Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supporting Information

Exploration of modification-induced self-assembly (MISA) technique and the preparation of nano-objects with functional poly(acrylic acid) core

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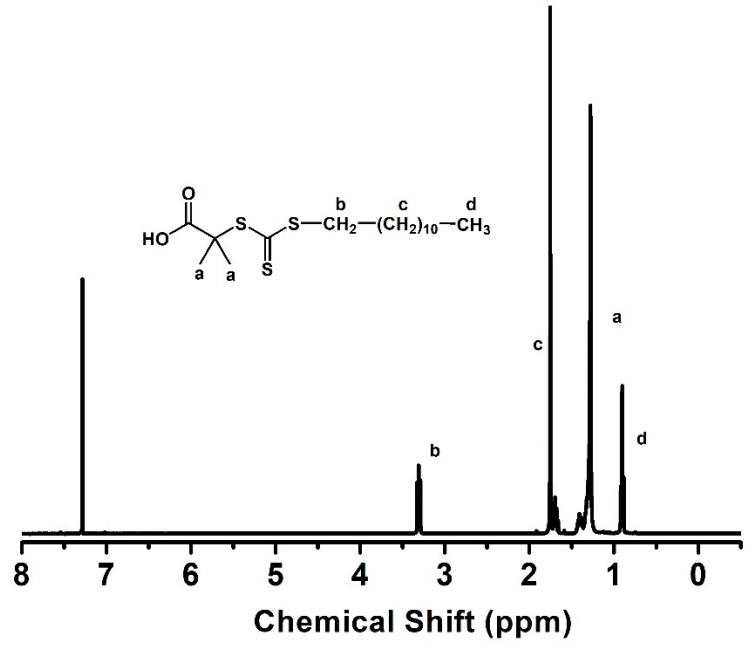

Fig. S1 ^{1}H NMR spectrum for CTA-1 (in $CDCl_3$ solvent).

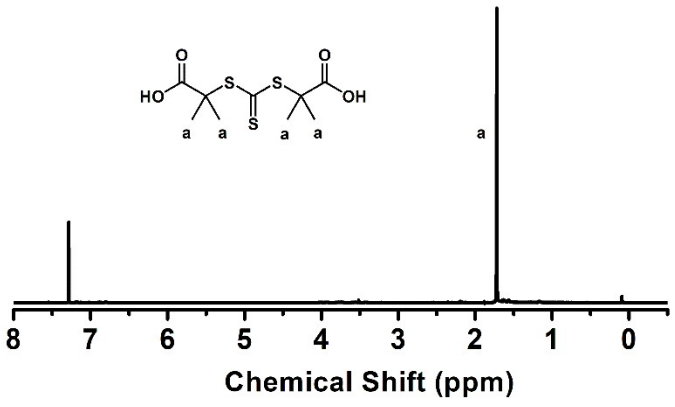

Fig. S2 ^{1}H NMR spectrum for CTA-2 (in $CDCl_3$ solvent).

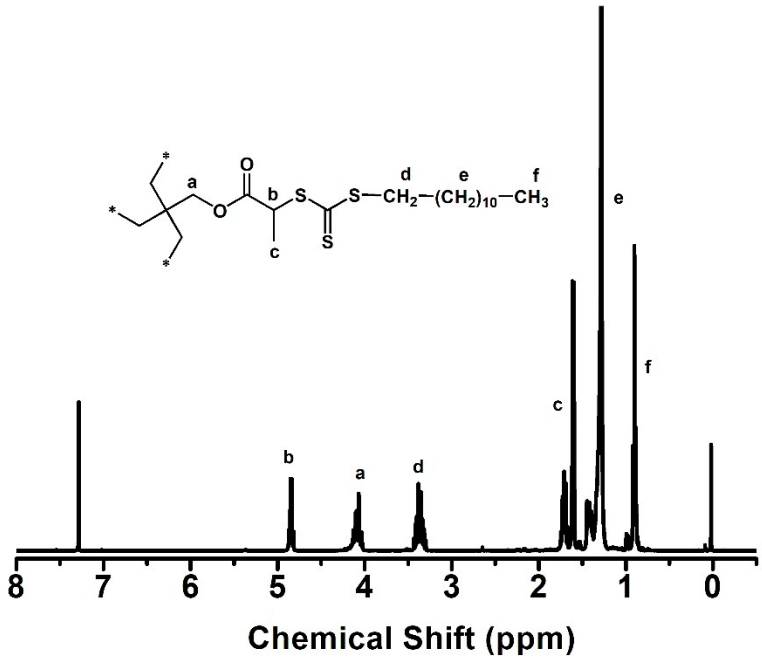

Fig. S3 ^{1}H NMR spectrum for CTA-3 (in $CDCl_3$ solvent).

