

List of Publications (Hidetaka Tobita)

1. Adachi, S.; Ogata, M.; Tobita, H.; Hashimoto, K., "Effects of Molecular Weight of Dextran and NAD⁺ Density on Coenzyme Activity of High Molecular Weight NAD⁺ Derivative Covalently Bound to Dextran", *Enzyme Microb. Technol.*, **6**, 259-262 (1984).
2. Adachi, S.; Hashimoto, K.; Komoto, M.; Tobita, H., "A Method for Estimating the Rejection Coefficient-Molecular Weight Relationship of Ultrafiltration Membrane for a Chain Polymer by Using Gel Permeation Chromatography", *Biotech. Bioeng.*, **28**, 1809-1813 (1986).
3. Tobita, H.; Hamielec, A.E., "A Kinetic Model for Network Formation in Free Radical Polymerization", *Makromol. Chem., Macromol. Symp.*, **20/21**, 501-543 (1988).
4. Tobita, H.; Hamielec, A.E., "Modeling of Network Formation in Free Radical Polymerization", *Macromolecules*, **22**, 3098-3105 (1989).
5. Tobita, H.; Hamielec, A.E., "Network Formation in Free Radical Copolymerization: Pseudo-Kinetic Rate Constant Method for Copolymers with Long Branches", in *Computer Application in Applied Polymer Science II* (ACS Symposium Series 404); Provder, T., Ed.; American Chemical Society: Washington, D.C.; p.242-255 (1989).
6. Tobita, H.; Hamielec, A.E., "Network Formation in Free Radical Polymerization", in *Integration of Fundamental Polymer Science and Technology - Volume IV*; Lemstra, P.J.; Kleintjens, L.A., Eds.; Elsevier Applied Science Publishers: Barking, UK; p.33-42 (1990).
7. Tobita, H.; Hamielec, A.E., "Modeling Emulsion Copolymerization: Crosslinking Kinetics", *Makromol. Chem., Makromol. Symp.*, **35/36**, 193-212 (1990).
8. Tobita, H.; Hamielec, A.E., "Crosslinking Kinetics in Free Radical Copolymerization", in *Polymer Reaction Engineering*; Reichert, K.-H.; Geiseler, W., Eds.; VCH Publishers: Weinheim, Germany; p.43-83 (1989).
9. Tobita, H.; Hamielec, A.E., "Crosslinking Kinetics in Polyacrylamide Networks", *Polymer*, **31**, 1546-1552 (1990).
10. Tobita, H.; Hamielec, A.E., "Kinetics of Free-Radical Copolymerization: The Pseudo-Kinetic Rate Constant Method", *Polymer*, **32**, 2641-2647 (1991).
11. Tobita, H.; Ohtani, Y., "Control of Molecular Weight Distribution in Step-Growth Polymerization: The Intermediate Monomer Feed Method", *Polymer*, **33**, 801-811 (1992).
12. Tobita, H.; Ohtani, Y., "Control of Molecular Weight Distribution in Step-Growth Polymerization by an Intermediate Monomer Feed Method: Effect of Interchange Reactions", *Polymer*, **33**, 2194-2202 (1992).
13. Tobita, H.; Hamielec, A.E., "Control of Network Structure in Free-Radical Crosslinking Copolymerization", *Polymer*, **33**, 3647-3657 (1992).

14. Tobita, H., "Cross-Linking Kinetics in Emulsion Copolymerization", *Macromolecules*, **25**, 2671-2678 (1992).
15. Tobita, H.; Hamielec, A.E., "Crosslinking Kinetics in Emulsion Polymerization", *Polymer International*, **30**, 177-183 (1993).
16. Tobita, H.; Hamielec, A.E., "Control of Network Structure in Emulsion Crosslinking Copolymerization", *Polymer International*, **30**, 195-201 (1993).
17. Tobita, H.; Kimura, K.; Fujita, K.; Nomura, M., "Crosslinking Kinetics in Emulsion Copolymerization of Methyl Methacrylate / Ethylene Glycol Dimethacrylate", *Polymer*, **34**, 2569-2574 (1993).
18. Tobita, H., "Kinetics of Long-Chain Branching via Chain Transfer to Polymer: 1. Branched Structure", *Polym. React. Eng.*, **1**, 357-378 (1993).
19. Tobita, H., "Kinetics of Long-Chain Branching via Chain Transfer to Polymer: 2. New Theory to Predict Molecular Weight Distribution", *Polym. React. Eng.*, **1**, 379-405 (1993).
20. Tobita, H., "Molecular Weight Distribution in Free-Radical Cross-Linking Copolymerization", *Macromolecules*, **26**, 836-841 (1993).
21. Tobita, H., "Molecular Weight Distribution in Free-Radical Polymerization with Long-Chain Branching", *J. Polym. Sci., Polym. Phys.*, **31**, 1363-1371 (1993).
22. Tobita, H.; Ito, K., "On the Calculation of Molecular Weight Distribution from the Moments using Laguerre Polynomials", *Polym. React. Eng.*, **1**, 407-425 (1993).
23. Tobita, H., "Simulation Model for Network Formation in Free-Radical Crosslinking Copolymerization: Pregelation Period", *Makromol. Chem., Theory Simul.*, **2**, 761-776 (1993).
24. Tobita, H., "A Simulation Model for Long-Chain Branching in Vinyl Acetate Polymerization: 1. Batch Polymerization", *J. Polym. Sci., Polym. Phys.*, **32**, 901-910 (1994).
25. Tobita, H., "A Simulation Model for Long-Chain Branching in Vinyl Acetate Polymerization: 2. Continuous Polymerization in a Stirred Tank Reactor", *J. Polym. Sci., Polym. Phys.*, **32**, 911-919 (1994).
26. Tobita, H., "Kinetics of Network Formation in Free-Radical Cross-Linking Copolymerization", *Macromolecules*, **26**, 5427-5435 (1993).
27. Tobita, H., "Kinetics of Long-Chain Branching in Emulsion Polymerization: 1. Chain Transfer to Polymer", *Polymer*, **35**, 3023-3031 (1994).
28. Tobita, H., "Kinetics of Long-Chain Branching in Emulsion Polymerization: 2. Vinyl Acetate Polymerization", *Polymer*, **35**, 3032-3038 (1994).

