

Publication List

1. “Molecular Simulation of Effects of Network Structure on Fracture Behavior of Gels Synthesized by Radical Polymerization”
Tsutomu Furuya and Tsuyoshi Koga
Macromolecules, **58**, 3359–3368, (2025). doi: [10.1021/acs.macromol.4c02875](https://doi.org/10.1021/acs.macromol.4c02875)
2. “Spherulites of Supramolecular Polymers Formed from Undercooled Melts, and Their Adhesive Properties”
Takuma Shimada, Yuichiro Watanabe, Tsutomu Furuya, Koji Nishida, Sadaki Samitsu, Yutaka Wakayama, and Kazunori Sugiyasu
Chem. Lett., **53**, upad030, (2024). doi: [10.1093/chemle/upad030](https://doi.org/10.1093/chemle/upad030)
3. “Comparison of Gels Synthesized by Controlled Radical Copolymerization and Free Radical Copolymerization: Molecular Dynamics Simulation”
Tsutomu Furuya and Tsuyoshi Koga
Soft Matter, **20**, 1164–1172, (2024). doi: [10.1039/d3sm01431b](https://doi.org/10.1039/d3sm01431b)
(selected for front cover. doi: [10.1039/d4sm90019g](https://doi.org/10.1039/d4sm90019g))
4. “Molecular Simulation of Polymer Gels Synthesized by Free Radical Copolymerization: Effects of Concentrations and Reaction Rates on Structure and Mechanical Properties”
Tsutomu Furuya and Tsuyoshi Koga
Polymer, **279**, 126012, (2023). doi: [10.1016/j.polymer.2023.126012](https://doi.org/10.1016/j.polymer.2023.126012)
5. “Small-Angle Light Scattering Instrument with Wide Scattering Vector and Wide Dynamic Ranges”
Tsutomu Furuya, Hiroyuki Kojima, Koji Nishida, Yoshiki Fukutani, Ayaka Mutaguchi, and Tsuyoshi Koga
J. Fiber Sci. Technol., **79**, 32–46, (2023). doi: [10.2115/fiberst.2023-0003](https://doi.org/10.2115/fiberst.2023-0003)
6. “Effects of Primary Structure of Reactive Polymers on Network Structure and Mechanical Properties of Gels”
Tsutomu Furuya and Tsuyoshi Koga
Macromol. Theory Simul., **31**, 2200044, (2022). doi: [10.1002/mats.202200044](https://doi.org/10.1002/mats.202200044)
(selected for front cover. doi: [10.1002/mats.202270011](https://doi.org/10.1002/mats.202270011))
7. “Molecular Simulation of Networks Formed by End-Linking of Tetra-Arm Star Polymers: Effects of Network Structures on Mechanical Properties”
Tsutomu Furuya and Tsuyoshi Koga
Polymer, **189**, 122195, (2020). doi: [10.1016/j.polymer.2020.122195](https://doi.org/10.1016/j.polymer.2020.122195)
8. “Effects of Added Physical Cross-Linkers on Mechanical Properties of Polymer Networks”
Tsutomu Furuya, Keita Yamamoto, and Tsuyoshi Koga
Macromol. Theory Simul., **28**, 1800042, (2019). doi: [10.1002/mats.201800042](https://doi.org/10.1002/mats.201800042)
9. “Molecular Simulation of Structures and Mechanical Properties of Nanocomposite Networks Consisting of Disk-shaped Particles and Polymers”

Tsutomu Furuya and Tsuyoshi Koga
Soft Matter, **14**, 8293-8305 (2018). doi: 10.1039/c8sm01437j

10. “Molecular Simulation of Structure Formation and Rheological Properties of Mixtures of Telechelic and Monofunctional Associating Polymer”
Tsutomu Furuya and Tsuyoshi Koga
J. Polym. Sci. Part B: Polym. Phys., **56**, 1251-1264 (2018). doi: 10.1002/polb.24716
(selected for front cover. doi: 10.1002/polb.24494)
11. “Theoretical Study of Inclusion Complex Formation of Cyclodextrin and Single Polymer Chain”
Tsutomu Furuya and Tsuyoshi Koga
Polymer, **131**, 193-201, (2017). doi: 10.1016/j.polymer.2017.10.031
12. “Effects of Added Surfactants on Thermoreversible Gelation of Associating Polymer Solutions”
Tsutomu Furuya, Tsuyoshi Koga, and Fumihiko Tanaka
J. Polym. Sci. Part B: Polym. Phys., **42**, 733-751, (2004). doi: 10.1002/polb.10722