

**Temperature and pH sensitive photoluminescence behaviour of a melamine
containing bicomponent hydrogel**

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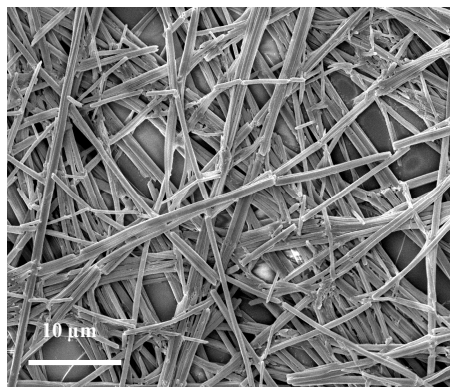
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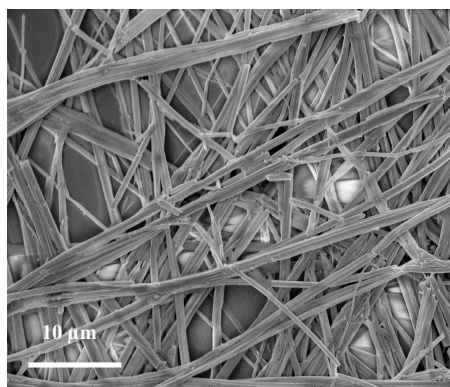
ELECTRONIC SUPPORTING INFORMATION

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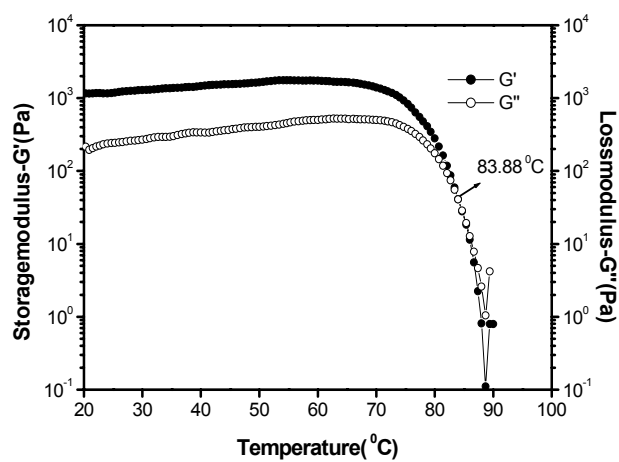


(a)

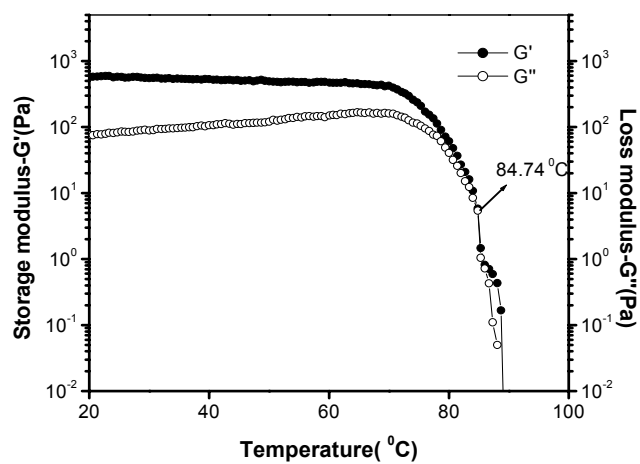


(b)

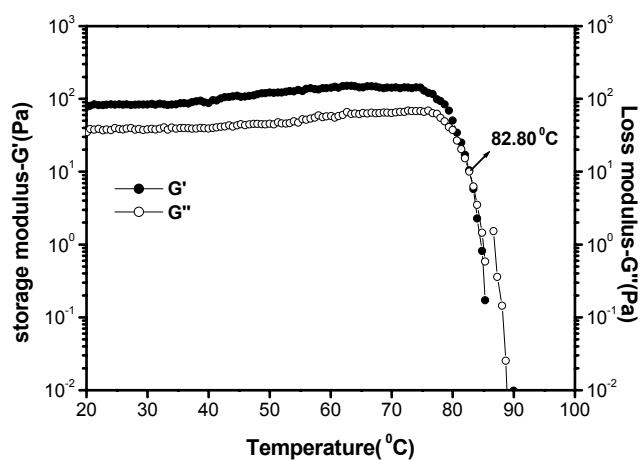
Figure S1. FESEM microscopy image of (a) MQ13 and (b) MQ31 hydrogel system