29. Tobita, H.; Ito, K., "Computer Simulation of Network Formation in Free-Radical Crosslinking Copolymerization", *Polym. Gels Network*, **2**, 191-204 (1994).
30. Tobita, H.; Takada, Y.; Nomura, M., "Molecular Weight Distribution in Emulsion Polymerization", *Macromolecules*, **27**, 3804-3811 (1994).
31. Tobita, H.; Yamamoto, K., "Network Formation in Emulsion Cross-Linking Copolymerization", *Macromolecules*, **27**, 3389-3396 (1994).
32. Tobita, H.; Yamamoto, Y.; Ito, K., "Molecular Weight Distribution in Random Crosslinking of Polymers: Modality of the Molecular Weight Distribution", *Macromol. Theory Simul.*, **3**, 1033-1049 (1994).
33. Tobita, H.; Takada, Y.; Nomura, M., "Simulation Model for the Molecular Weight Distribution in Emulsion Polymerization", *J. Polym. Sci., Polym. Chem.*, **33**, 441-453 (1995).
34. Tobita, H., "Dimensions of Cross-Linked Polymers Formed in Living Vinyl/Divinyl Copolymerization", *Macromolecules*, **27**, 5413-5420 (1994).
35. Tobita, H., "Molecular Weight Distribution in Random Crosslinking of Polymer Chains", *J. Polym. Sci., Polym. Phys.*, **33**, 1191-1202 (1995).
36. Tobita, H.; Hatanaka, K., "Long-Chain Branching in Free-Radical Polymerization Due to Chain Transfer to Polymer", *J. Polym. Sci., Polym. Phys.*, **33**, 841-853 (1995).
37. Tobita, H., "Simulation Model for the Modification of Polymers via Crosslinking and Degradation", *Polymer*, **36**, 2585-2596 (1995).
38. Tobita, H. "Monte Carlo Simulation of Emulsion Polymerization - Linear, Branched, and Crosslinked Polymers", *Acta Polymerica*, **46**, 185-203 (1995). [Feature Article]
39. Tobita, H., "Molecular Weight Distribution in Free-Radical Polymerization with Chain-Length-Dependent Bimolecular Termination: 1. Bulk Polymerization", *Macromolecules*, **28**, 5119-5127 (1995).
40. Tobita, H., "Molecular Weight Distribution in Free-Radical Polymerization with Chain-Length-Dependent Bimolecular Termination: 2. Emulsion Polymerization", *Macromolecules*, **28**, 5128-5134 (1995).
41. Tobita, H.; Hatanaka, K., "Branched Structure Formation in Free-Radical Polymerization of Vinyl Acetate", *J. Polym. Sci., Polym. Phys.*, **34**, 671-681 (1996).
42. Tobita, H.; Uemura, Y., "Microgel Formation in Emulsion Copolymerization: 1. Polymerization without Seed Latex", *J. Polym. Sci., Polym. Phys.*, **34**, 1403-1413 (1996).
43. Tobita, H.; Yoshihara, Y., "Microgel Formation in Emulsion Copolymerization: 2. Seeded Polymerization", *J. Polym. Sci., Polym. Phys.*, **34**, 1415-1422 (1996).

