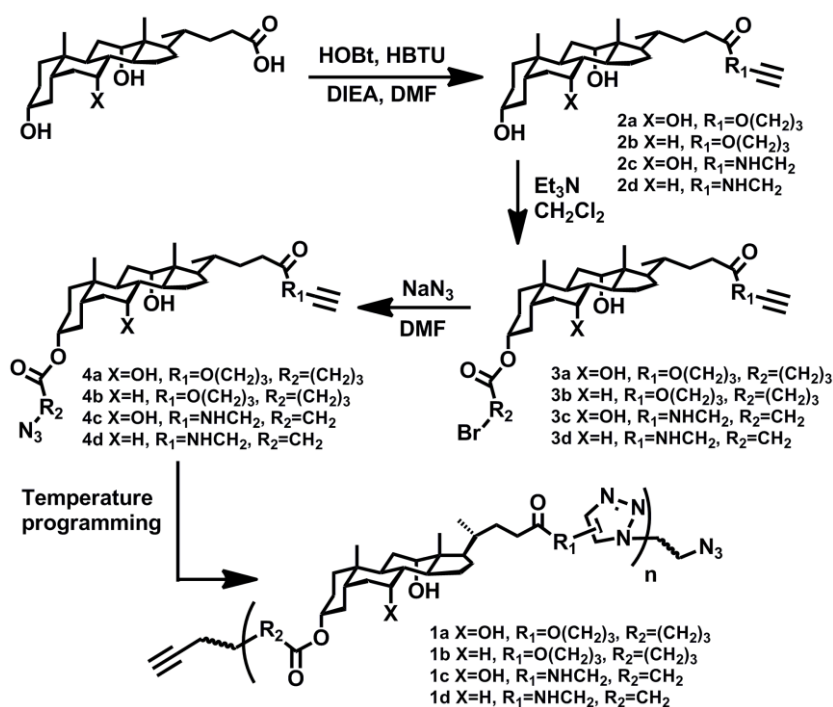


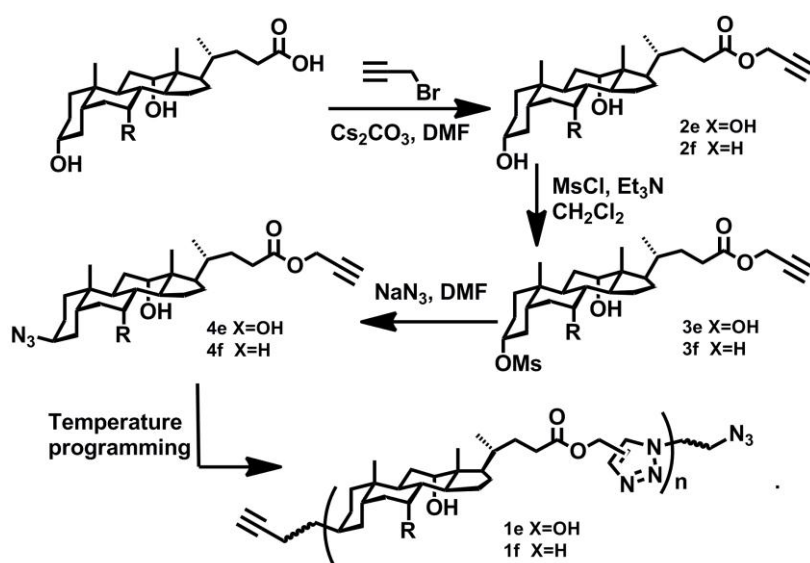
Electronic Supplementary Information (ESI) for

