Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

Electronic Supplementary Information

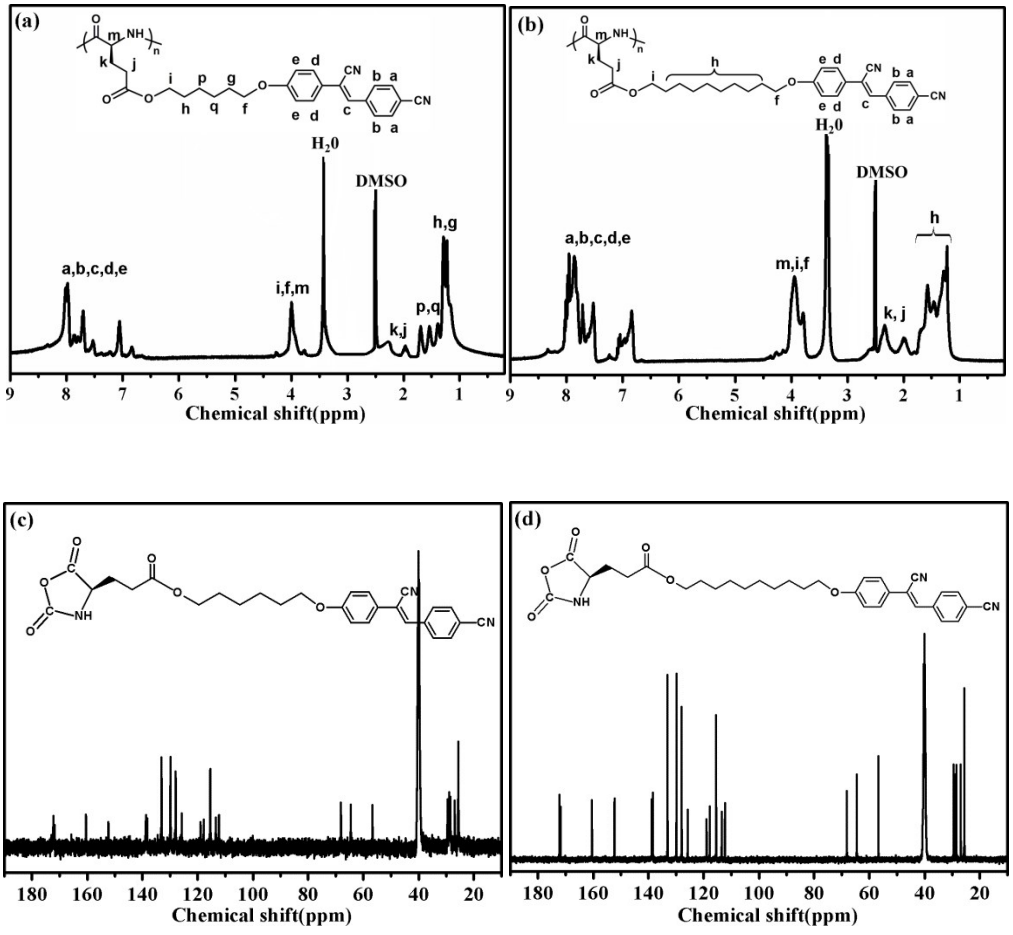
Preparation and Property Manipulation of High Efficiency Circularly Polarized Luminescent Liquid Crystal Polypeptides

Youde Chen, Peng Lu, Yongjie Yuan,* Hailiang Zhang,*

Key Laboratory of Polymeric Materials and Application Technology of Hunan Province, Key Laboratory of Advanced Functional Polymer Materials of Colleges and Universities of Hunan Province, College of Chemistry, Xiangtan University, Xiangtan 411105, Hunan Province, China.