44. Tobita, H., "Random Sampling Technique to Predict the Molecular Weight Distribution in Free-Radical Polymerization that Involves Polyfunctional Chain Transfer Agents", *Macromolecules*, **29**, 693-704 (1996).
45. Tobita, H., "Microgel Formation in Emulsion Crosslinking Copolymerization", in *Polymer Reaction Engineering*; Reichert, K.-H.; Geiseler, W., Eds.; VCH Publishers: Weinheim; p.3-18 (1995).
46. Tobita, H., "Random Degradation of Branched Polymers: 1. Star Polymers", *Macromolecules*, **29**, 3000-3009 (1996).
47. Tobita, H., "Random Degradation of Branched Polymers: 2. Multiple Branches", *Macromolecules*, **29**, 3010-3021 (1996).
48. Tobita, H., "Molecular Weight Distribution in Random Branching of Polymer Chains", *Macromol. Theory Simul.*, **5**, 129-144 (1996).
49. Tobita, H.; Zhu, S., "Polyradical Distribution in Free-Radical Crosslinking of Polymer Chains", *J. Polym. Sci., Polym. Phys.*, **34**, 2099-2104 (1996).
50. Tobita, H., "Kinetics of Free-Radical Polymerization with Chain-Length-Dependent Bimolecular Termination under Unstationary Conditions", *Macromolecules*, **29**, 3073-3080 (1996).
51. Tobita, H., "Formation of Homogeneously Branched Polymers Using Terminal Double Bond Polymerization", *Polymer*, **38**, 1705-1717 (1997).
52. Tobita, H., "Random Sampling Technique to Predict the Molecular Weight Distribution in Nonlinear Polymerization", *Macromol. Theory Simul.*, **5**, 1167-1194 (1996). [Feature Article]
53. Tobita, H., "Copolymerization with Chain Transfer Monomer: 1. Distribution of Branched Points", *Macromolecules*, **30**, 1685-1692 (1997).
54. Tobita, H., "Copolymerization with Chain Transfer Monomer: 2. Molecular Weight Distribution", *Macromolecules*, **30**, 1693-1700 (1997).
55. Tobita, H.; Zhu, S., "Statistical Crosslinking of Heterochains", *Polymer*, **38**, 5431-5439 (1997).
56. Tobita, H., "Statistical Branching of Heterochains", *Macromol. Theory Simul.*, **6**, 451-465 (1997).
57. Tobita, H., "Production of Homogeneously Branched Polymers by Using a Chain-Transfer Monomer", *Ind. Eng. Chem. Res.*, **36**, 1181-1190 (1997).
58. Tobita, H., "Molecular Weight Distribution in Nonlinear Emulsion Polymerization", *J. Polym. Sci., Polym. Phys.*, **35**, 1515-1532 (1997).

59. Tobita, H., “Statistical Derivation of Kinetic Molecular Weight Development Equations in Nonlinear Free-Radical Polymerization”, *Macromol. Theory Simul.*, **6**, 641-654 (1997).
60. Tobita, H., “Markovian Approach to Nonlinear Polymer Formation: Free-Radical Polymerization with Chain Transfer to Polymer”, *J. Polym. Sci., Polym. Phys.*, **36**, 357-371 (1998).
61. Tobita, H., “Bivariate Distribution of Chain Length and Composition in Multicomponent Polymerization”, *Polymer*, **39**, 2367-2372 (1998).
62. Tobita, H., “Molecular Weight Distribution Formed Through Chain-Length-Dependent Crosslinking Reactions”, *Macromol. Theory Simul.*, **7**, 225-232 (1998).
63. Tobita, H., “Structural Requirements for Gel Formation”, *J. Polym. Sci., Polym. Phys.*, **36**, 2015-2018 (1998).
64. Tobita, H.; Nomura, M., “Molecular Weight Distribution in Nonlinear Emulsion Polymerization”, *Coll. Surf. A: Physicochem. Eng.*, **153**, 119-122 (1999).
65. Tobita, H., “General Matrix Formula for the Weight-Average Molecular Weights of Crosslinked Polymer Systems”, *J. Polym. Sci., Polym. Phys.*, **36**, 2423-2433 (1998).
66. Tobita, H., “Markovian Approach to Nonrandom Crosslinking of Polymer Chains: Free-Radical Crosslinking Copolymerization”, *Macromol. Theory Simul.*, **7**, 675-684 (1998).
67. Tobita, H., “Molecular Weight Distribution of Graft Copolymers Prepared from Macromonomers”, *Polymer*, **40**, 3565-3573 (1999).
68. Tobita, H., “Comb-Branched Polymer Formation During Copolymerization with Macromonomer”, *Polym. React. Eng.*, **7**, 577-605 (1999).
69. Tobita, H., Mima, T., Okada, A., Mori, J., Tanabe, T., “Molecular Weight Distribution Formed during Free-Radical Polymerization in the Presence of Polyfunctional Chain Transfer Agents”, *J. Polym. Sci., Polym. Phys.*, **37**, 1267-1275 (1999).
70. Tobita, H., Kumagai, M., Aoyagi, N., “Microgel Formation in Emulsion Polymerization”, *Polymer*, **41**, 481-487 (2000).
71. Tobita, H., Takekuma, K., “Analytical Calculus and Monte Carlo Simulation of Crosslinked Polymer Formation in Copolymerization of Tetraethoxysilane and Poly(dimethylsiloxane)”, *Macromol. Theory Simul.*, **9**, 181-187 (2000).
72. Tobita, H., Saito, S., “Size Exclusion Chromatography of Branched Polymers: Star and Comb Polymers”, *Macromol. Theory Simul.*, **8**, 513-519 (1999).
73. Tobita, H., Hamashima, N., “Monte Carlo Simulation of Size Exclusion Chromatography for Randomly Branched and Crosslinked Polymers”, *J. Polym. Sci., Polym. Phys.*, **38**, 2009-2018 (2000).