Metal-free click approach for facilely producing main chain poly(bile acid)s

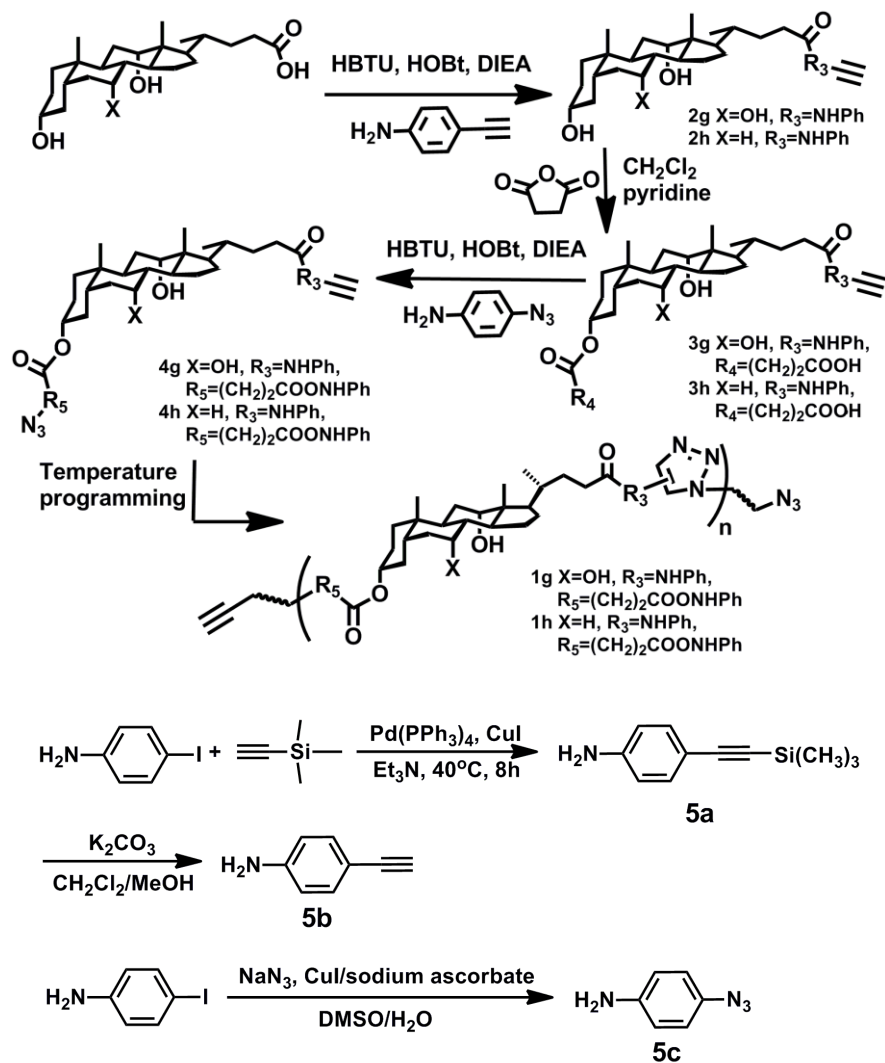
Weina Li,^{‡,a,b} Tian Tian,^{‡,a} Wei Zhu,^a Jiecheng Cui,^a Yong Ju,^{*,b} and Guangtao Li^{*,a}



Scheme S1 Reaction scheme for the synthesis of main chain poly(bile acid)s 1a-1d.



Scheme S2 Reaction scheme for the synthesis of main chain poly(bile acid)s 1e-1f.



Scheme S3 Reaction scheme for the synthesis of main chain poly(bile acid)s **1g-1h** and the phenyl azide and phenyl alkyne **5a-5c**.