(a)

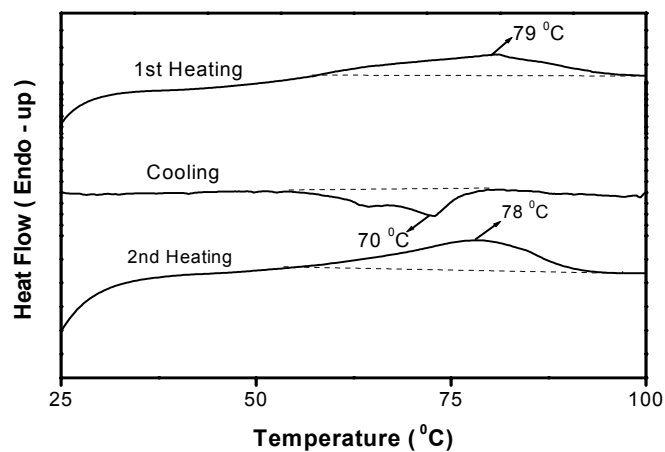


(b)

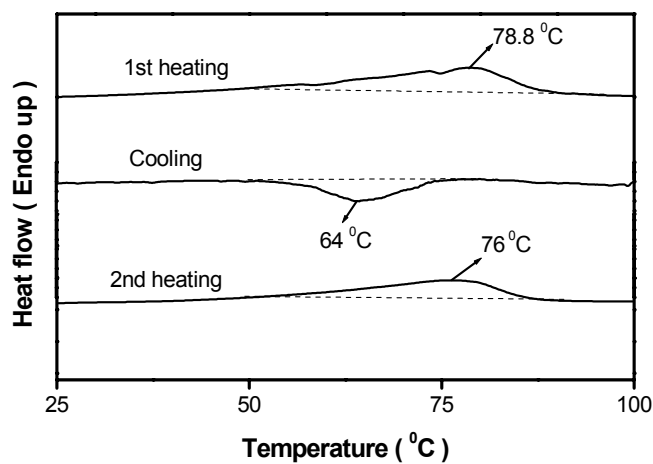


(c)

Figure S2. Rheological temperature ramp of (a) MQ11 (b) MQ13 and (c) MQ31 hydrogel (1% w/v, 3 days aged hydrogel)

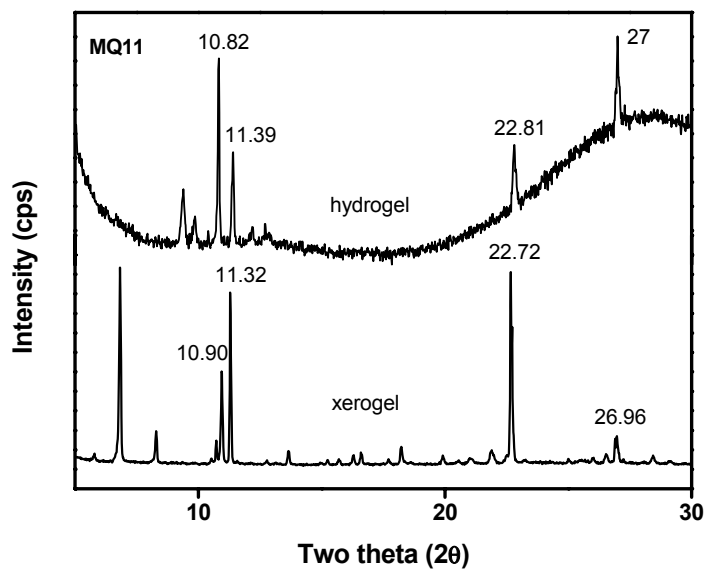


(a)

