Electronic Supplementary Information

Metal-free phenylpropiolate-azide polycycloaddition: efficient synthesis of functional poly(phenyltriazolylcarboxylate)s

Wei Yuan,^a Weiwen Chi,^a Ting Han,^b Jun Du,^a Hongkun Li,*^a Yongfang Li^a and

Ben Zhong Tang*b

^aState 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
^bDepartment 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 P 1b/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 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.	S5	
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.	S5	
Fig. S7 ¹ H NMR spectra of monomers 1d (A) and 2 (B) and their polymer P1d	I/2 (C)	
in CDCl ₃ . The solvent and water peaks are marked with asterisks.	S6	
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.	S6	

Fig. S9 ¹³ C NMR spectra of monomers 1b (A) and 2 (B) and their polymer P1	b/2 (C)
in CDCl ₃ . The solvent peaks are marked with asterisks.	S7
Fig. S10 ¹³ C NMR spectra of monomer 1c (A) and 2 (B) and their polymer P1	.c/2 (C)
in CDCl ₃ . The solvent peaks are marked with asterisks.	S7
Fig. S11 ¹³ C NMR spectra of monomers 1d (A) and 2 (B) and their polymer P1	l d/2 (C)
in CDCl ₃ . The solvent peaks are marked with asterisks.	S8
Fig. S12 ¹³ C NMR spectra of monomers 1e (A) and 2 (B) and their polymer P1	e/2 (C)
in CDCl ₃ . The solvent peaks are marked with asterisks.	S 8



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 ¹H NMR spectra of monomers **1b** (A) and **2** (B) and their polymer P**1b/2** (C) in CDCl₃. The solvent and water peaks are marked with asterisks.



Fig. S6 ¹H 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 ¹H NMR spectra of monomers **1d** (A) and **2** (B) and their polymer P**1d/2** (C) in CDCl₃. The solvent and water peaks are marked with asterisks.



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.



Fig. S9 ¹³C NMR spectra of monomers **1b** (A) and **2** (B) and their polymer P**1b/2** (C) in CDCl₃. The solvent peaks are marked with asterisks.



Fig. S10 ¹³C NMR spectra of monomer 1c (A) and 2 (B) and their polymer P1c/2 (C) in CDCl₃. The solvent peaks are marked with asterisks.



Fig. S11 ¹³C NMR spectra of monomers **1d** (A) and **2** (B) and their polymer P**1d/2** (C) in CDCl₃. The solvent peaks are marked with asterisks.



Fig. S12 ¹³C NMR spectra of monomers 1e (A) and 2 (B) and their polymer P1e/2 (C) in CDCl₃. The solvent peaks are marked with asterisks.