Electronic Supporting Information

A Novel Smart Supramolecular Organic Gelator Exhibiting Dual-channel Responsive Sensing Behaviours towards Fluoride ion via Gel-Gel States

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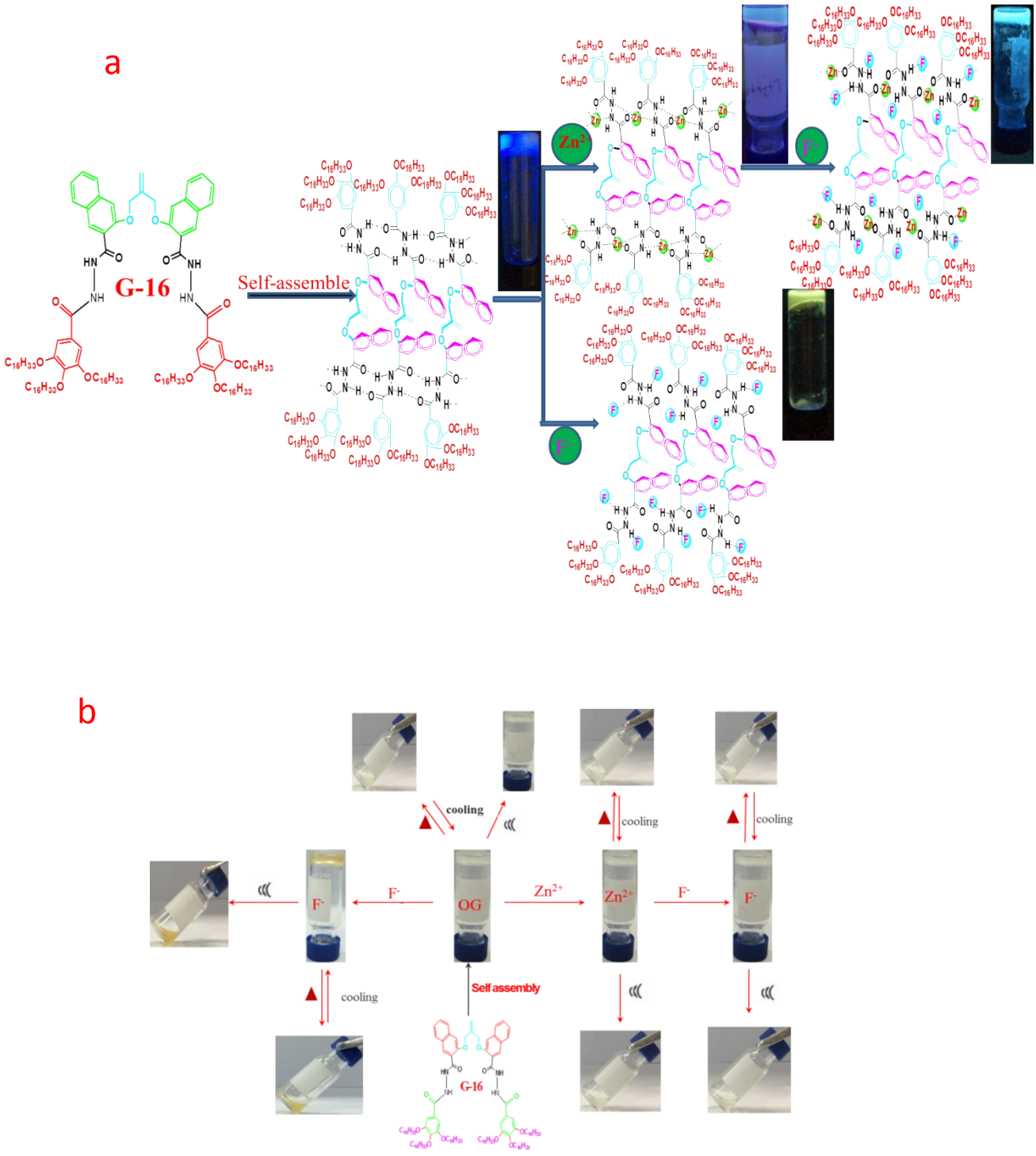

Figure S1. (a) The presumed self-assembly and stimuli-responsive mechanism of **OG** and metallogel **OG-Zn** towards fluoride ion. (b) Photograph of Sol–gel phase transition of **OG**, **OG-Zn**, **OG-Zn-F** and **OG-F** in response to thermal and mechanical stimuli.