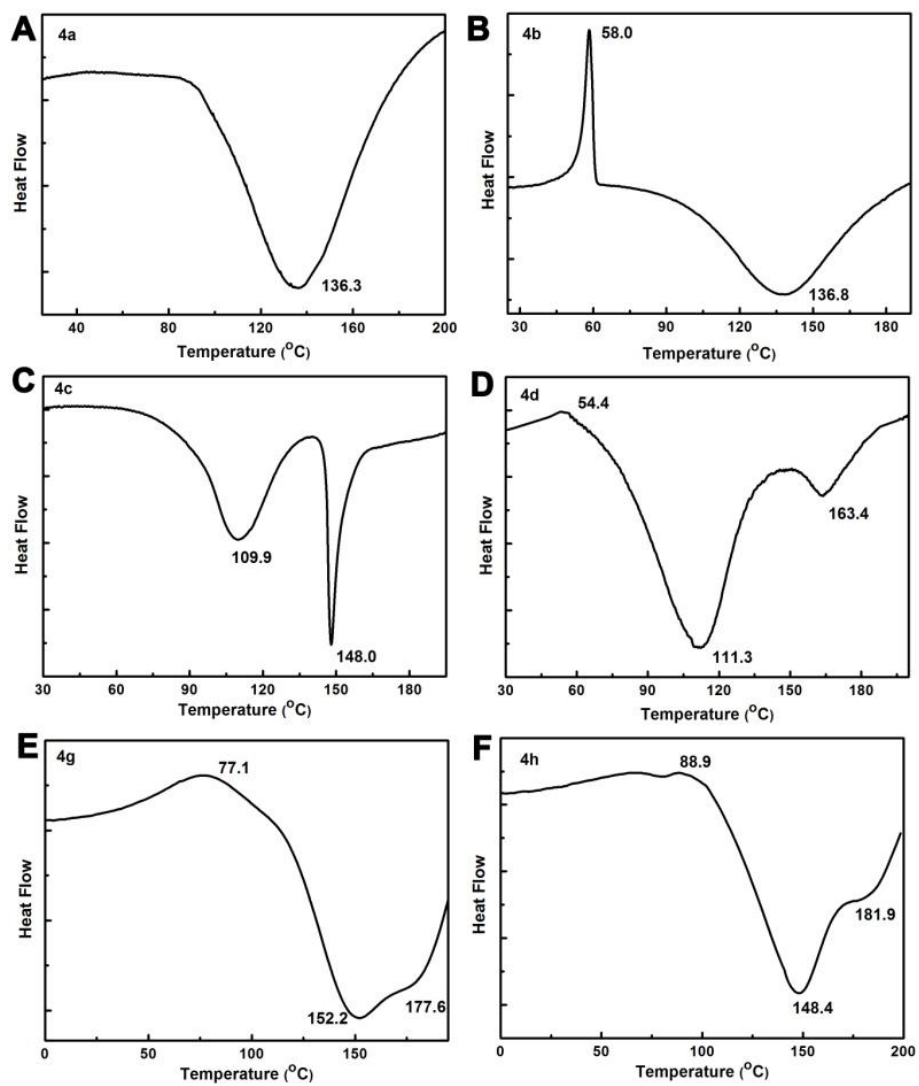


Figure S1 DSC thermalgrams of the bile acid derivatives **4a** (A), **4b** (B), **4c** (C), **4d** (D), **4g** (E) and **4h** (F) recorded under N₂ atmosphere at a heating rate of 1°C min⁻¹.

