymer</i> , 2006 , 47, 7601-7606	3.9	9
46	Fast limiting behavior of the melting kinetics of polyethylene crystals examined by fast-scan calorimetry. <i>Thermochimica Acta</i> , 2019 , 677, 211-216	2.9	8
45	Gibbs-Thomson, Thermal Gibbs-Thomson, and Hoffman-Weeks Plots of Polyethylene Crystals Examined by Fast-Scan Calorimetry and Small-Angle X-ray Scattering. <i>Crystal Growth and Design</i> , 2019 , 19, 2493-2502	3.5	8

44	Kinetics of Melting of Sucrose Crystals. <i>Crystal Growth and Design</i> , 2018 , 18, 2602-2608	3.5	8
43	Molecular weight dependence of growth and morphology of it-poly(butene-1) spherulites. <i>Polymer</i> , 2011 , 52, 2051-2058	3.9	8
42	Periodically Modulated Driving Force Applied with TMDSC to the Crystallization and Melting Kinetics of Ice Crystals Confined in a Porous Silica Gel. <i>Magyar Árvad Kélemyek</i> , 2001 , 64, 775-782	0	8
41	Melting point maximum against pressure in poly(4-methyl-pentene-1) crystals. <i>Polymer</i> , 1996 , 37, 2285-2287	3.7	8
40	Superheated Melting Kinetics of Metastable Chain-Folded Polymer Crystals. <i>Crystal Growth and Design</i> , 2018 , 18, 3637-3643	3.5	8
39	Application of a deconvolution method to construct aqueous phase diagram. <i>Thermochimica Acta</i> , 2010 , 500, 100-105	2.9	7
38	Supercooling (III) dependence of nano-nucleation of PE by SAXS and proposal of a new nucleation theory. <i>Polymer</i> , 2007 , 48, 1116-1126	3.9	7
37	Morphology, Growth Rate, and Lamellar Thickness of Polymer Crystals. <i>Journal of Macromolecular Science - Physics</i> , 2003 , 42, 867-874	1.4	7
36	Transition kinetics of a TiNi alloy examined by temperature-modulated DSC. <i>Thermochimica Acta</i> , 2005 , 431, 98-105	2.9	7
35	In Situ Electron Microscopy of Crystal Growth of Isotactic Polystyrene from the Melt. <i>Japanese Journal of Applied Physics</i> , 1992 , 31, L626-L627	1.4	7
34	The Narrow Thickness Distribution of Lamellae of Poly(butylene succinate) Formed at Low Melt Supercooling. <i>Macromolecules</i> , 2021 , 54, 3366-3376	5.5	7
33	Enhanced Crystallization of Blended Poly(ethylene terephthalate) and Poly(butylene terephthalate). <i>Polymer Journal</i> , 2008 , 40, 992-995	2.7	6
32	Dynamical Stability in the Capillary Flow of Polymer Melt: A Modeling with Statistical Stick-Slip Process. <i>Journal of the Physical Society of Japan</i> , 1999 , 68, 77-85	1.5	6
31	Temperature-Modulated Scanning Calorimetry of Melting-Recrystallization of Poly(butylene terephthalate). <i>Polymers</i> , 2021 , 13,	4.5	6
30	Effect of multi-step annealing above the glass transition temperature on the crystallization and melting kinetics of semicrystalline polymers. <i>Polymer</i> , 2020 , 202, 122712	3.9	5
29	Isotropic scattering in Hv light scattering from spherulites of polymers. <i>Polymer</i> , 1992 , 33, 909-913	3.9	5
28	Nucleation-controlled growth in polyethylene single crystals: Growth and shape of {100} sectors. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1989 , 27, 1721-1729	2.6	5
27	A Temperature Modulated DSC Study of Glass Transition in Poly(ethylene terephthalate). <i>Progress of Theoretical Physics Supplement</i> , 1997 , 126, 103-106		5

