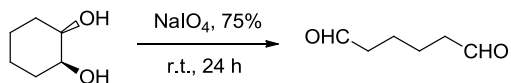
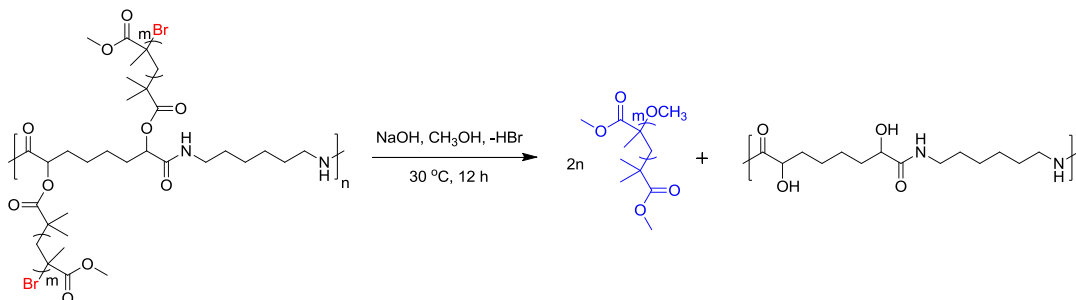
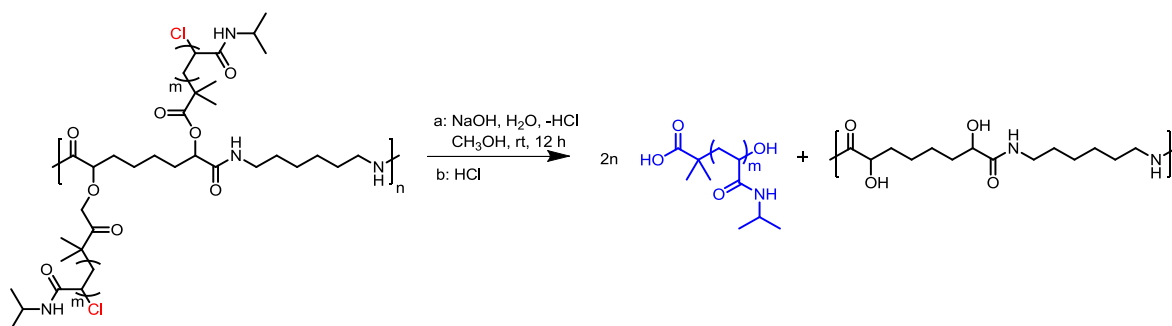


Supplementary Material**Graft Copolymers with Polyamide Backbones via Combination of Passerini Multi-component Polymerization and Controlled Chain-growth Polymerization***Xin-Xing Deng,^A Yang Cui,^A Yao-Zong Wang,^A Fu-Sheng Du,^A and Zi-Chen Li^{A,B}*

^ABeijing National Laboratory for Molecular Sciences (BNLMS), Key Laboratory of Polymer Chemistry and Physics of Ministry of Education, Department of Polymer Science and Engineering, College of Chemistry and Molecular Engineering, Peking University, Beijing 100871, China.

^BCorresponding author. Email: zcli@pku.edu.cn

**Scheme S1.** Synthesis of hexane-1, 6-dial.**Scheme S2.** Methanolysis of PA-g-PMMA.



Scheme S3. Hydrolysis of PA-g-PNIPAM.

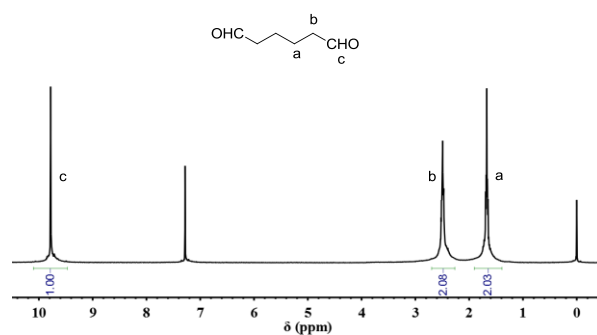


Figure S1. ¹H NMR spectrum of hexane-1, 6-dial.

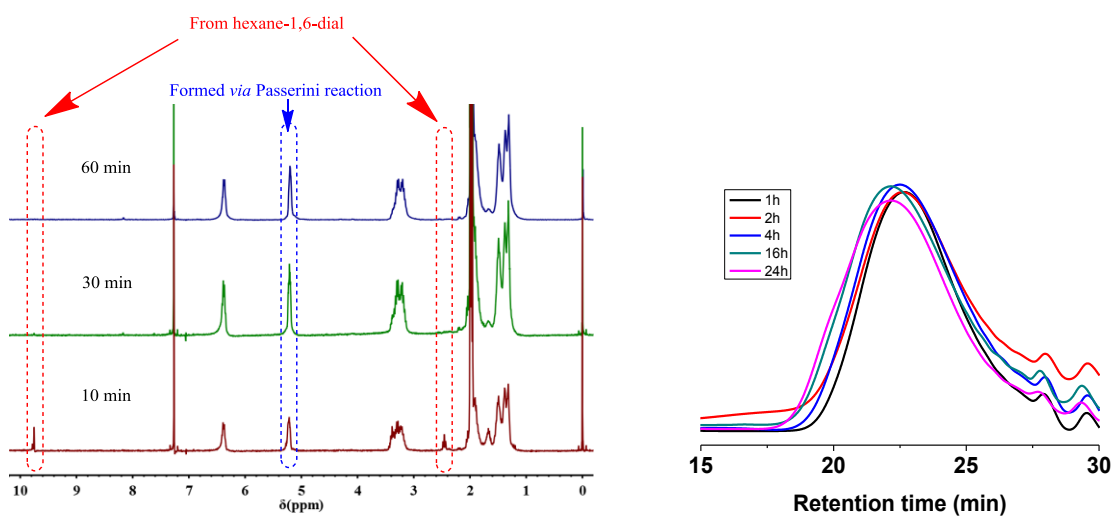


Figure S2. Kinetic study of the backbone formation.

