

ESI for

Perylene carboxylate modified titanium-oxide gel, a functional material with photoswitchable fluorescent property

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Fig. S1 EDS analysis of the precipitate confirmed that it contains Ti, O and C.

Fig. S2 The FTIR spectrum of the precipitate confirmed the PTC-TiO coordination state.

Fig. S3 The schematical view of the *G*-form (a) and *O*-form (b) in PTC-TiO solution or gel.

Fig. S4 The XRD results of the films by coating the gel on glass substrate, indicating the amorphous nature.

Fig. S5 The TG results of the gels in different dryness.

Fig. S6 The XPS results of the PTC-TiO dry gel, (a) Ti2p, (b) C1s and (c) O1s.

Fig. S7 The photographs of the *G*-form gels (a), after irradiation (b) and then oxygen blowing (c).

Fig. S8 The photographs of the fluorescence of the *G*-form gels (a), after irradiation (b) and then oxygen blowing (c).

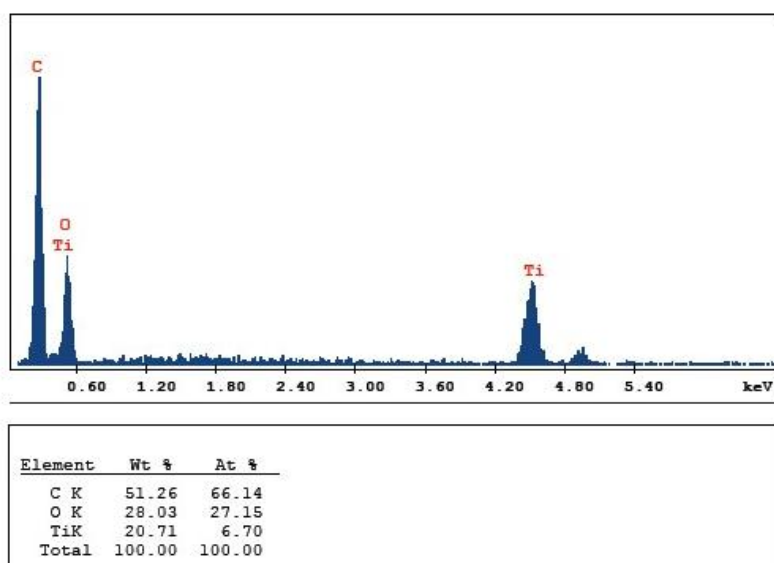


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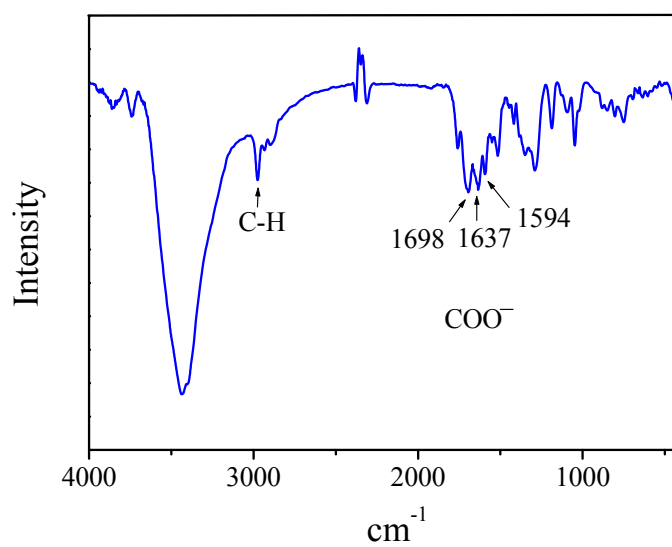


Fig. S2 The FTIR spectrum of the precipitate confirmed the PTC-TiO coordination state.

