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## **Supporting Information**

## Surfactants-mediated morphology and fluorescent properties of amino acidsbased lanthanide coordination polymers

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Figure S1. Chemical structures of surfactants CTAB, PVP and SDS.



Figure S2. Selected area electron diffraction (SAED) image of Phe/Tb CPs.



Figure S3. Thermogravimetric analysis of Phe/Tb CPs.



Figure S4. SEM images of Tb/Phe CPs prepared by using equal molar initial reactants of 50 mM

(a) and 100 mM (b).



Figure S5. FTIR spectra of Phe/Tb CPs synthesized by the addition of CTAB, SDS and PVP (each 25 mg).



Figure S6. Selected area electron diffraction (SAED) images of Phe/Tb CPs in the presence of CTAB (a), SDS (b) and PVP (c).

Elements	C (wt%) <sup>a</sup>	O (wt%) <sup>a</sup>	Tb (wt%) <sup>a</sup>	N (wt%) <sup>a</sup>	S (wt%) <sup>a</sup>	Br (wt%) <sup>a</sup>
Tb/Phe + CTAB	17.12	61.41	27.82	3.51		0.14
Tb/Phe + SDS	24.06	58.80	12.88	3.76	0.51	
Tb/Phe + PVP	16.92	67.46	12.28	3.34		

Table S1 EDS data for Tb/Phe in the presence of different surfactants.

a Atomic percents (wt%) are obtained from EDS data.