

Electronic Supplementary Information for the journal of

RSC Advances:

Fabrication of Size Controllable Polymeric Hollow Nanospheres Containing Azo Functional Groups via Ionic Self-Assembly

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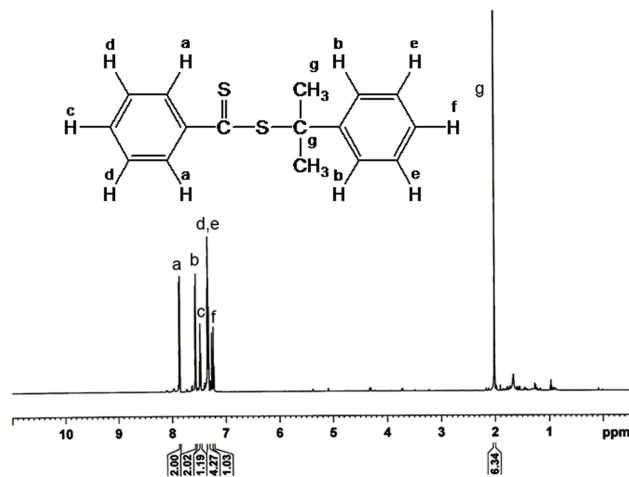


Figure. S1 ^1H NMR spectrum for the CDB chain transfer agents in CDCl_3 .

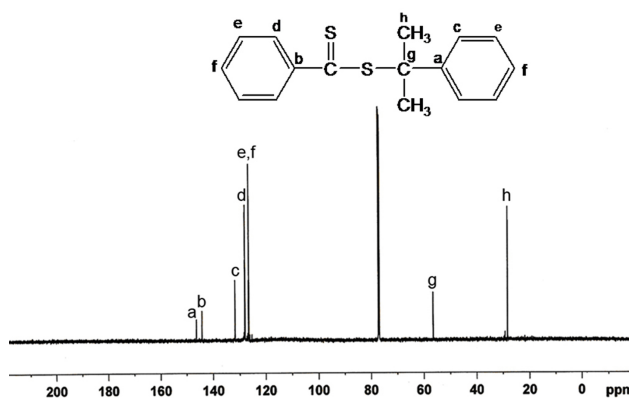


Figure. S2 ^{13}C NMR spectrum for the CDB chain transfer agents in CDCl_3 .

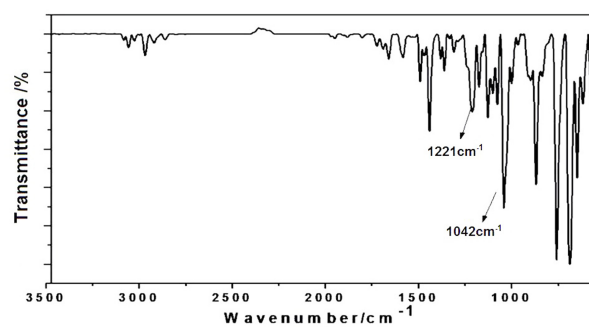


Figure. S3 IR spectrum of cumyl dithiobenzoate.

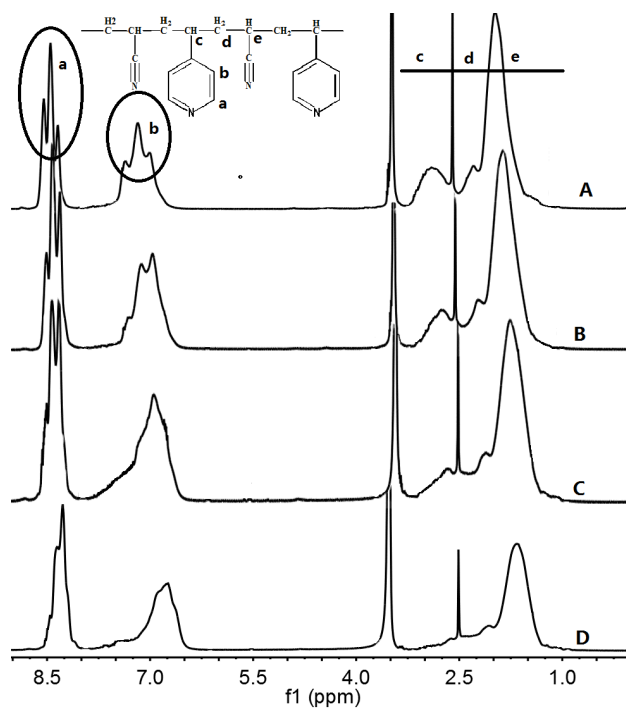


Figure. S4 ^1H NMR spectra of: A) $\text{PAN}_{12}\text{-stat-P4VP}_{46}$, B) $\text{PAN}_{18}\text{-stat-P4VP}_{40}$,
C) $\text{PAN}_{25}\text{-stat-P4VP}_{30}$, D) $\text{PAN}_{31}\text{-stat-P4VP}_{23}$.