74. Tobita, H., Hamashima, N., “Monte Carlo Simulation of Size Exclusion Chromatography for Branched Polymers Formed Through Free-Radical Polymerization with Chain Transfer to Polymer”, *Macromol. Theory Simul.*, **9**, 453-462 (2000).
75. Tobita, H., Sakai, T.; Tani, N., “Postgel Properties in the Statistical Crosslinking of Heterochains: 1. Systems with N Types of Chains”, *J. Polym. Sci., Polym. Phys.*, **38**, 2333-2341 (2000).
76. Tobita, H., Tani, N., Sakai, T., “Postgel Properties in the Statistical Crosslinking of Heterochains: 2. Free-Radical Crosslinking Copolymerization”, *J. Polym. Sci., Polym. Phys.*, **38**, 2342-2350 (2000).
77. Tobita, H., “Simultaneous Long-Chain Branching and Random Scission: 1. Monte Carlo Simulation”, *J. Polym. Sci., Polym. Phys.*, **39**, 391-403 (2001).
78. Tobita, H., “Simultaneous Long-Chain Branching and Random Scission: 2. Analytic Expression for the Weight-Average Molecular Weights”, *J. Polym. Sci., Polym. Phys.*, **39**, 404-414 (2001).
79. Tobita, H., Hayashi, M., “Molecular Weight Development in Free-Radical Polymerization with Polyfunctional Chain Transfer Agents: 1. Equal Reactivity Model”, *Macromol. Theory Simul.*, **10**, 573-580 (2001).
80. Tobita, H., “Molecular Weight Development in Free-Radical Polymerization with Polyfunctional Chain Transfer Agents: 2. Substitution Effects”, *Macromol. Theory Simul.*, **10**, 581-586 (2001).
81. Tobita, H., Shiozaki, H., “Determination of Monomer Transfer Constants in Emulsion Polymerization”, *Macromol. Theory Simul.*, **10**, 676-685 (2001).
82. Tobita, H., Aoyagi, N., Takamura, S., “Bimodal Molecular Weight Distribution Formed in Emulsion Crosslinking Copolymerization”, *Polymer*, **42**, 7583-7587 (2001).
83. Tobita, H., “Dimensions of Branched Polymers in Simultaneous Long-Chain Branching and Random Scission”, *J. Polym. Sci., Polym. Phys.*, **39**, 2960-2968 (2001).
84. Tobita, H., “Heterochain Model for Simultaneous Long-Chain Branching and Crosslinking: 1. Matrix Formula for the Weight-Average Molecular Weights”, *J. Polym. Sci., Polym. Phys.*, **42**, 2780-2790 (2004).
85. Tobita, H., “Heterochain Model for Simultaneous Long-Chain Branching and Crosslinking: 2. Application to Free-Radical Polymerization”, *J. Polym. Sci., Polym. Phys.*, **42**, 2791-2800 (2004).
86. Tobita, H., “Heterochain Model for Simultaneous Long-Chain Branching and Crosslinking: 3. Multicomponent Polymerization”, *J. Polym. Sci., Polym. Phys.*, **42**, 2801-2812 (2004).
87. Tobita, H., “Bimodal Molecular Weight Distribution Formed in Emulsion Polymerization

