Supporting Information

Gel properties of T-shaped tetrathiafulvalene-pyridazine conjugates and regulation in the presence of F₄TCNQ

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Figure S1. Absorption spectra of 1b (black line), after addition of 1 equiv. of F₄TCNQ (blue line) and F₄TCNQ (red line) in CHCl₃ (5 × 10⁻⁵ M) solution.

Figure S2. Tuning the gel formation of gelator 1b by the addition of 1.0 equiv. F₄TCNQ in toluene.
Figure S3. TGA curves of the gelators 1a-c.
Figure S4. FT-IR spectra of native xerogel of 1b from toluene (b), the CT complex gel of 1b with F₄TCNQ (mole ratio = 1 : 1) from toluene (c) and the F₄TCNQ powder (d).

Figure S5. Variable-concentration ¹H-NMR spectra of 1b in CDCl₃.
Figure S6. Variable-concentration UV-Vis spectra of 1b in DMF dilute solution.
Concentrations from bottom to top: $1 \times 10^{-5}$M, $3 \times 10^{-5}$M, $6 \times 10^{-5}$M, $9 \times 10^{-5}$M, $2 \times 10^{-4}$M, $5 \times 10^{-4}$M, respectively.
Figure S7. The CV curves of (a) 1b (1 mM), (b) native xerogel of 1b from DMF, (c) CT complex xerogel of 1b with F$_4$TCNQ and (d) F$_4$TCNQ (1 mM) in benzonitrile. Scan rate was 100 mV s$^{-1}$, with Pt as the counter electrode, glass carbon as the working electrode and Ag/AgCl electrode (saturated KCl) as the reference electrode, and Bu$_4$NPF$_6$ (0.1 M) as supporting electrolyte.

Figure S8. UV-Vis absorption spectra of 1b in CHCl$_3$ ($2\times10^{-5}$ M) solution with gradually increasing the concentration of F$: 0$ eq. F$^-$ (black line), 0.5 eq. F$^-$ (pink line), 1.0 eq. F$^-$ (blue line), 2.0 eq. F$^-$ (yellow-green line), 3.0 eq. F$^-$ (red line).

Figure S9. Photographs of the 1b organogel (toluene, 25 mg/mL) upon the addition of 2.0 equiv. of each anion. From left to right is F$^-$, Cl$^-$, Br$^-$, I$^-$, AcO$^-$, HSO$_4^-$, H$_2$PO$_4^-$, respectively.
$^1$H, $^{13}$C NMR and MALDI-TOF-MS Spectra

$^1$H NMR of 3a
$^{13}$C NMR of 3a

MALDI-TOF-MS of 3a

EM: 812.19 MW: 813.21
$^1$H NMR of $3b$

$^{13}$C NMR of $3b$
MALDI-TOF-MS of 3b

EM: 924.32 MW: 925.42

1H NMR of 3c
$^{13}$C NMR of 3c

MALDI-TOF-MS of 3c
$^1$H NMR of 1a

$^{13}$C NMR of 1a
MALDI-TOF-MS of 1a

EM: 1118.57 MW: 1119.83

{H NMR of 1b
$^{13}$C NMR of 1b

MALDI-TOF-MS of 1b
$\text{H NMR of 1c}$

$\text{13C NMR of 1c}$
MALDI-TOF-MS of 1c

EM: 1398.88 MW: 1400.36