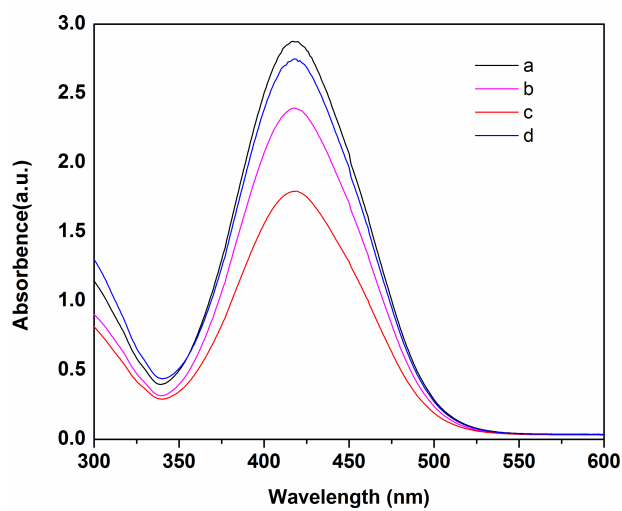


Figure. S5 UV-vis spectra of: a) $\text{PAN}_{18}\text{-stat-P4VP}_{40}/\text{MY}_{38}$,
b) $\text{PAN}_{18}\text{-stat-P4VP}_{40}/\text{MY}_{31}$, c) $\text{PAN}_{18}\text{-stat-P4VP}_{40}/\text{MY}_{26}$, d)
 $\text{PAN}_{18}\text{-stat-P4VP}_{40}/\text{MY}_{16}$ in DMF.

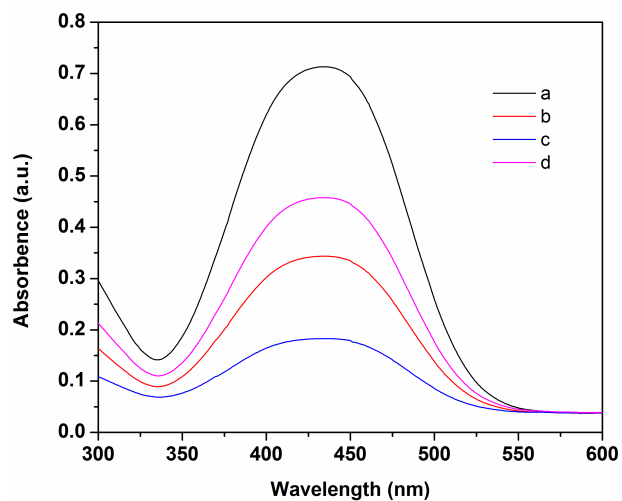
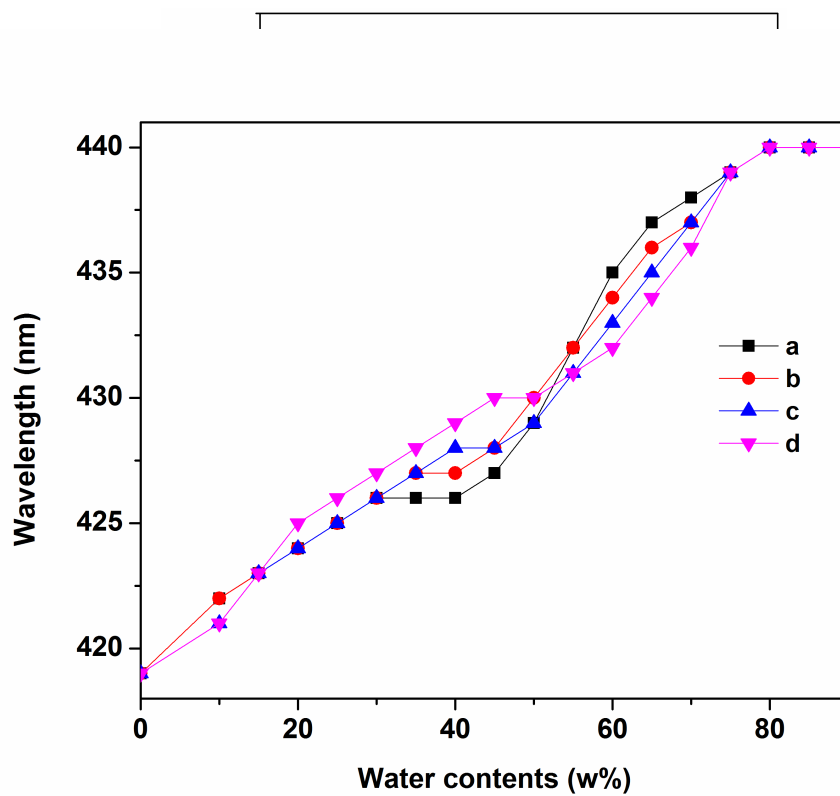


Figure. S6 UV-Vis spectra of: a) PAN₁₈-stat-P4VP₄₀/MY₃₈,
b) PAN₁₈-stat-P4VP₄₀/MY₃₁, c) PAN₁₈-stat-P4VP₄₀/MY₂₆,
d) PAN₁₈-stat-P4VP₄₀/MY₁₆ in H₂O.