- of Ethylene”, *J. Polym. Sci., Polym. Chem.*, **40**, 3426-3433 (2002).
88. Tobita, H. “Molecular Weight Development During Simultaneous Chain Scission, Long-Chain Branching and Crosslinking: 1. General Matrix Formula”, *Macromol. Theory Simul.*, **12**, 24-31 (2003).
 89. Tobita, H. “Molecular Weight Development During Simultaneous Chain Scission, Long-Chain Branching and Crosslinking: 2. Free-Radical Polymerization”, *Macromol. Theory Simul.*, **12**, 32-41 (2003).
 90. Tobita, H. “Bimodal Molecular Weight Distribution Formed in Emulsion Polymerization with Long-Chain Branching”, *Polym. React. Eng.*, **11**, 855-868 (2003).
 91. Tobita, H., Kawai, H., “Simulation of Size Exclusion Chromatography for Branched Polymers Formed in Simultaneous Long-Chain Branching and Random Scission”, *e-Polymers*, no. 048 (2002).
 92. Tobita, H., “Multivariate Composition Distribution in Free-Radical Multicomponent Polymerization: 1. Exact Calculation Method Using Generating Function”, *Macromol. Theory Simul.*, **12**, 463-469 (2003).
 93. Tobita, H., “Multivariate Composition Distribution in Free-Radical Multicomponent Polymerization: 2. Approximation Using Multivariate Normal Distribution”, *Macromol. Theory Simul.*, **12**, 470-475 (2003).
 94. Tobita, H., Zhu, S. “Molecular Weight Distribution of Block Copolymers”, *e-Polymers*, no. 025 (2003).
 95. Tobita, H., “Scale-Free Power-Law Distribution of Emulsion-Polymerized Nonlinear Polymers: Free-Radical Polymerization with Chain Transfer to Polymer”, *Macromolecules*, **37**, 585-589 (2004).
 96. Tobita, H., “Scale-Free Power-Law Distribution Found in SARS Epidemic in Singapore : Are the Superspreading Events Unusual?”, *Mem. Fac. Eng. Fukui Univ.*, **52**, 37-41 (2004).
 97. Tobita, H., “Scale-Free Power-Law Distribution of Nonlinear Polymers Formed in a Homeostatic System”, *ePolymers*, no. 032 (2004).
 98. Tobita, H., “Scale-Free Power-Law Distribution of Branched Polymers Formed in a Continuous-Stirred Tank Reactor: Simple Relationship for the Power Exponent”, *ePolymers*, no. 076 (2004).
 99. Tobita, H., “Scale-Free Power-Law Distribution of Emulsion-Polymerized Branched Polymers: Power Exponent of the Molecular Weight Distribution”, *Macromol. Mater. Eng.*, **290**, 363-371 (2005).
 100. Tobita, H., “Power-law distribution of molecular weights in nonlinear emulsion polymers”, *ePolymers*, no. 065 (2005).

101. Nomura, M.; Tobita, H.; Suzuki, K., "Emulsion Polymerization: Kinetic and Mechanistic Aspects", *Adv. Polym. Sci.*, **175**, 1-128 (2005).
102. Tobita, H., "Molecular Weight Distribution of "Living" Radical Polymers: 1. Fundamental Distribution", *Macromol. Theory Simul.*, **15**, 12-22 (2006).
103. Tobita, H., "Molecular Weight Distribution of "Living" Radical Polymers: 2. Monte Carlo Simulation", *Macromol. Theory Simul.*, **15**, 23-31 (2006).
104. Tobita, H., "Power-Law Distribution of Molecular Weights in Nonlinear Emulsion Polymers", in *Polymeric Microspheres – Science and Technology*; Nomura, M.; Tobita, H., Suzuki, K. Eds.; Kyoto University Press: Kyoto, Japan; Chapter 13, p.163-179 (2007).
105. Tobita, H., Suzuki, K., "Theory of Random Degradation and Its Applications to Polymer Modification, Chain Transfer Reactions, and Particle Size Distribution", *Mem. Grad. Eng. Univ. Fukui*, **55**, 23-34 (2007).
106. Tobita, H., "Polymer Distribution Change During Irreversible Depolymerization by Chain-End Scission", *Macromol. Theory Simul.*, **16**, 399-406 (2007).
107. Tobita, H., Yanase, F., "Monte Carlo Simulation of Controlled/Living Radical Polymerization in Emulsified Systems", *Macromol. Theory Simul.*, **16**, 476-488 (2007).
108. Tobita, H., "Kinetics of Controlled/Living Radical Polymerization in Emulsified Systems", *Macromol. Symp.*, **261**, 36-45 (2008).
109. Tobita, H., "Kinetics of Stable Free Radical Mediated Polymerization inside Submicron Particles", *Macromol. Theory Simul.*, **16**, 810-823 (2007).
110. Tobita, H., "Fundamental Molecular Weight Distribution of RAFT Polymers", *Macromol. React. Eng.*, **2**, 371-381 (2008).
111. Tobita, H., "RAFT Miniemulsion Polymerization, 1. Polymerization Rate", *Macromol. Theory Simul.*, **18**, 108-119 (2009).
112. Tobita, H., "RAFT Miniemulsion Polymerization, 2. Molecular Weight Distribution", *Macromol. Theory Simul.*, **18**, 120-126 (2009).
113. Tobita, H., "Fundamentals of RAFT Miniemulsion Polymerization Kinetics", *Macromol. Symp.*, **288**, 16-24 (2010).
114. Tobita, H., "Change and Convergence of Polymer Distribution During Nonrandom Degradation", *Macromol. React. Eng.*, **4**, 333-341 (2010).
115. Tobita, H., "Modeling Controlled/Living Radical Polymerization Kinetics: Bulk and Miniemulsion", *Macromol. React. Eng.*, **4**, 643-662 (2010). [Feature Article]
116. Tobita, H., "Effects of Fluctuation and Segregation in the Rate Acceleration of ATRP Miniemulsion Polymerization", *Macromol. Theory Simul.*, **20**, 179-190 (2011).