26	Modeling of the Peeling Process of Pressure-sensitive Adhesive Tapes with the Combination of Maxwell Elements. <i>Journal of the Physical Society of Japan</i> , 2004 , 73, 2135-2141	1.5	4
25	Physical Mechanism of Stick-Slip Behavior in Polymer Melt Extrusion: Temperature Dependence of Flow Curve. <i>Journal of the Physical Society of Japan</i> , 2001 , 70, 3268-3273	1.5	4
24	Polyethylene crystallization from dilute solutions: adsorption isotherm on the growth face. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1995 , 91, 2581		4
23	Small angle X-ray scattering from finite sequence of lamellar stacks of crystalline polymers. <i>Polymer</i> , 2020 , 211, 123110	3.9	4
22	Insertion-Crystallization-Induced Low-Temperature Annealing Peaks in Melt-Crystallized Poly(l-Lactic Acid). <i>Macromolecular Chemistry and Physics</i> , 2021 , 222, 2100177	2.6	4
21	Temperature-modulated fast scanning calorimetry of isothermal crystallization of Poly(butylene terephthalate). <i>Polymer</i> , 2021 , 228, 123936	3.9	4
20	Analysis of non-isothermal polymer crystallization at constant scan rates based on the Avrami model. <i>Thermochimica Acta</i> , 2021 , 702, 178984	2.9	4
19	Dynamical Properties in Uniform and Periodic Growth Modes of Ascorbic Acid Crystal Domain from Thin Solution Film. <i>Journal of the Physical Society of Japan</i> , 2014 , 83, 064002	1.5	3
18	Spatiotemporal Patterns Formed by the Dynamics of Bistable Units with Global and Asymmetric Local Interactions. <i>Journal of the Physical Society of Japan</i> , 2012 , 81, 043002	1.5	3
17	The Growth Kinetics of Polyethylene Twins: Evidence for Nucleation and Growth Processes. <i>Journal of the Physical Society of Japan</i> , 1987 , 56, 1631-1634	1.5	3
16	Melting Kinetics of Superheated Polymer Crystals Examined by Isothermal and Nonisothermal Fast Scanning Calorimetry. <i>Macromolecules</i> , 2021 , 54, 8770-8779	5.5	3
15	Effect of a Nucleating Agent on Polymer Crystallization Analyzed Using the Original Avrami Model. <i>Macromolecules</i> , 2022 , 55, 2202-2209	5.5	3
14	A reinterpretation of the Ozawa model for non-isothermal crystallization at fixed scan rates. <i>Thermochimica Acta</i> , 2021 , 707, 179086	2.9	2
13	On the crystal stabilization during two-step isothermal crystallization of poly(butylene terephthalate) examined by fast scanning calorimetry. <i>Polymer</i> , 2021 , 230, 124057	3.9	2
12	Reprint of An evaluation of thermal lags of fast-scan microchip DSC with polymer film samples□ <i>Thermochimica Acta</i> , 2015 , 603, 197-204	2.9	1
11	Mechanical and Thermal Properties of a Hot-melt Adhesive of Triblock Copolymer Added with a Miscible Homopolymer. <i>Polymer Journal</i> , 2009 , 41, 74-82	2.7	1
10	Dynamic Light Scattering Studies on Crystallization of Isotactic Polystyrene from Dilute Solutions at High Supercoolings. <i>Journal of Macromolecular Science - Physics</i> , 2006 , 45, 1149-1157	1.4	1
9	Periodically modulated driving force applied to polymer crystallization in a visco-elastic measurement with temperature modulation. <i>Thermochimica Acta</i> , 2002 , 391, 81-86	2.9	1

- 8 Growth Kinetics of Polyethylene Single Crystals **1993**, 141-152 1
- 7 Enthalpy relaxation of unconstrained and constrained amorphous phase for low isotacticity polypropylene. *Polymer*, **2022**, 253, 124991 3.9 1
- 6 Molecular Weight Dependence of Crystal Growth in Isotactic Polystyrene Ultrathin Films. *ACS Macro Letters*, **2019**, 8, 1227-1232 6.6
- 5 Encyclopedia of Polymers and Composites **2013**, 1-12
- 4 Spatiotemporal patterns formed by deformed adhesive in peeling. *Journal of Physics: Conference Series*, **2007**, 89, 012013 0.3
- 3 Polymer Crystallization. *Seikei-Kakou*, **2008**, 20, 78-83 0
- 2 A note on the kinetics of non-isothermal crystallization of polymers. *Thermochimica Acta*, **2022**, 179244 2.9
- 1 Modulated Temperature Differential Scanning Calorimetry **2022**, 41-73