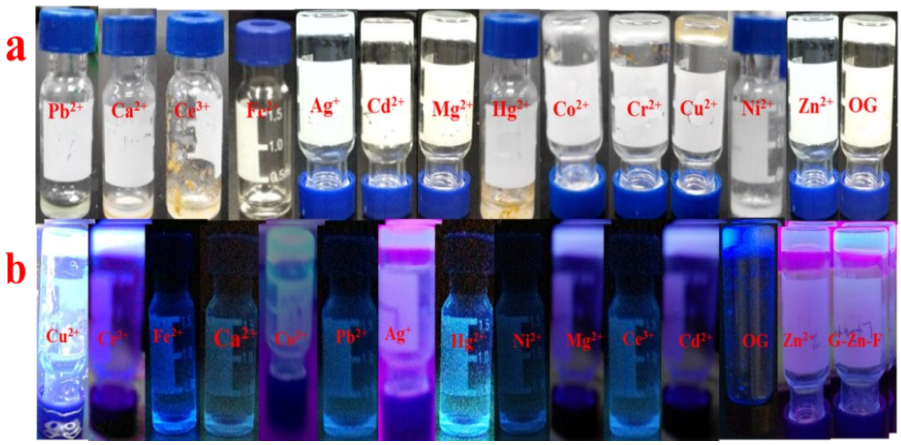

Figure S2. Photographs of organogel of **OG** in DMF 1% w/v) and organogel **OG** in the presence of various metal ions (in DMF, 1%, w/v, using their perchlorate salts as the sources, **OG**: cation = 1: 1) under (a) Day light (b) UV light.