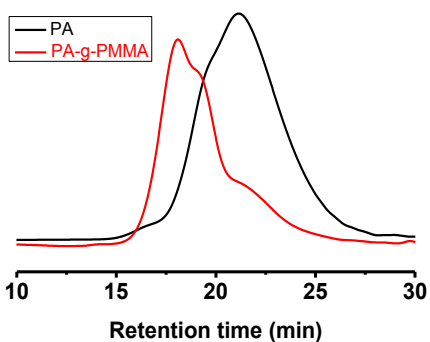


Figure S3. GPC traces of **PA-1** and **PA-g-PMMA_{2h}** (Mn: 43.7 kDa, PDI: 1.79).

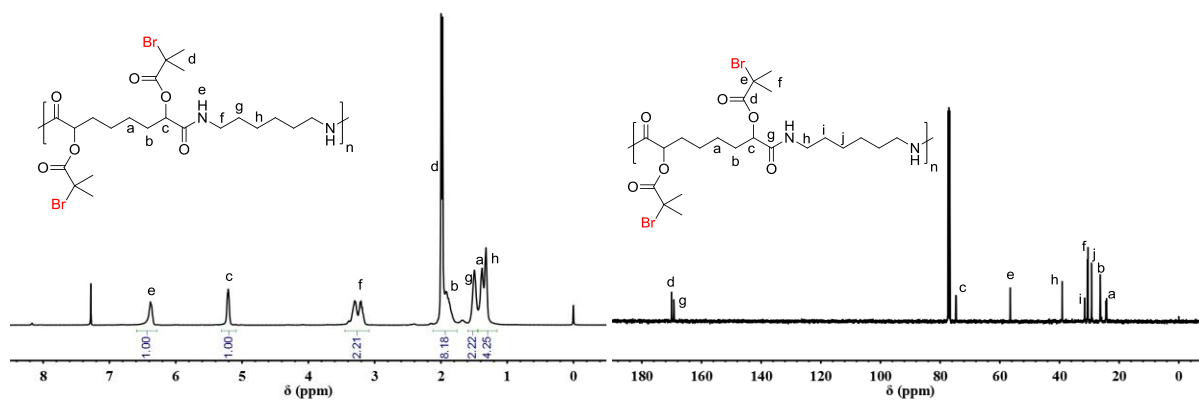


Figure S4. ¹H NMR (A) and ¹³C NMR (B) spectra of **PA-1'**.

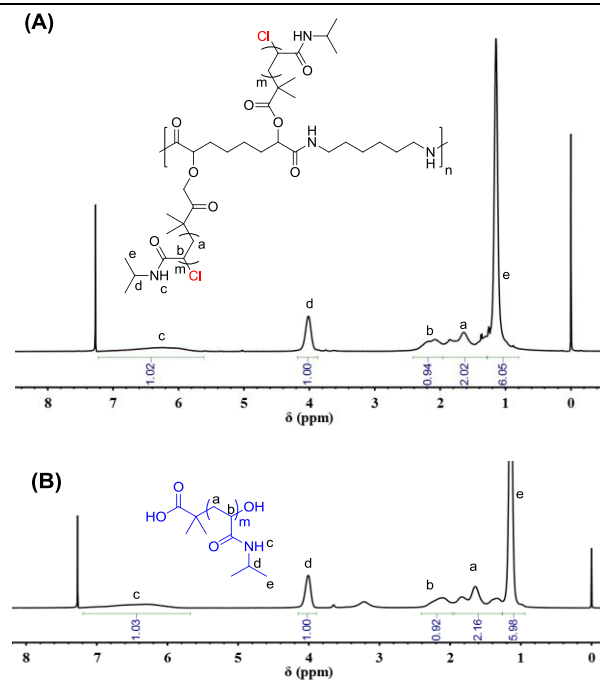


Figure S5. ¹H NMR spectra of **PA-g-PNIPAM'** (A) and **PNIPAM'** (B).

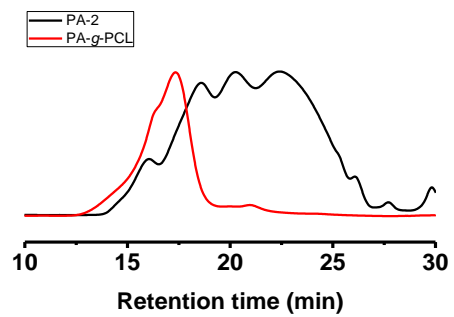


Figure S6. GPC traces of **PA-2** and **PA-g-PCL**.