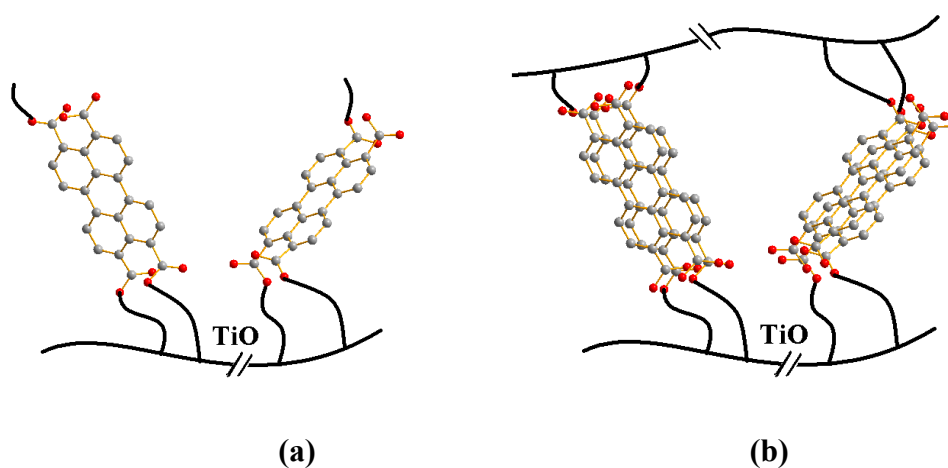


Fig. S3 The schematical view of the *G*-form (a) and *O*-form (b) in PTC-TiO solution or gel.

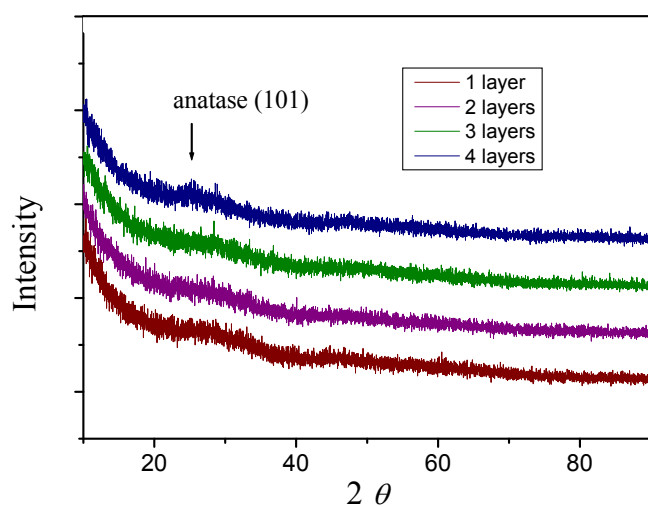


Fig. S4 The XRD results of the films by coating the gel on glass substrate, indicating the amorphous nature.

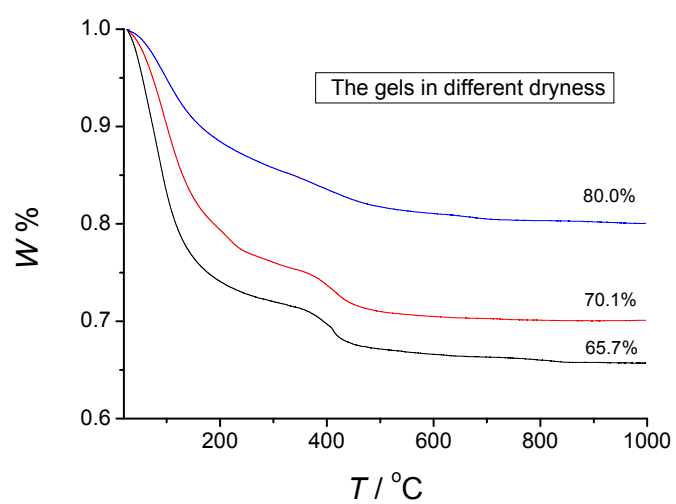
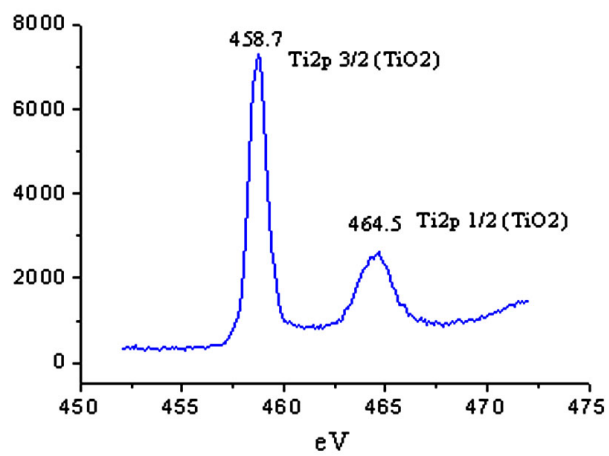
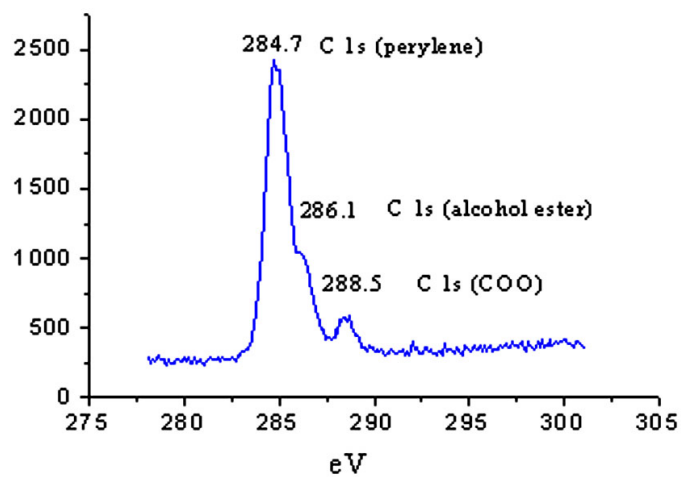


