Electronic Supplementary Information for

Concurrent supramolecular gelation and fluorescence turn-on triggered by coordination of silver ion

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Electronic Supplementary Material (ESI) for Soft Matter This journal is C The Royal Society of Chemistry 2012

1. FT-IR spectra of the CN-TFMBPPE and the silver-coordinated complex gel.



Figure S1. FT-IR spectra of (a) CN-TFMBPPE (black line) and silver ion-coordinated complex gel (red line). (b) and (c) are their magnified plots.

Figure S1 showed the FT-IR spectra of CN-TFMBPPE (black line) and silver ion-coordinated gel (red line). FT-IR spectra were obtained by using the KBr pellet containing CN-TFMBPPE and silver ion-coordinated gel (dried) as a powder, respectively. Both spectra exhibited the typical peak of the nitrile

group at near 2220 cm⁻¹. For gel, the strong peak of the hydroxy group centered at 3490 cm⁻¹ was found. It is most probably due to the presence of the hydrate form that can be easily generated from the silver perchlorate connected to the CN-TFMBPPE ligands. The aromatic C-H stretch peaks originating from the pyridine and the benzene appear at 3032-3076 cm⁻¹ for CN-TFMBPPE, while these peaks appear at 3043-3103 cm⁻¹ for silver ion-coordinated gel. In particular, the pyridine ring vibration peaks appear at 1596 cm⁻¹ for CN-TFMBPPE, while these peaks appear at 1596 cm⁻¹ for CN-TFMBPPE, while these peaks appear at 1610 cm⁻¹ for silver ion-coordinated gel.

2. XRD pattern of the silver coordinate complex gel (dried state)



Figure S2. Small-angle X-ray diffraction pattern of the silver ion-coordinated complex gel. Inset indicates its wide angle X-ray diffraction pattern.

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3. The energy-dispersive X-ray (EDX) spectra of the dried gel after UV irradiation.



Figure S3. The energy-dispersive X-ray (EDX) spectra of the dried gel after UV irradiation.