117. Tobita, H., “Effects of Retardation and Variation of Monomer Concentration in RAFT Miniemulsion Polymerization”, *Macromol. Theory Simul.*, **20**, 709-720 (2011).
118. Tobita, H., “Threshold Particle Diameters in Miniemulsion Reversible-Deactivation Radical Polymerization”, *Polymers*, **3**, 1944-1971 (2011).
119. Tobita, H., “Effects of Nano-Sized Polymerization Locus on the Kinetics of Controlled/Living Radical Polymerization”, in *Advanced Polymer Nanoparticles: Synthesis and Surface Modifications*, Mittal, V. Ed.; CRC Press, Boca Raton, FL, USA; p.263-305 (2011).
120. Miki, M., Makimura, S., Saitoh, T., Bunya, M., Sugahara, Y., Ueno, Y., Kimura-Sakiyama, C., Tobita, H., “A Three-Dimensional FRET Analysis to Construct an Atomic Model of the Actin-Tropomyosin Complex on a Reconstituted Thin Filament”, *J. Mol. Biol.*, **414**, 765-782 (2011).
121. Suzuki, K., Nishimura, Y., Kanematsu, Y., Masuda, Y., Satoh, S., Tobita, H., “Experimental Validation of Intermediate Termination in RAFT Polymerization with Dithiobenzoate via Comparison of Miniemulsion Polymerization and Bulk Polymerization Rates”, *Macromol. React. Eng.*, **6**, 17-23 (2012).
122. Miki, M., Makimura, S., Sugahara, Y., Yamada, R., Bunya, M., Saito, T., Tobita, H., “A Three-Dimensional FRET Analysis to Construct an Atomic Model of the Actin-Tropomyosin-Troponin Core Domain Complex on a Muscle Thin Filament”, *J. Mol. Biol.*, **420**, 40-55 (2012).
123. Tobita, H., “Free-Radical Polymerization with Long-Chain Branching and Scission in a Continuous Stirred Tank Reactor”, *Macromol. React. Eng.*, **7**, 181-192 (2013).
124. Tobita, H., “On the Discrimination of RAFT Models Using Miniemulsion Polymerization”, *Macromol. Theory Simul.*, **22**, 399-409 (2013).
125. Tobita, H., “Continuous Free-Radical Polymerization with Long-Chain Branching and Scission in a Tanks-in-Series Model”, *Macromol. Theory Simul.*, **23**, 182-197 (2014).
126. Suzuki, K., Kanematsu, Y., Miura, T., Satoh, S., Tobita, H., “Experimental Method to Discriminate RAFT Models between Intermediate Termination and Slow Fragmentation via Comparison of Rates of Miniemulsion and Bulk Polymerization”, *Macromol. Theory Simul.*, **23**, 136-146 (2014).
127. Tobita, H., “Free-Radical Polymerization with Long-Chain Branching and Scission: Markovian Solution of the Weight-Average Molecular Weight”, *Macromol. Theory Simul.*, **23**, 477-489 (2014).
128. Tobita, H., “Markovian Approach to Free-Radical Polymerization with Simultaneous Long-Chain Branching and Scission: Effect of Branching and Scission Kinetics”, *Macromol. React. Eng.*, **9**, 245-258 (2015).

129. Tobita, H., “Markovian Approach to Self-Condensing Vinyl Polymerization: Distributions of Molecular Weights, Degree of Branching, and Molecular Dimensions”, *Macromol. Theory Simul.*, **24**, 117-132 (2015).
130. Tobita, H., “Polymerization Processes, 1. Fundamentals”, in *Ullmann's Encyclopedia of Industrial Chemistry*, (50 pages), DOI: 10.1002/14356007.a21_305.pub3, Published Online 23 JUL 2015.
131. Tobita, H., A.E. Hamielec, “Polymerization Processes, 2. Modeling of Processes and Reactors”, in *Ullmann's Encyclopedia of Industrial Chemistry*, (51 pages), DOI: 10.1002/14356007.o21_o01.pub2, Published Online 23 JUL 2015.
132. Tobita, H., “Continuous Tanks-in-Series Process for Free-Radical Polymerization with Long-Chain Branching and Scission: Effect of the Order of a Large Tank”, *Macromol. React. Eng.*, **9**, 556-569 (2015).
133. Tobita, H., “Universality in Branching Frequencies and Molecular Dimensions during Hyperbranched Polymer Formation: Step Polymerization of AB₂ Type Monomer with Equal Reactivity”, *Macromol. Theory Simul.*, **25**, 116-122 (2016).
134. Tobita, H., “Universality in Branching Frequencies and Molecular Dimensions during Hyperbranched Polymer Formation: 2. Step Polymerization of AB₂ Type Monomer with Different Reactivity for the Second B Group”, *Macromol. Theory Simul.*, **25**, 123-133 (2016).
135. Tobita, H., “Model-Based Reactor Design in Free-Radical Polymerization with Simultaneous Long-Chain Branching and Scission”, *Processes*, **3**, 731-748 (2015).
136. Tobita, H., “Effect of Small Reaction Locus in Free-Radical Polymerization: Conventional and Reversible-Deactivation Radical Polymerization”, *Polymers*, **8**, 155 (14 pages) (2016).
137. Tobita, H., “Molecular Weight Distribution of Core Cross-Linked Star Polymers”, *Macromol. Theory Simul.*, **26**, 1600037 (12 pages) (2017). DOI: 10.1002/mats.201600037
138. Tobita, H., “Hyperbranched Polymers Formed Through Irreversible Step Polymerization of AB₂ Type Monomer in a Continuous Flow Stirred-Tank Reactor (CSTR)”, *Macromol. Theory Simul.*, **26**, 1600078 (13 pages) (2017). DOI: 10.1002/mats.201600078
139. Tobita, H., “Hyperbranched Polymers Formed Through Irreversible Step Polymerization of AB₂ Type Monomer with Substitution Effect in a Continuous Stirred-Tank Reactor (CSTR)”, *Macromol. Theory Simul.*, **26**, 1700020 (17 pages) (2017). DOI: 10.1002/mats.201700020
140. Tobita, H., “Model-Based Reactor Design to Control Hyperbranched Polymer Architecture”, *Macromol. React. Eng.*, **12**, 1700065 (15 pages) (2018).
DOI: 10.1002/mren.201700065