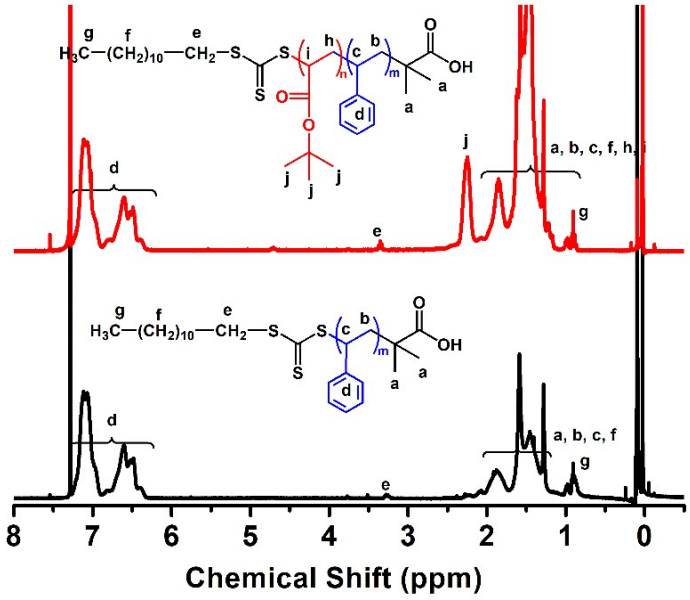

Fig. S4 ^{1}H NMR spectra for macroinitiator PS-CTA-1 and PS-*b*-P*t*BA (in $CDCl_3$ solvent).

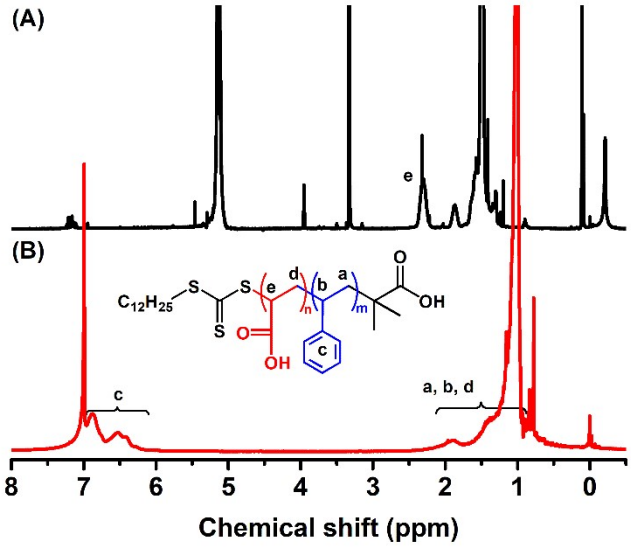

Fig. S5 ^{1}H NMR spectra for nano-objects in (A) CD_3OD solvent, and (B) C_6D_6 solvent from PS-*b*-PAA.