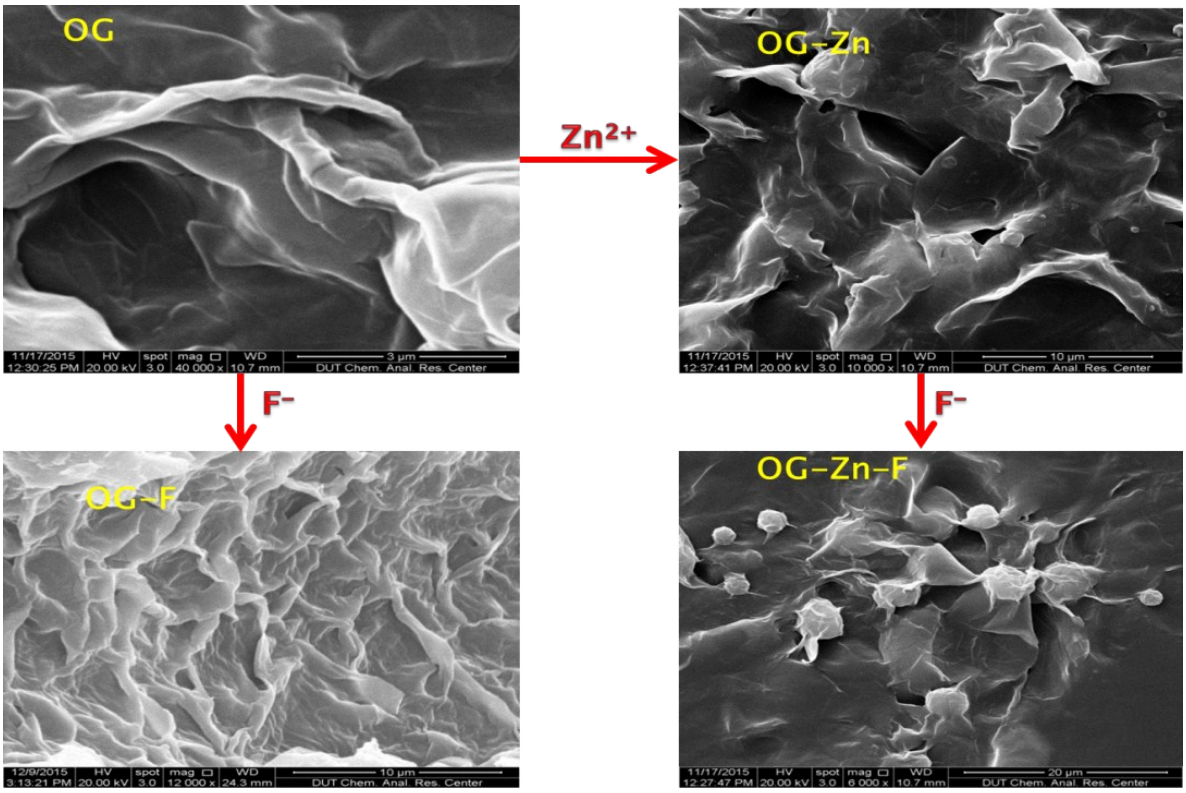

Figure S3. SEM images of xerogels of **OG**, **OG-Zn** (1:1), **OG-Zn-F** (1:1:1) and **OG-F** (1:1) (obtained from 1% DMF organogel).

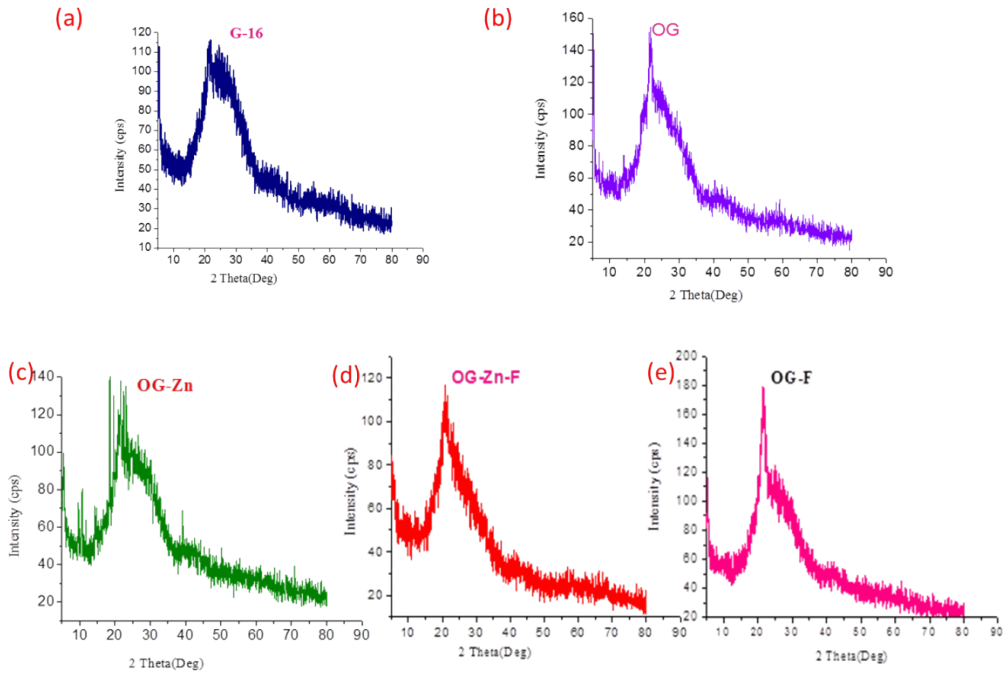

Figure S4. Powder XRD patterns of organic gelator and xerogels (a) **G-16** (b) **OG** xerogel (obtained from 1 % DMF organogel) (c) **OG-Zn** xerogel (obtained from 1% DMF **OG** : Zn^{2+} = 1 : 1) (d) **OG-Zn-F** xerogel **OG** : Zn^{2+} :F (1: 1 : 1) (e) **OG-F** xerogel **OG** :F (1: 1).