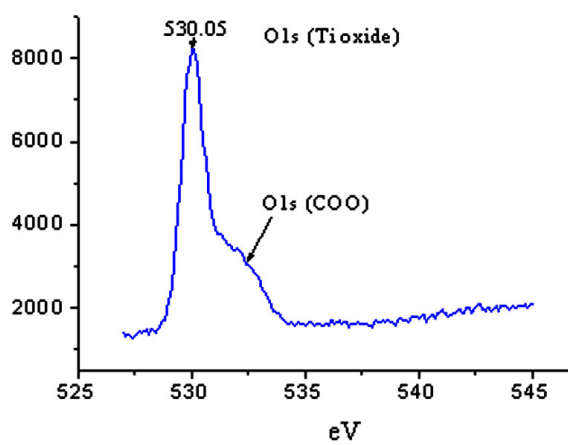
Fig. S5 The TG results of the gels in different dryness.



(a)



(b)



(c)

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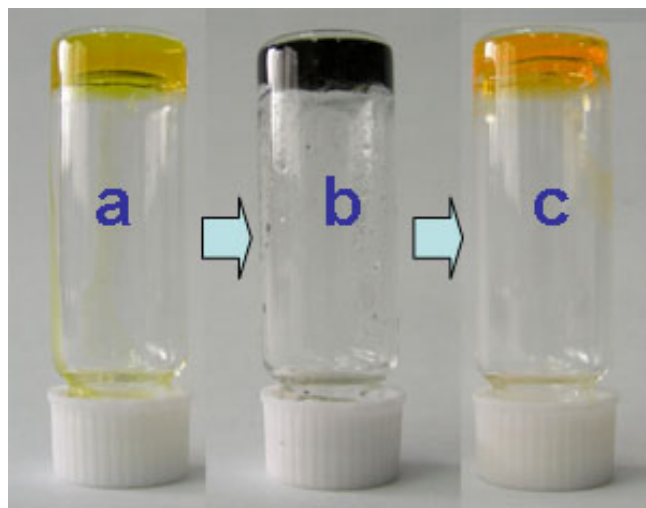


Fig. S7 The photographs of the *G*-form gels (a), after irradiation (b) and then oxygen blowing (c).

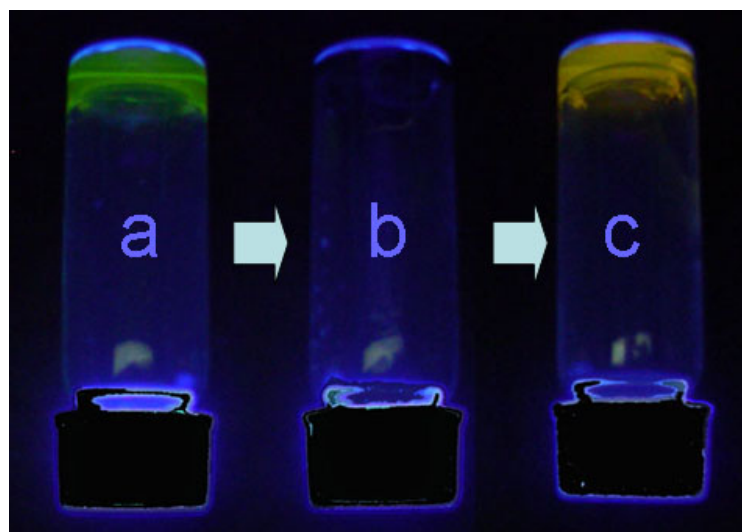


Fig. S8 The photographs of the fluorescence of the *G*-form gels (a), after irradiation (b) and then oxygen blowing (c).