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Supporting Information

March 28, 2023

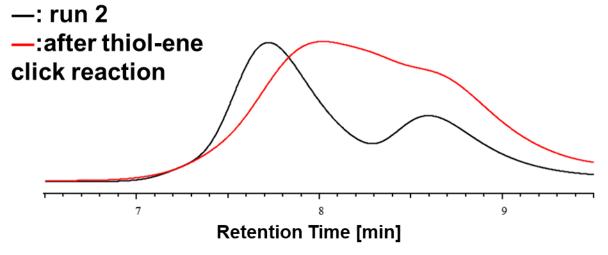
Catenane Formation of a Cyclic Poly(alkyl sorbate) via Chain-Growth Polymerization Induced by an *N*-Heterocyclic Carbene and Ring-Closing Without Extreme Dilution

## Hirotake Yato, Kota Oto, Akinori Takasu\*, Masahiro Higuchi

Division of Soft Materials,

Department of Engineering, Nagoya Institute of Technology,

Gokiso-cho, Showa-ku, Nagoya 466-8555, Japan



**Figure S1**. SEC traces of poly(ES) after thiol-ene click reaction (Thiol- ene click reaction with 1-dodecanethiol in Experimental Section).

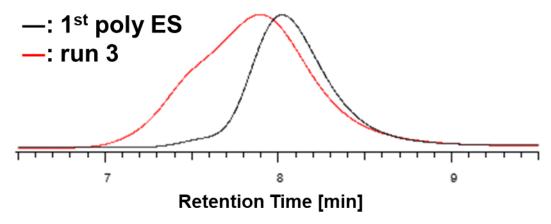


Figure S2. SEC traces of poly(ES) (Run 3 in Table 1).

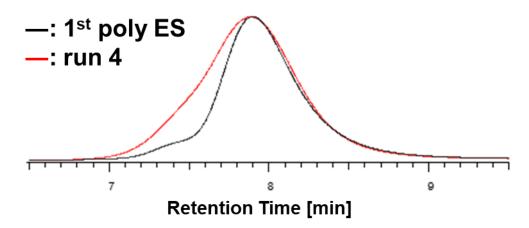


Figure S3. SEC traces of poly(ES) (Run 4 in Table 1).

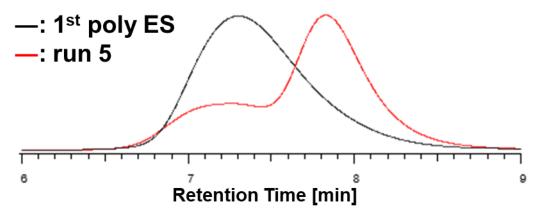
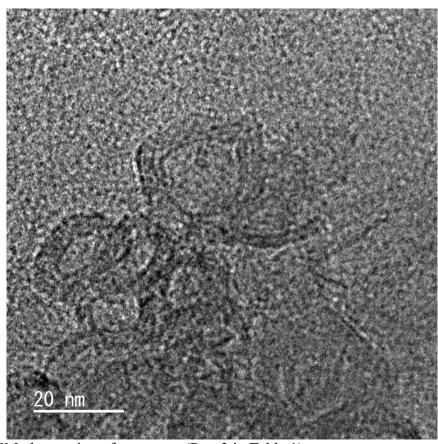


Figure S4. SEC traces of poly(ES) (Run 5 in Table 1).



**Figure S5**. TEM observation of catenanes (Run 3 in Table 1).

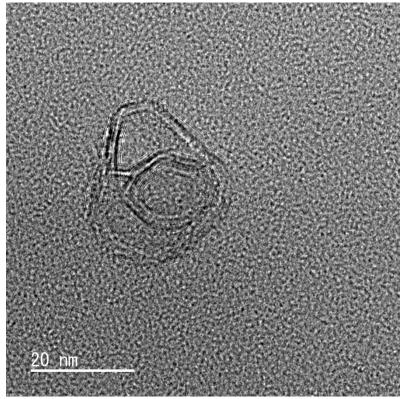


Figure S6. TEM observation of catenanes (Run 5 in Table 1).

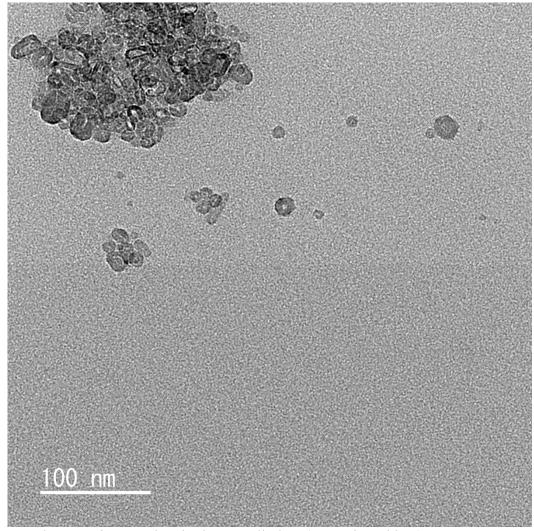


Figure S7. The TEM image taken in the overall view (Run 1 in Table 1).