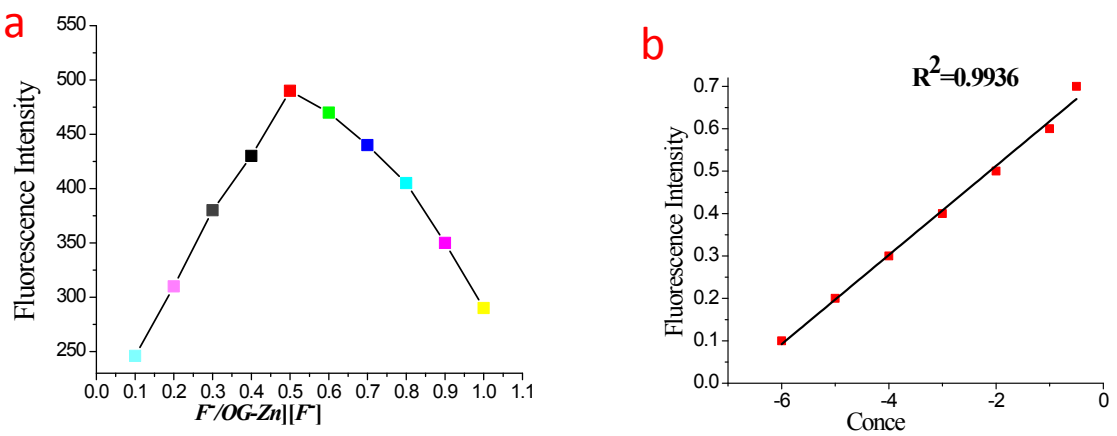

Figure S5. (a) Job's plot of metallogel **OG-Zn** and F^- ion which indicated the stoichiometry of **OG–Zn –F** Complex is 1:1. (b) Plot of the linear relationship value of **OG-Zn** with F^- ion (Right).