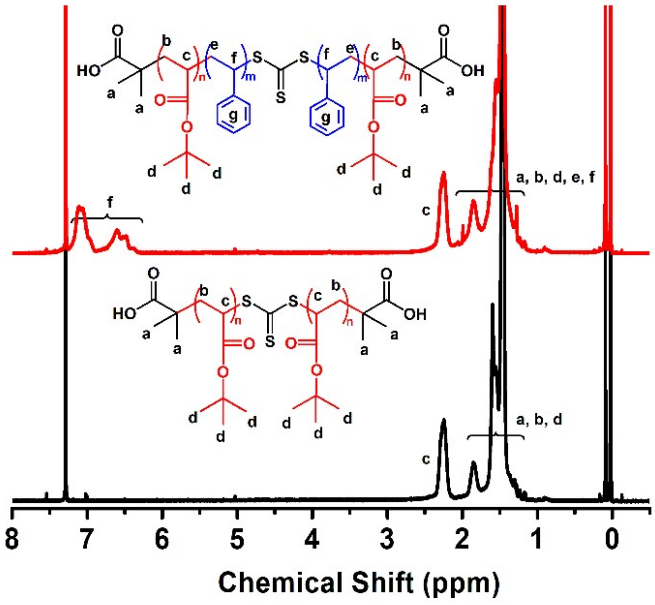

Fig. S6 ^{1}H NMR spectra for macroinitiator P*t*BA-CTA-2 and P*t*BA-*b*-PS-*b*-P*t*BA (in $CDCl_3$ solvent).

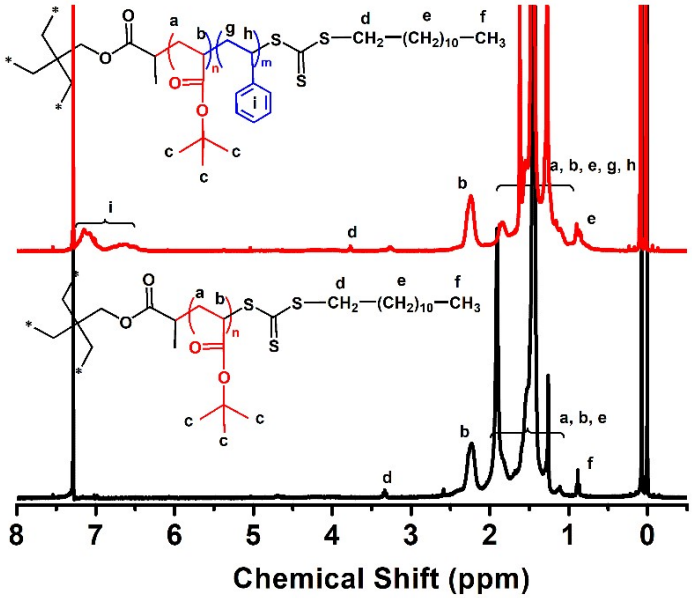

Fig. S7 ^{1}H NMR spectra for macroinitiator Star-P*t*BA$_4$ and Star-(P*t*BA-*b*-PS)$_4$ (in $CDCl_3$ solvent).

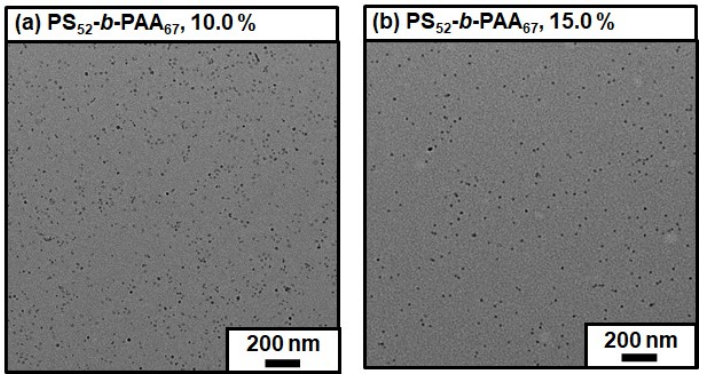

Fig. S8 TEM images of nano-objects formed in MISA process from PS$_{52}$-*b*-P*t*BA$_{67}$ with different weight solids content. (a, b) spherical nano-objects.