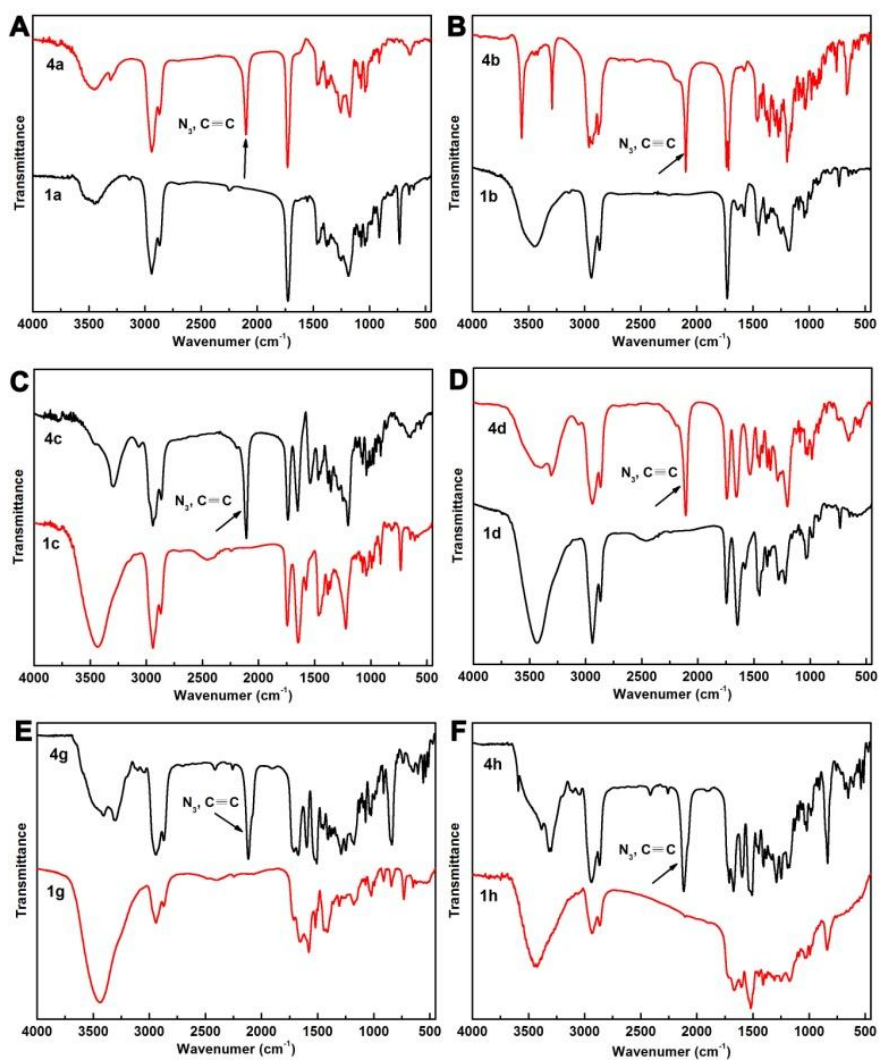


Figure S2 FTIR spectra of the bile acid monomers their corresponding polymers **4a** and **1a** (A), **4b** and **1b** (B), **4c** and **1c** (C), **4d** and **1d** (D), **4g** and **1g** (E) and **4h** and **1h** (F).