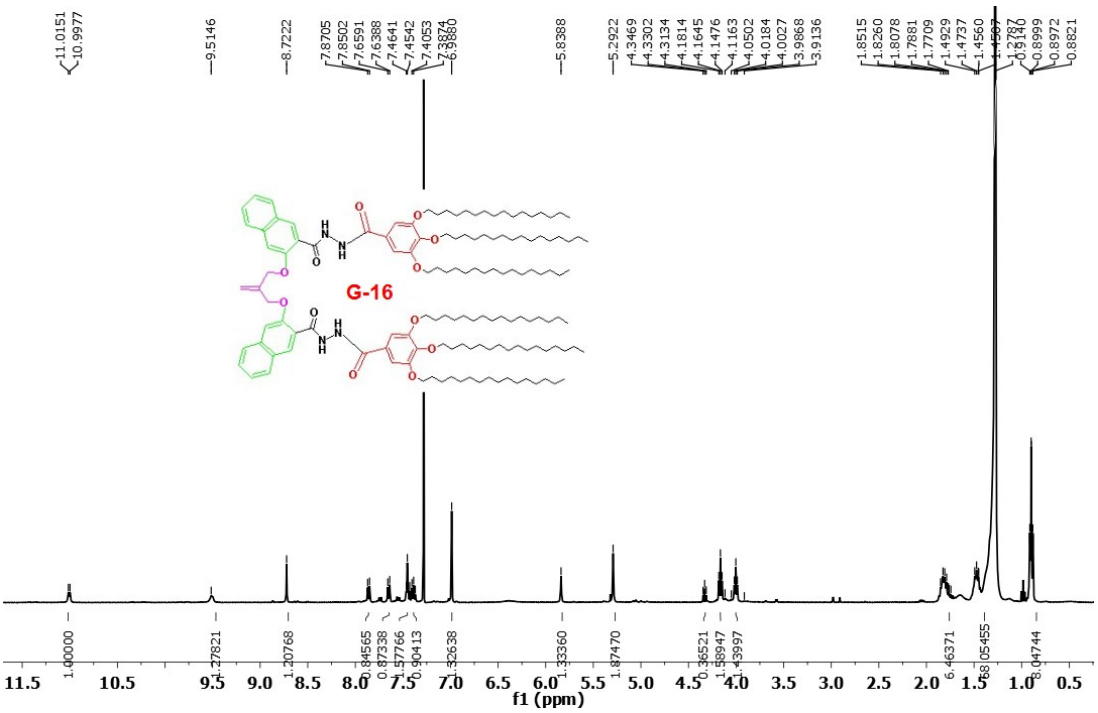

Figure S6. ^{1}H NMR spectrum of supramolecular organic gelator **G-16.**

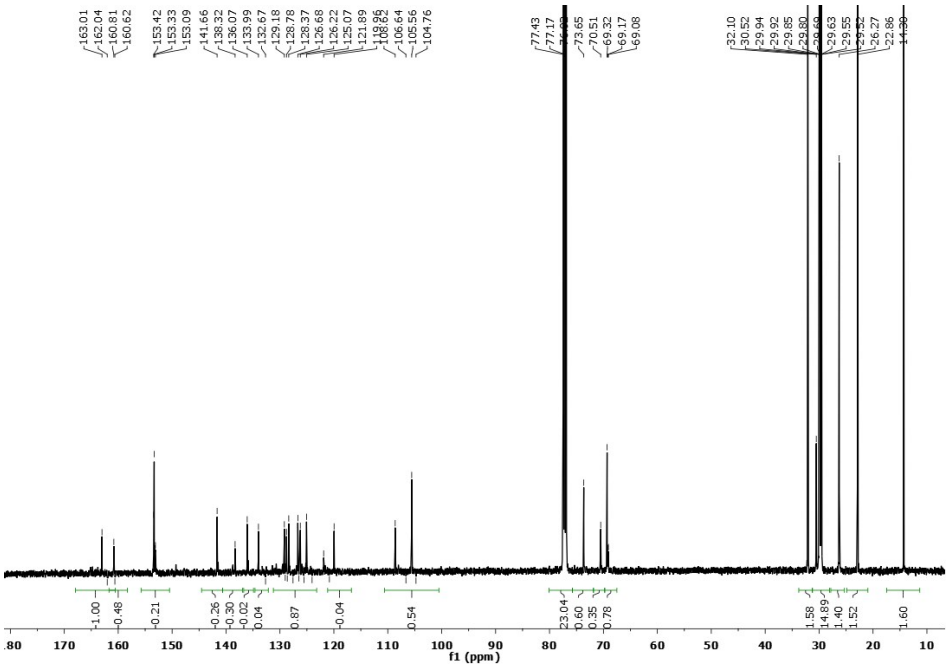

Figure S7. ^{13}C NMR spectrum of supramolecular organic gelator **G-16.**

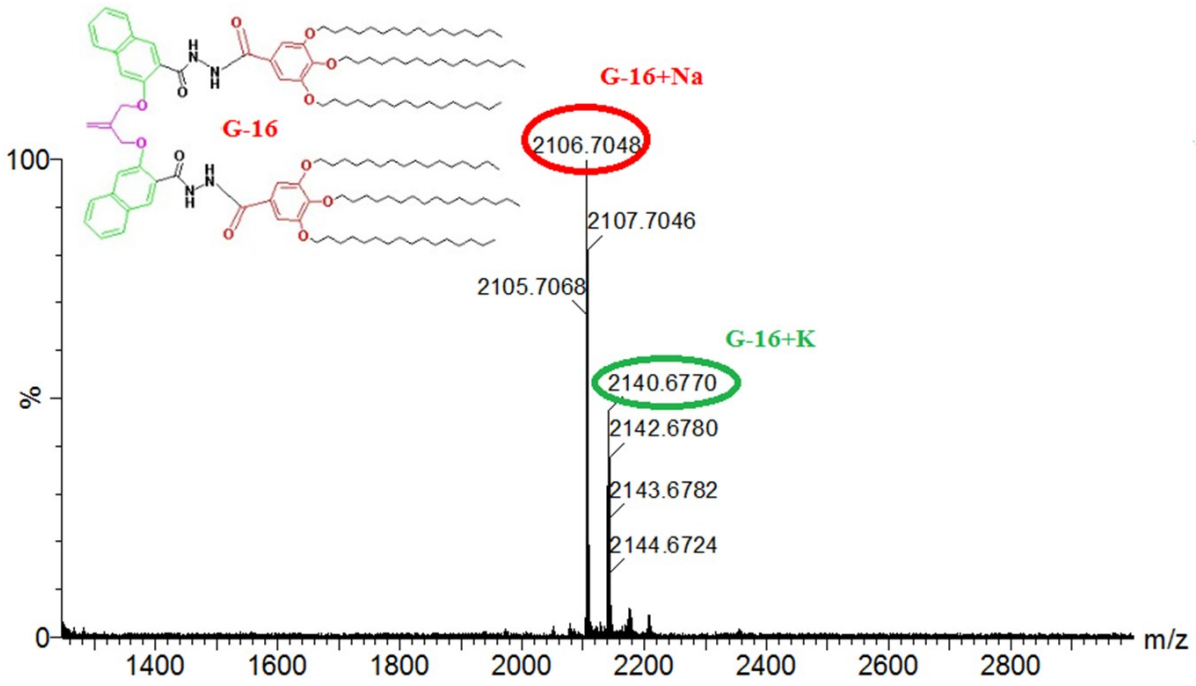

Figure S8. Mass spectrum of supramolecular organic gelator **G-16.**