E-mail: hailiangzhang@xtu.edu.cn; yuanyongjie@xtu.edu.cn

Chemical structure and performance characterizations



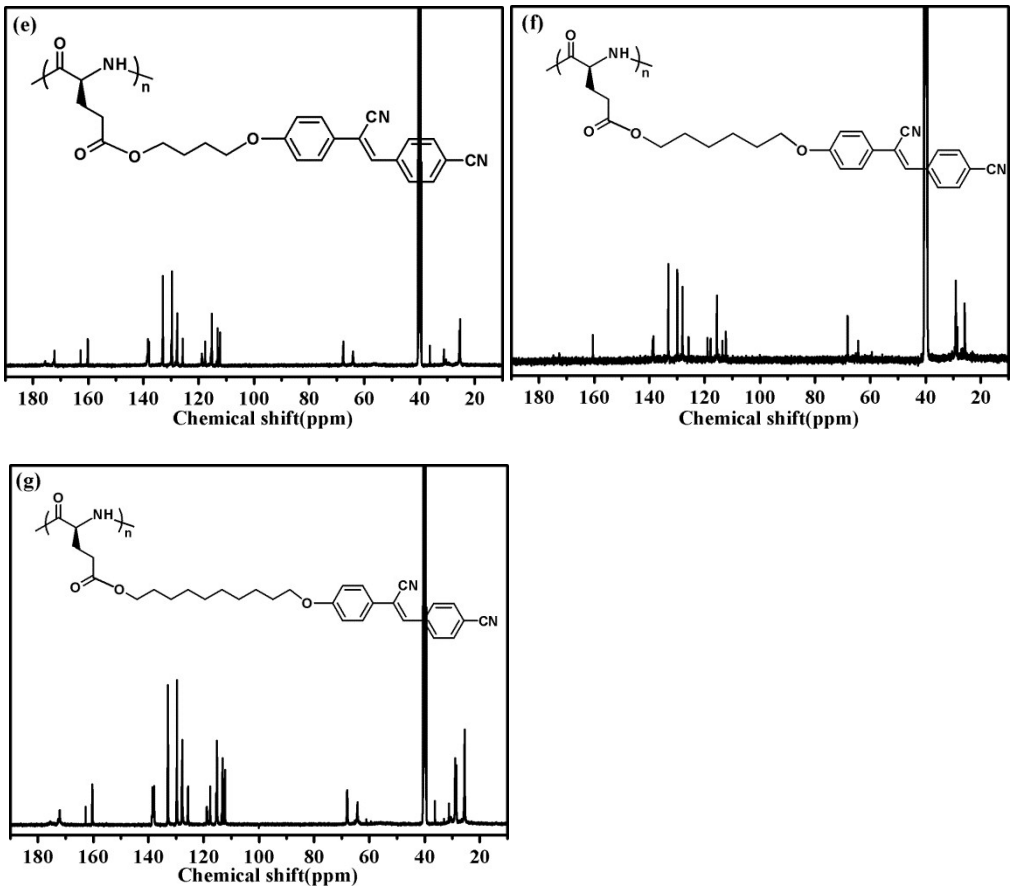


Fig.S1 ^{1}H NMR spectra of polymer PGAC-6 (a) and PGAC-10 (b) in DMSO-d_6; ^{13}C NMR spectra of MNCA-6 (c) and MNCA-10 (d) in DMSO-d_6; ^{13}C NMR spectra of PGAC-4 (e), PGAC-6 (f) and PGAC-6 (g) in DMSO-d_6.

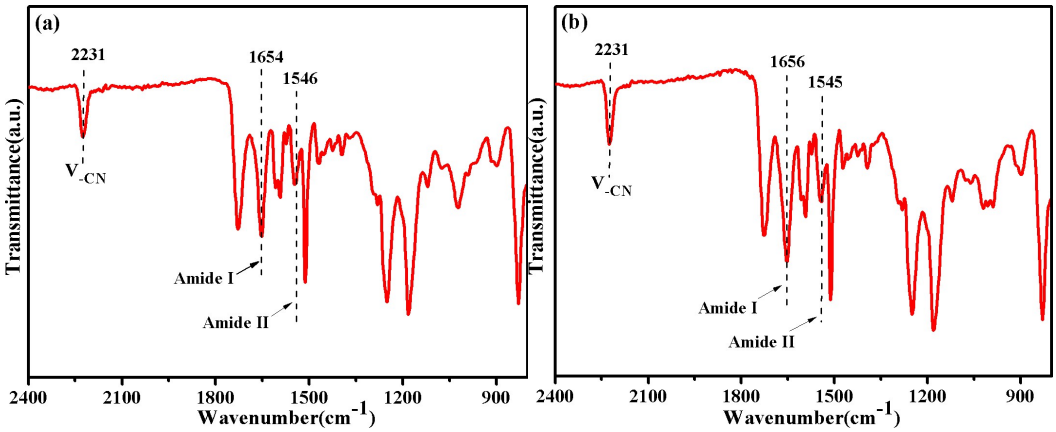


Fig.S2 FT-IR spectra of polymer PGAC-6 (a) and PGAC-10 (b) in solid state.