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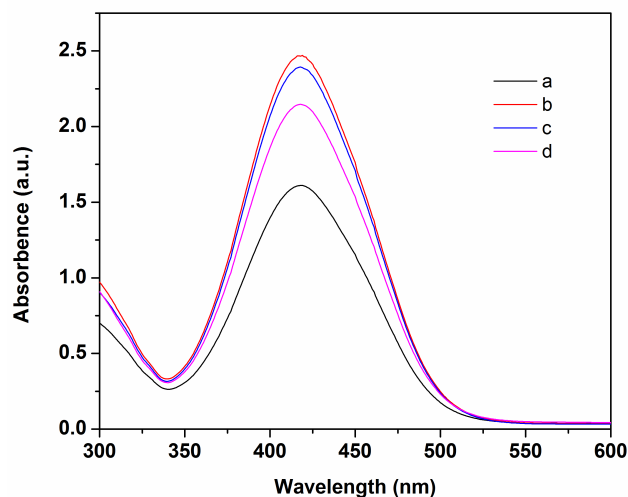


Figure. S8 UV-Vis spectra of: a) PAN₃₁-*stat*-P4VP₂₃/MY₁₈, b) PAN₂₅-*stat*-P4VP₃₀/MY₂₄, c) PAN₁₈-*stat*-P4VP₄₀/MY₃₁, d) PAN₁₂-*stat*-P4VP₄₆/MY₃₇ in DMF.

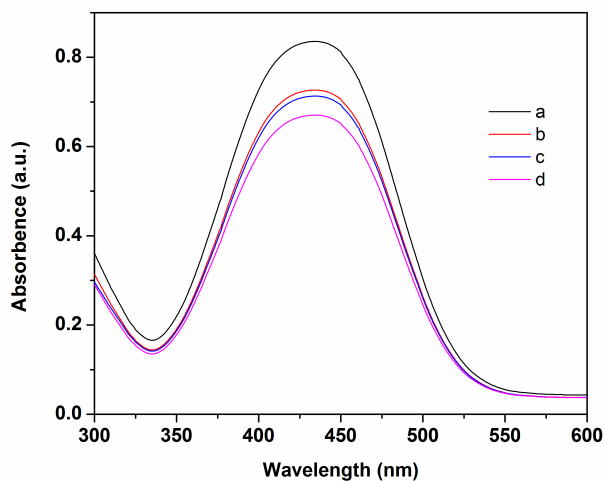


Figure. S9 UV-vis spectra of: a) PAN₃₁-*stat*-P4VP₂₃/MY₁₈, b) PAN₂₅-*stat*-P4VP₃₀/MY₂₄, c) PAN₁₈-*stat*-P4VP₄₀/MY₃₁, d) PAN₁₂-*stat*-P4VP₄₆/MY₃₇ in H₂O.

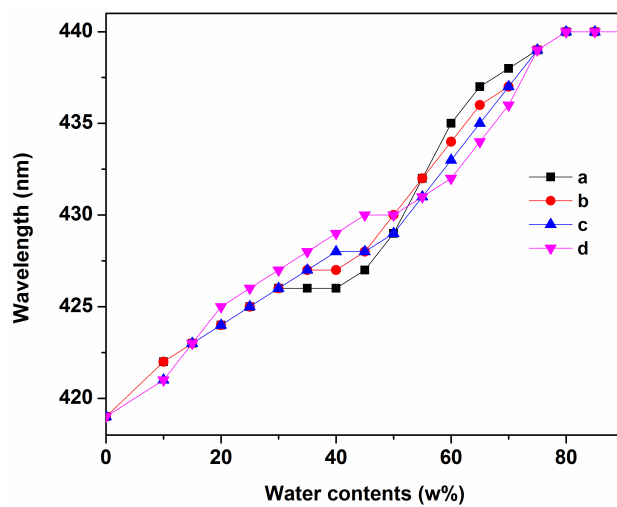


Figure. S10 Maximum absorption peaks of azocomplex as a function of water

contents: a) PAN₁₂-*stat*-P4VP₄₆/MY₃₇, b) PAN₁₈-*stat*-P4VP₄₀/MY₃₁, c)

PAN₂₅-*stat*-P4VP₃₀/MY₂₄, d) PAN₃₁-*stat*-P4VP₂₃/MY₁₈ .