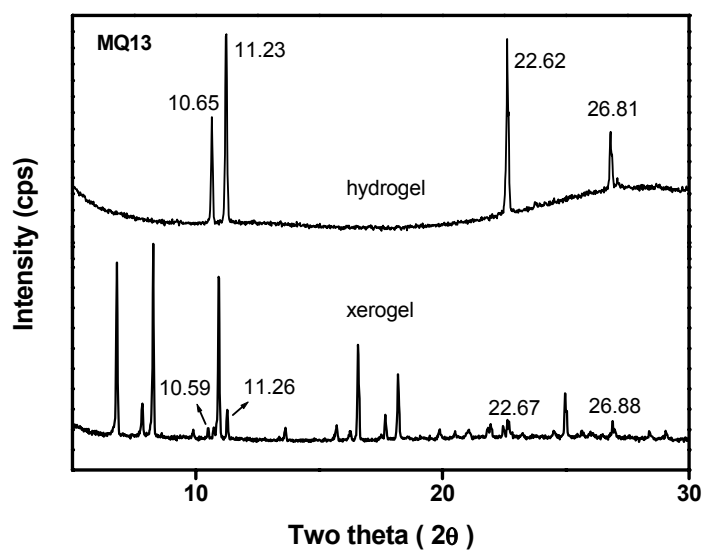


(b)

Figure S3. DSC data of (a) MQ13 and (b) MQ31 hydrogel systems (1 %w/v, H₂O, 3 days aged).

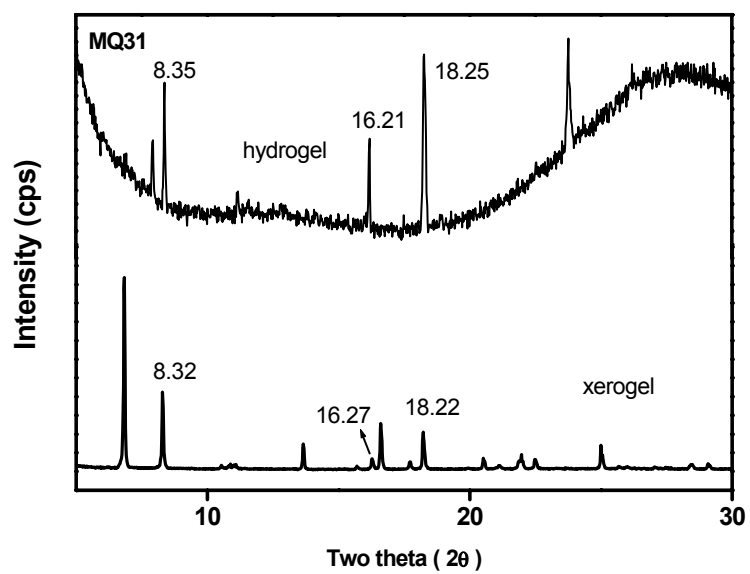


(a)



(b)

Figure S4. WAXS patterns of hydrogel and xerogel of (a) MQ11 and (b) MQ13 gel system.



(c)

Figure S4. (c) WAXS patterns of hydrogel and xerogel of MQ31 gel system.