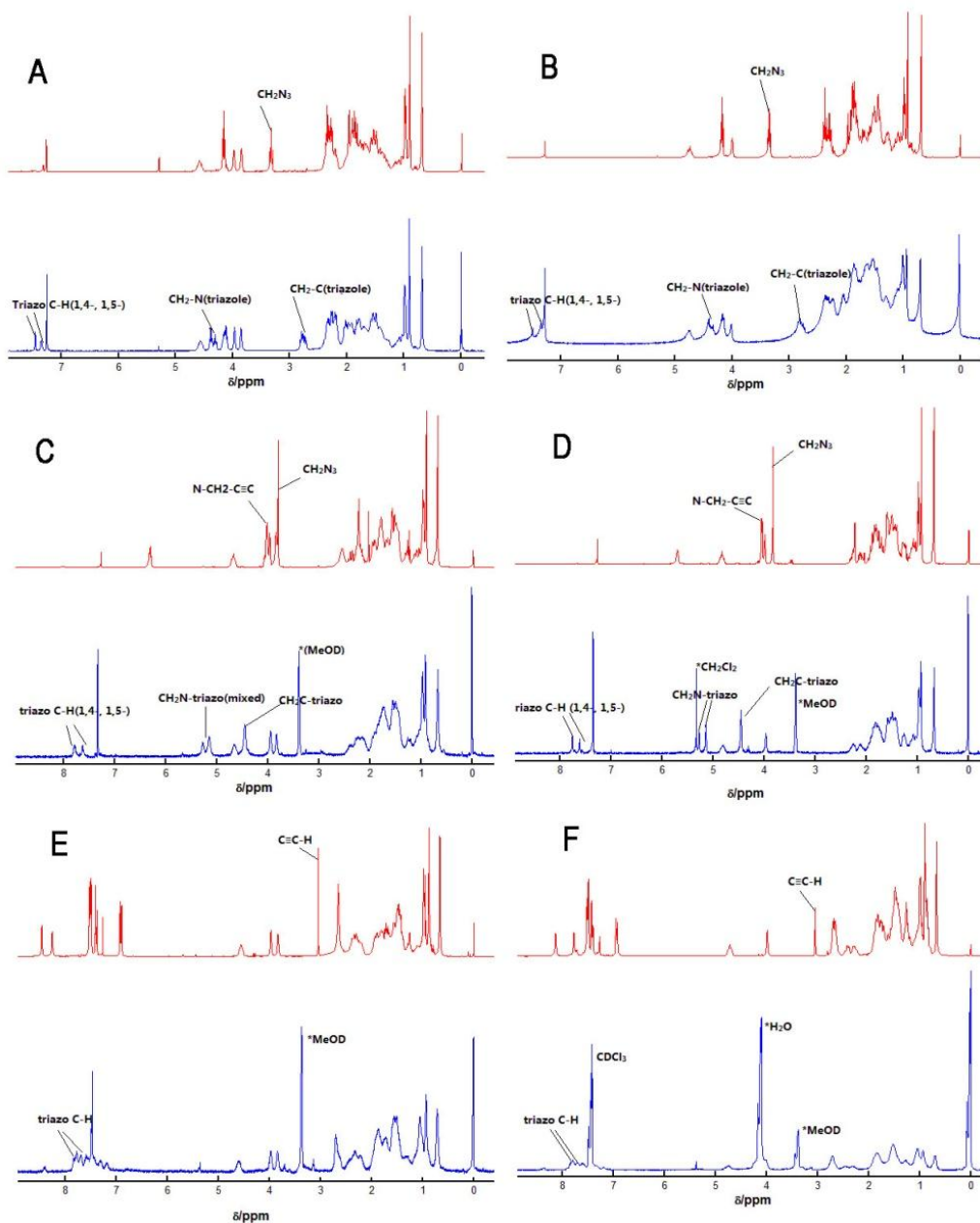


Figure S3 ^1H NMR spectra of bile acid monomers and the corresponding polymers **4a** and **1a** (A), **4b** and **1b** (B), **4c** and **1c** (C), **4d** and **1d** (D), **4g** and **1g** (E) and **4h** and **1h** (F).

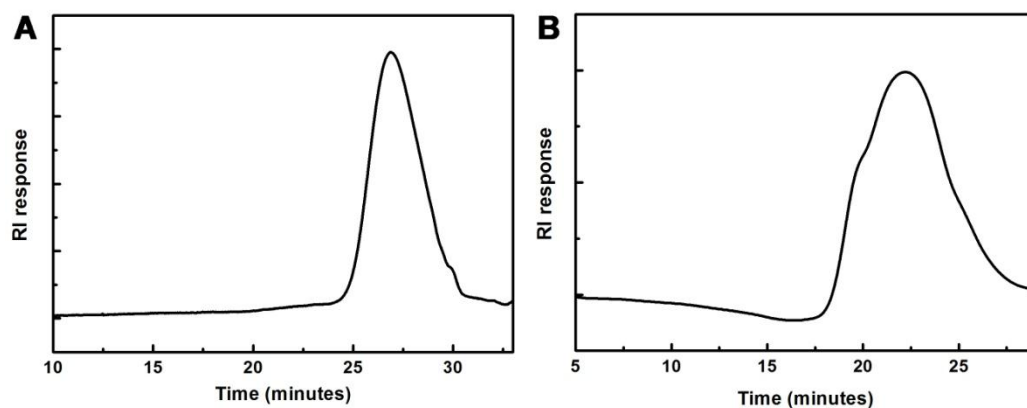
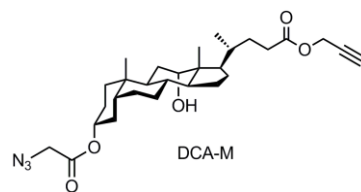


Figure S4 GPC spectra of DCA-P as synthesized from amorphous (A) and crystal state (B) monomers.