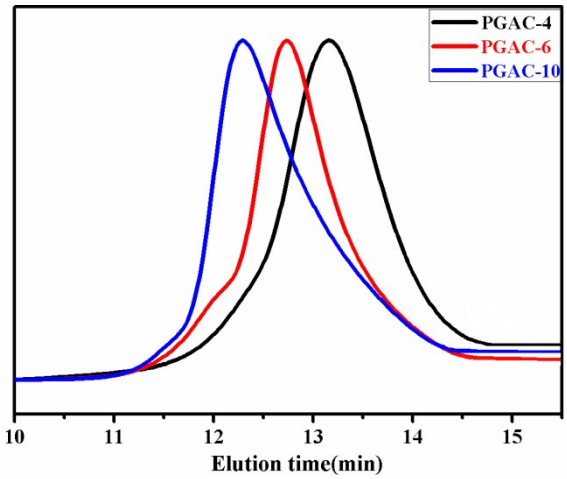


Fig.S3 GPC curves of PGAC-m.

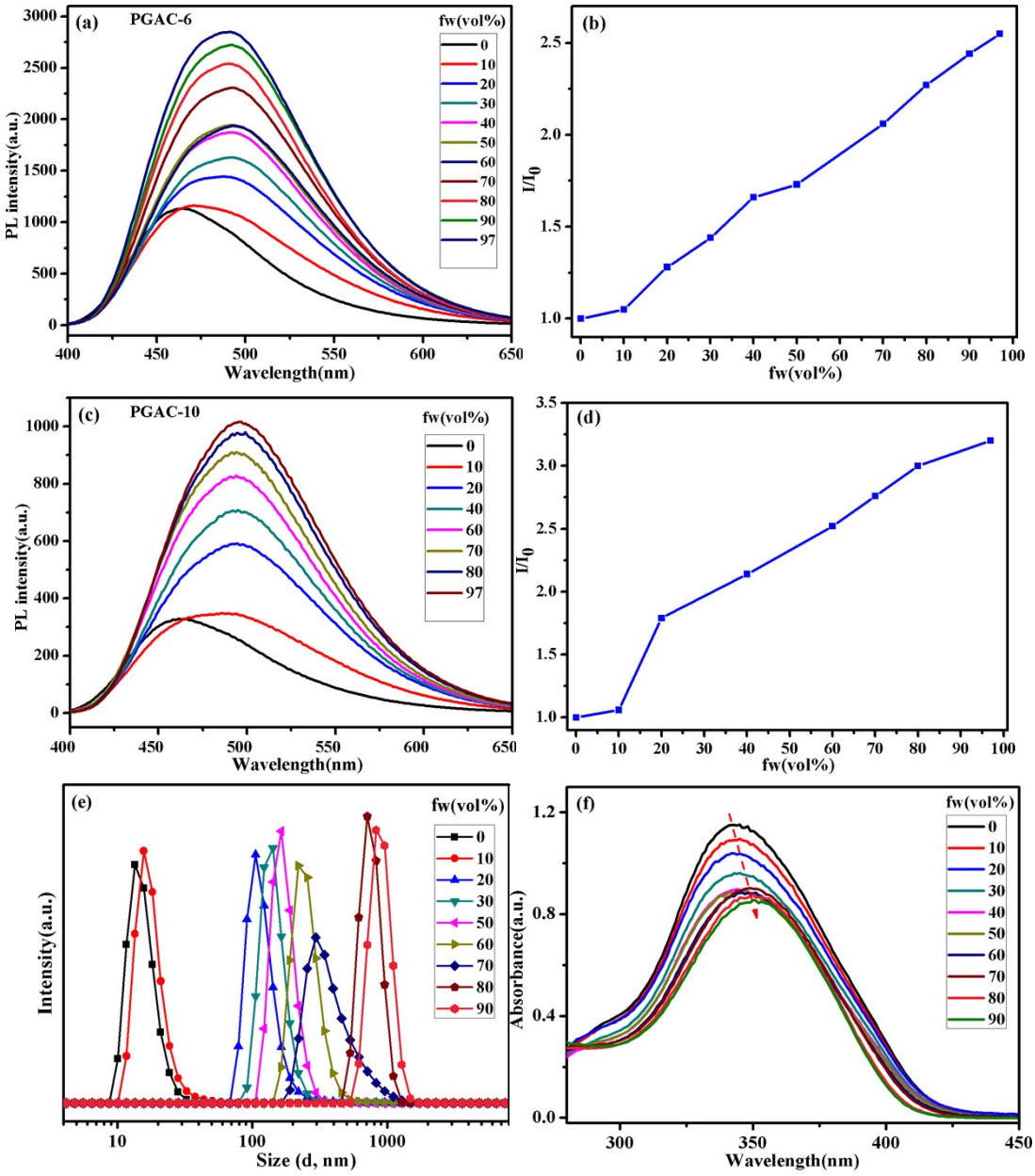


Fig.S4 The emission spectra of (a) polymer PGAC-6 and (c) polymer PGAC-10 in DMF-water mixtures with incremental water fractions; the PL enhancement ratio (I/I_0) of (b) polymer PGAC-6 and (d) polymer PGAC-10; (e) The DLS of PGAC-4 with incremental f_w; (f) The UV-visible absorption spectra of PGAC-4 with incremental f_w; (Excitation wavelength: 365 nm. Concentration = 1×10^{-5} mol L^{-1}).