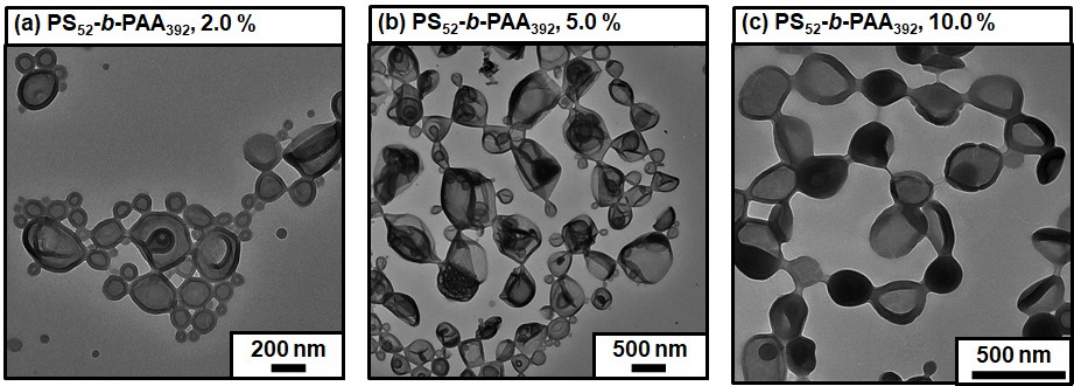

Fig. S9 TEM images of nano-objects formed in MISA process from PS_{52}-*b*-P*t*BA_{392} with different weight solids content. (a, b, c) vesicular nano-objects.

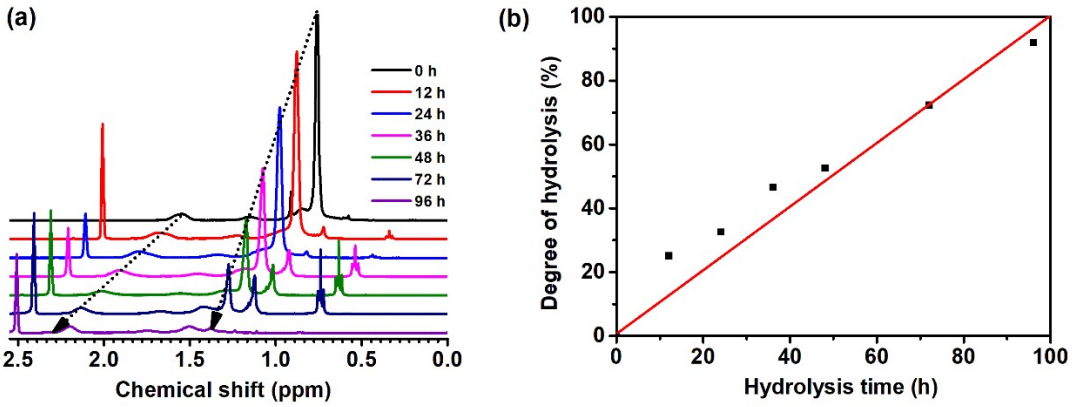

Fig. S10 (a) ^{1}H NMR for the purified and hydrolyzed block copolymers PS_{52}-*b*-P*t*BA_{313} at different time (in DMSO-d_6 solvent), (b) the relationship between the degree of hydrolysis and hydrolysis time.

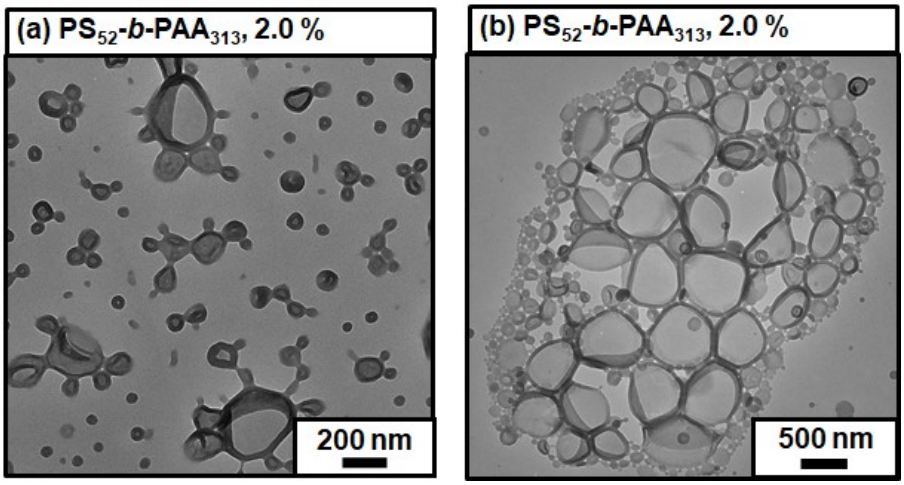

Fig. S11 TEM images of nano-objects formed in MISA process from PS_{52}-*b*-P*t*BA_{313} with fixed weight solids content of 2.0 % w/w and varied stirring rate. (a) stirring rate was fixed as 600 rpm, (b) stirring rate was fixed as 250 rpm.