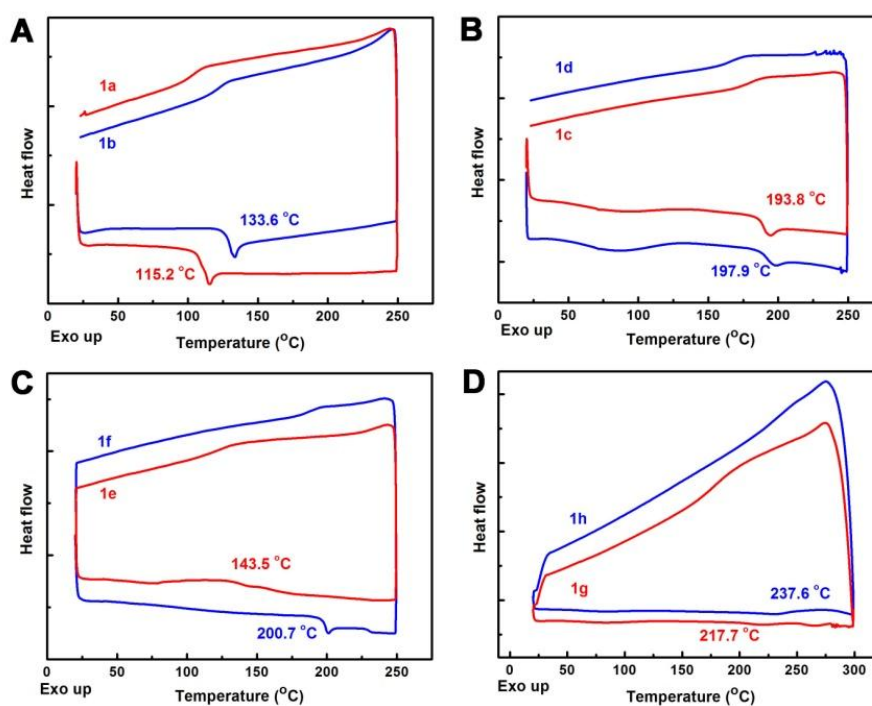


Figure S5 DSC heating and cooling curves of poly(bile acids) **1a** and **1b** (A), **1c** and **1d** (B), **1e** and **1f** (C), **1g** and **1h** (D).

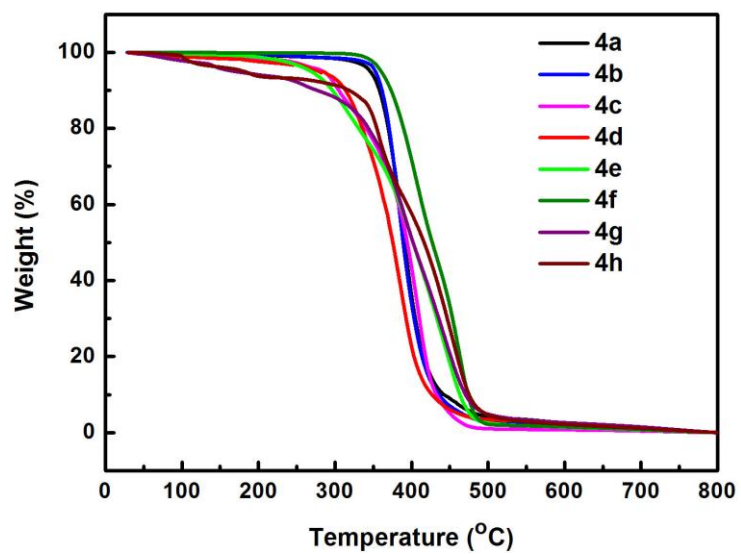


Figure S6 TGA thermograms of **4a-4h** recorded under nitrogen at a heating rate of $10\text{ }^{\circ}\text{C min}^{-1}$.