141. Tobita, H., “Effect of Chain Transfer to Polymer in Conventional and Living Emulsion Polymerization Process”, *Processes*, **6**, 14 (22 pages) (2018). DOI: 10.3390/pr6020014
142. Tobita, H., “Hyperbranched Polymers Formed Through Self-Condensing Vinyl Polymerization in a Continuous Stirred-Tank Reactor (CSTR): 1. Molecular Weight Distribution”, *Macromol. Theory Simul.*, **27**, 1800027 (15 pages) (2018).
143. Tobita, H., “Hyperbranched Polymers Formed Through Self-Condensing Vinyl Polymerization in a Continuous Stirred-Tank Reactor (CSTR): 2. Branched Architecture”, *Macromol. Theory Simul.*, **27**, 1800028 (7 pages) (2018).
144. Tobita, H., “Detailed Structural Analysis of the Hyperbranched Polymers Formed in Self-Condensing Vinyl Polymerization”, *Macromol. Theory Simul.*, **28**, 1800061 (10 pages) (2019).
145. Tobita, H., “Universal Relationships in Hyperbranched Polymer Architecture for Batch and Continuous Step Growth Polymerization of AB₂-Type Monomers”, *Processes*, **7**, 220 (18 pages) (2019). DOI: 10.3390/pr7040220
146. Tobita, H., “Universal Relationships in Branched Architecture Formed in Conventional and Living Emulsion Polymerization”, *Macromol. Theory Simul.*, **28**, 1900018 (11 pages) (2019). DOI: 10.1002/mats.201900018

[Other Articles]

1. Hamielec, A.E.; Tobita, H., “Polymerization Processes”, in *Ullmann's Encyclopedia of Industrial Chemistry*, **Vol. A 21**; VCH Publishers: Weinheim, Germany; p.305-428 (1992).
2. 飛田英孝(Tobita, H.), 「ラジカル共重合系における分岐・架橋反応のモデル化」平成3年度化学工学会賞；(Modeling of Network Formation in Free-Radical Copolymerization), *化学工学(Kagaku Kogaku)*, **56**, 383 (1992). (*Japanese*)
3. 飛田英孝(Tobita, H.), 「架橋を伴うラジカル共重合系におけるゲル化反応のシミュレーションモデルの開発」(Simulation Model for Gelation in Free-Radical Crosslinking Polymerization), *Network 福井大学情報処理センターニュース(Information Center News, Fukui University)*, **7** (No.3), 33-46 (1993). (*Japanese*)
4. 飛田英孝(Tobita, H.), 「乳化重合におけるマイクロゲルの生成過程と架橋構造制御」(Microgel Formation and Control of Crosslinked Structure in Emulsion Crosslinking Copolymerization), in *高分子製造プロセスのアセスメント 17 ; 高分子微粒子の機能化・複合化技術 (反応工学研究会研究レポート) (Assessment of Polymerization Processes)*, No. 17, Society of Polymer Science, Japan; p.89-107 (1996). (*Japanese*)
5. 飛田英孝(Tobita, H.), 「ゲル化理論」(Theory of Gelation), in *ゲルハンドブック*；長田義仁, 梶原莞爾編集代表 (*Gel Handbook*; Osada, Y.; Kajiwara, K., Eds.); NTS: Tokyo;

