Electronic Supplementary Information

Metal-free phenylpropionate-azide polycycloaddition: efficient synthesis of functional poly(phenyltriarylcarboxylate)s

Wei Yuan, Weiwen Chi, Ting Han, Jun Du, Hongkun Li, Yongfang Li and Ben Zhong Tang

a State and Local Joint Engineering Laboratory for Novel Functional Polymeric Materials, Laboratory of Advanced Optoelectronic Materials, College of Chemistry, Chemical Engineering and Materials Science, Soochow University, Suzhou 215123, China. E-mail: hkli@suda.edu.cn
b Department of Chemistry, Hong Kong Branch of Chinese National Engineering Research Center for Tissue Restoration and Reconstruction, The Hong Kong University of Science & Technology, Clear Water Bay, Kowloon, Hong Kong, China. E-mail: tangbenz@ust.hk

Table of Contents

Fig. S1 IR spectra of monomers 1b (A) and 2 (B) and their polymer P1b/2 (C). S3
Fig. S2 IR spectra of monomers 1c (A) and 2 (B) and their polymer P1c/2 (C). S3
Fig. S3 IR spectra of monomers 1d (A) and 2 (B) and their polymer P1d/2 (C). S4
Fig. S4 IR spectra of monomers 1e (A) and 2 (B) and their polymer P1e/2 (C). S4
Fig. S5 1H NMR spectra of monomers 1b (A) and 2 (B) and their polymer P1b/2 (C) in CDCl3. The solvent and water peaks are marked with asterisks. S5
Fig. S6 1H NMR spectra of monomers 1c (A) and 2 (B) and their polymer P1c/2 (C) in CDCl3. The solvent and water peaks are marked with asterisks. S5
Fig. S7 1H NMR spectra of monomers 1d (A) and 2 (B) and their polymer P1d/2 (C) in CDCl3. The solvent and water peaks are marked with asterisks. S6
Fig. S8 1H NMR spectra of monomers 1e (A) and 2 (B) and their polymer P1e/2 (C) in CDCl3. The solvent and water peaks are marked with asterisks. S6
**Fig. S9** $^{13}$C NMR spectra of monomers 1b (A) and 2 (B) and their polymer P1b/2 (C) in CDCl$_3$. The solvent peaks are marked with asterisks.  

**Fig. S10** $^{13}$C NMR spectra of monomer 1c (A) and 2 (B) and their polymer P1c/2 (C) in CDCl$_3$. The solvent peaks are marked with asterisks.  

**Fig. S11** $^{13}$C NMR spectra of monomers 1d (A) and 2 (B) and their polymer P1d/2 (C) in CDCl$_3$. The solvent peaks are marked with asterisks.  

**Fig. S12** $^{13}$C NMR spectra of monomers 1e (A) and 2 (B) and their polymer P1e/2 (C) in CDCl$_3$. The solvent peaks are marked with asterisks.
Fig. S1 IR spectra of monomers 1b (A) and 2 (B) and their polymer P1b/2 (C).

Fig. S2 IR spectra of monomers 1c (A) and 2 (B) and their polymer P1c/2 (C).
Fig. S3 IR spectra of monomers 1d (A) and 2 (B) and their polymer P1d/2 (C).

Fig. S4 IR spectra of monomers 1e (A) and 2 (B) and their polymer P1e/2 (C).
**Fig. S5** $^1$H NMR spectra of monomers 1b (A) and 2 (B) and their polymer P1b/2 (C) in CDCl$_3$. The solvent and water peaks are marked with asterisks.

**Fig. S6** $^1$H NMR spectra of monomers 1c (A) and 2 (B) and their polymer P1c/2 (C) in CDCl$_3$. The solvent and water peaks are marked with asterisks.
**Fig. S7** $^1$H NMR spectra of monomers 1d (A) and 2 (B) and their polymer P1d/2 (C) in CDCl$_3$. The solvent and water peaks are marked with asterisks.

**Fig. S8** $^1$H NMR spectra of monomers 1e (A) and 2 (B) and their polymer P1e/2 (C) in CDCl$_3$. The solvent and water peaks are marked with asterisks.
**Fig. S9** $^{13}$C NMR spectra of monomers 1b (A) and 2 (B) and their polymer P1b/2 (C) in CDCl$_3$. The solvent peaks are marked with asterisks.

**Fig. S10** $^{13}$C NMR spectra of monomer 1c (A) and 2 (B) and their polymer P1c/2 (C) in CDCl$_3$. The solvent peaks are marked with asterisks.
**Fig. S11** $^{13}$C NMR spectra of monomers 1d (A) and 2 (B) and their polymer P1d/2 (C) in CDCl$_3$. The solvent peaks are marked with asterisks.

**Fig. S12** $^{13}$C NMR spectra of monomers 1e (A) and 2 (B) and their polymer P1e/2 (C) in CDCl$_3$. The solvent peaks are marked with asterisks.