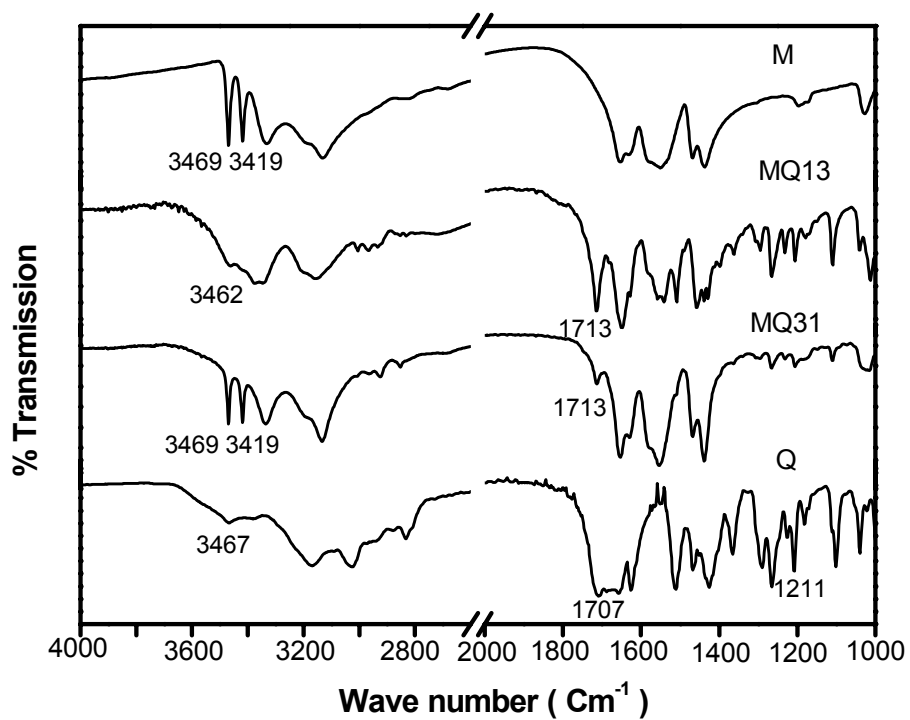
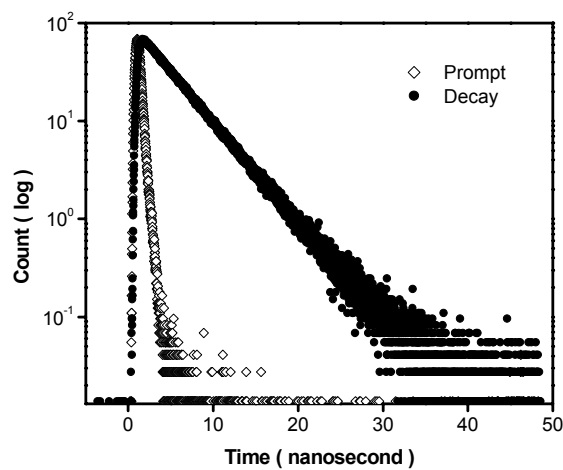
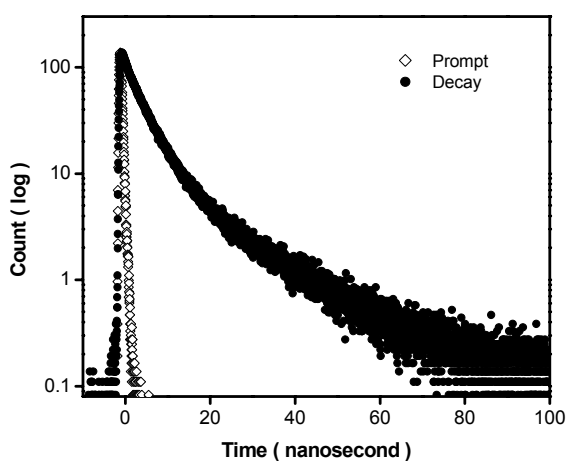


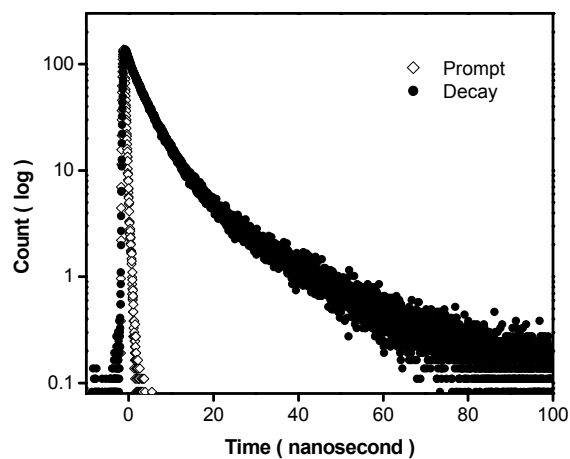
Figure S5. FTIR spectra of pure M, Q and xerogels MQ13 and MQ31 (Dried in vacuum for 5 days)



(a)



(b)



(c)

Figure S6. Time-resolved fluorescence decay of (a) Pure Q (b) MQ13 and (c) MQ31 (0.5 % w/v) hydrogel at 25⁰C ($\lambda_{\text{ex}} = 295$ nm). The sharp profile on the left is the lamp profile.