- p.18-30 (1997). (*Japanese*): Translated into English and published from Academic Press (2001) ISBN 0123949645
6. 飛田英孝(Tobita, H.), 「計算科学によるネットワークポリマーの設計」 (Design and Control of Polymeric Networks Through the Use of Computational Science), ネットワークポリマー (*Journal of Network Polymer, Japan*), **17**, 192-205 (1996). (*Japanese*)
 7. 飛田英孝(Tobita, H.); 埜村守(Nomura, M.), 「乳化重合における架橋高分子生成過程の理論解析」 (Theoretical Study of Crosslinked Polymer Formation in Emulsion Polymerization), *高分子加工(Polymer Applications)*, **45**, 542-549 (1996). (*Japanese*)
 8. Tobita, H., “Modeling and Simulation of Nonlinear Free-Radical Polymerization”, in *How Can Computer Chemistry Contribute to Chemical Industry, The 21st Seminar on Frontier Technology*, Sin Kagaku Hattenkyokai: Tokyo, Session II, p.1-21 (1997).
 9. 飛田英孝 (Tobita, H.) 共著, 「第 20 章 重合反応・高分子成形加工」 (Polymerization/Polymer Processing) in *化学工学便覧 (Chemical Engineering Handbook)*; 丸善(Maruzen): Tokyo; p.1023-1068 (1999). (*Japanese*)
 10. 飛田英孝、柳瀬文彦、「技術者倫理教育用事例としての水俣病事件—教育実践報告—」、福井大学工学部研究報告、第 53 巻、第 1 号、29-39 (2005). Tobita, H., Yanase, F., “Minamata Disease Incident as a Case Teaching Material for Engineering Ethics Education –Educational Practice Report–”, *Mem. Fac. Eng. Fukui Univ.*, **53**, 29-39 (2005). (*Japanese*)
 11. 飛田英孝, 稲垣成識, 「タバコのポイ捨てゴミにおけるフラクタル分布の発現—観測事実とモデル解析—」, 福井大学大学院工学研究科研究報告, 第 55 巻, 15-22 (2007). Tobita, H., Inagaki, S., “Fractal Distribution Found in Littering of Cigarette Butts –Observation and Model Analysis–”, *Mem. Grad. Eng. Univ. Fukui*, **55**, 15-22 (2007). (*Japanese*)
 12. 飛田英孝, 「夢を形にする技術者育成プログラム」, 工学教育, 第 57 巻, 第 5 号, 50-55 (2009). H. Tobita, “Fostering of Creative Engineers Who Can Devise and Implement Imaginative Concepts”, *J. of JSEE*, **57**(5), 50-55 (2009). (*Japanese*)
 13. Tobita, H. “RAFT Miniemulsion Polymerization, 1. Polymerization Rate”, *Best of Macromolecular Journals 2009*, s62-s73 (2010). 112 の論文の再掲載。
 14. 飛田英孝, 「夢を形にする技術者, Imagineer 育成プログラム」, 福井大学高等教育推進センター年報 (*Studies in and on Higher Education, Center for the Advancement of Higher Education, University of Fukui*), **1**, 3-12 (2011). (*Japanese*)
 15. 鈴木奈緒子, 飛田英孝, 「工学部の創成教育における教育評価の取り組み」, 福井大学高等教育推進センター年報 (*Studies in and on Higher Education, Center for the Advancement of Higher Education, University of Fukui*), **3**, 27-38 (2013). (*Japanese*)
 16. Tobita, H., Zhu, S., “Essay: Modeling and Simulation of Complex Polymerization

Reactions”, *Macromol. Theory Simul.*, **23**, 107-109 (2014).

17. 飛田英孝, 『反転授業』実施報告～完全習得学習をめざして～(Implementation Report on “Flip Teaching”: Aiming at Mastery Learning.), 福井大学高等教育推進センター年報 (*Studies in and on Higher Education*, Center for the Advancement of Higher Education, University of Fukui), **4**, 81-90 (2014). (*Japanese*)
18. 藤田和美, 鈴木清, 飛田英孝, 「反応熱の可視化～熱量計を用いた重合反応速度解析～」(Visualization of Reaction Heat: Quantitative Analysis of Polymerization Rate by using an Improved Reaction Calorimeter), 化学工学 (Chemical Engineering of Japan), **79**, 295-297 (2015). (*Japanese*)
19. 飛田英孝, 「福井大学工学部における学生主体プロジェクト支援」, 北陸信越工学教育協会会報 (Report of The HSAEE), 第 66 号, 62-68 (2018).
20. 飛田英孝, 「嬉しい、楽しい、反転授業!」, 北陸信越工学教育協会会報 (Report of The HSAEE), 第 67 号, 56-61 (2019).

[Ph.D. Thesis]

Tobita, H., “Crosslinking Kinetics in Free-Radical Copolymerization”, McMaster University, Hamilton, Ontario, Canada (1990).

[Course Note]

Tobita, H., “Modeling and Simulation of Polymerization (First Edition)”, Fukui University, Japan (1995).