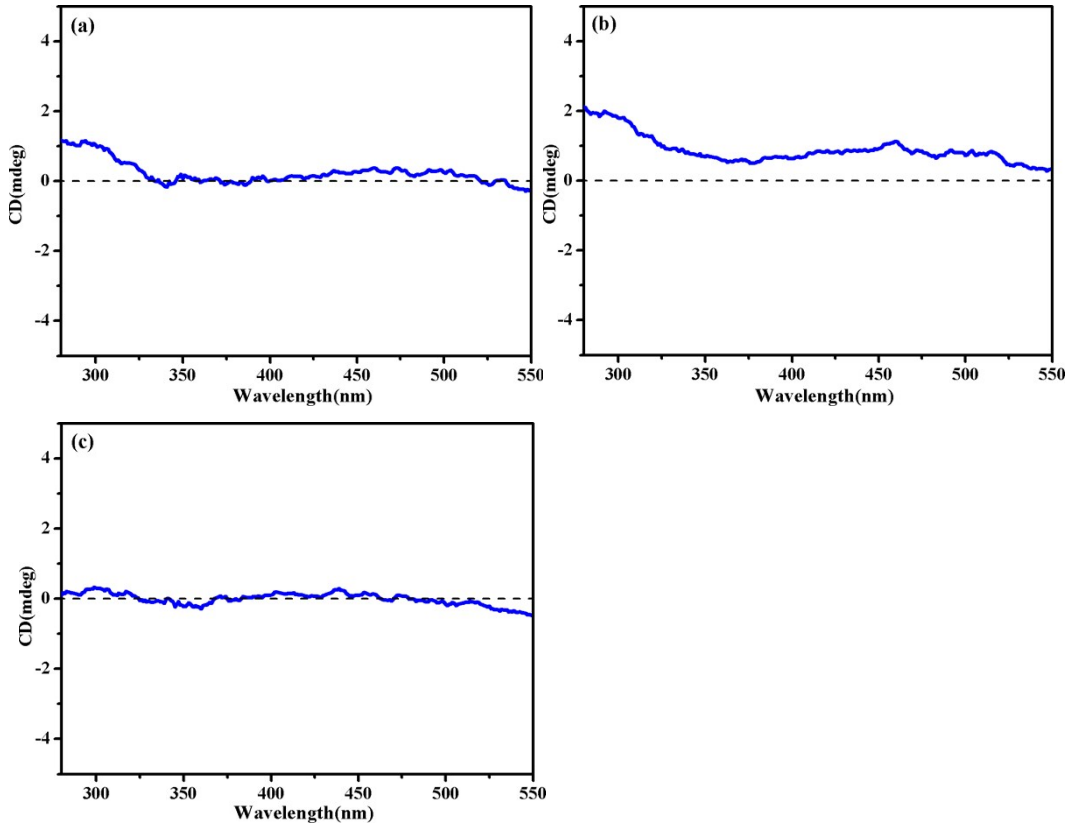


Fig.S5 The CD spectra of target polymers in DMF solution; (a) PGAC-4, (b) PGAC-6, (c) PGAC-10

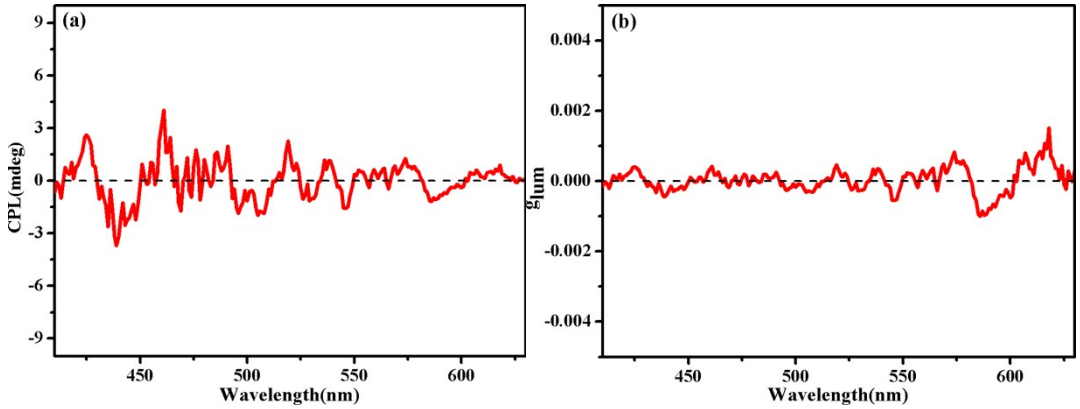


Fig.S6 The CPL spectrum (a) and synchronous g_{lum} spectrum (b) of PGAC-4 in DMF solution; Excitation wavelength = 350 nm.

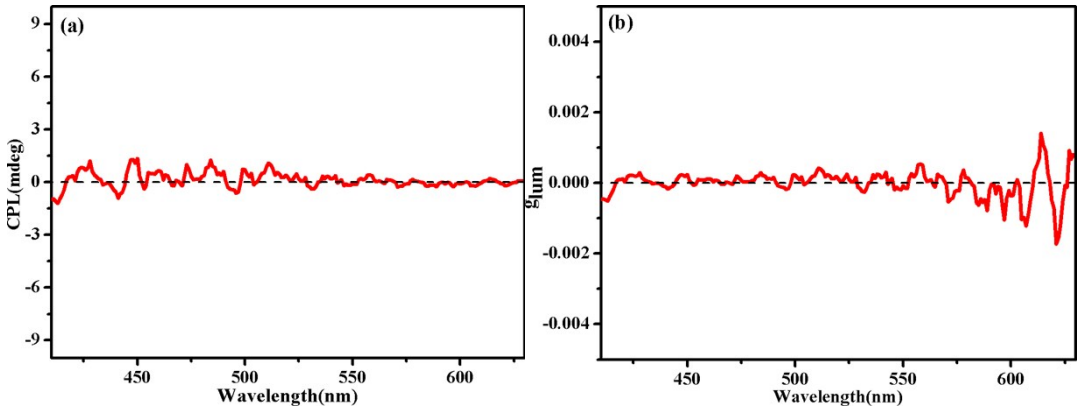


Fig.S7 The CPL spectrum (a) and synchronous g_{lum} spectrum (b) of PGAC-6 in DMF solution; Excitation wavelength = 350 nm.

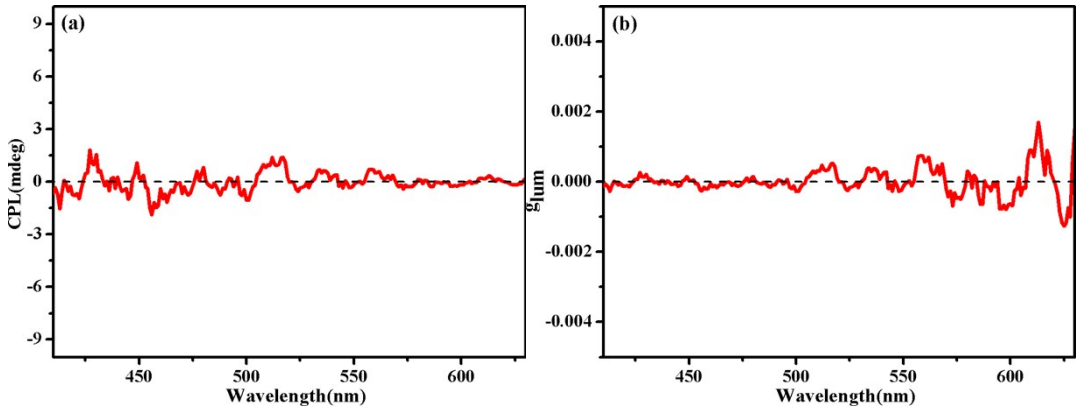


Fig.S8 The CPL spectrum (a) and synchronous g_{lum} spectrum (b) of PGAC-10 in DMF solution; Excitation wavelength = 350 nm.

Table S1. Comparison of CPL properties of PGAC-4 with that of some reported non-doped CPL-active polymer materials in literatures.

Polymers	$\|g_{lum}\|$ ($\times 10^{-3}$)	Quantum yield (%)	Reference
P(TPE-Alanine)	4.5	16.8	Q. Liu et al.[1]
S-P (R-P)	14.5 (8.2)	12.3	J. Ma et al.[2]
R-P1 (S-P1)	10	16 (14)	H. Hayasaka et al.[3]
R/S-P1, P2, P3	1-2	21-26	Y. Wang et al.[4]
P5 (P10)	2.01 (1.39)	6.7 (10.3)	Y. Hu et al. [5]
S-P (R-P)	24 (19)	14.8	L. Yang et al [6]
PGAC-4	**45**	**30.2**	**This work**

References

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