Electronic Supplementary Information

Stepwise self-assembly of a block copolymer-platinum(II) complex hybrid in solvents of variable quality: From wormlike micelle to free-standing sheet to vesiclelike nanostructure

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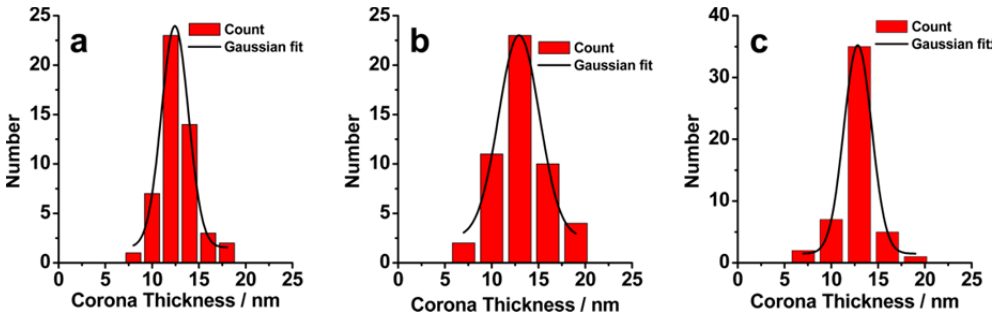

Fig. S1. The corona thicknesses of the vesiclelike nanostructures and sheets were fitted to 12 ± 2 (90 vol %, BF-TEM), 13 ± 3 (90 vol %, HAADF-STEM), and 13 ± 2 nm (50 vol %) by counting 50 coronas.

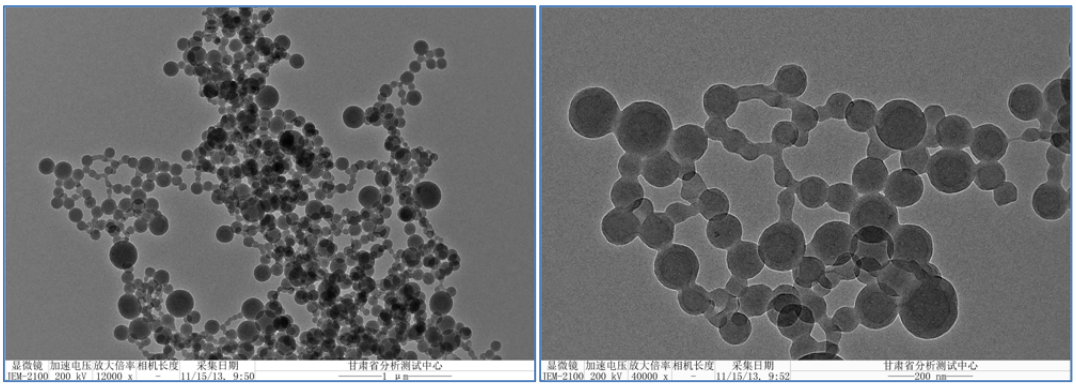

Fig. S2. TEM images of the precipitate of SAPt-1 obtained from the toluene/methanol mixture solvent with a methanol volume ratio of 90%.

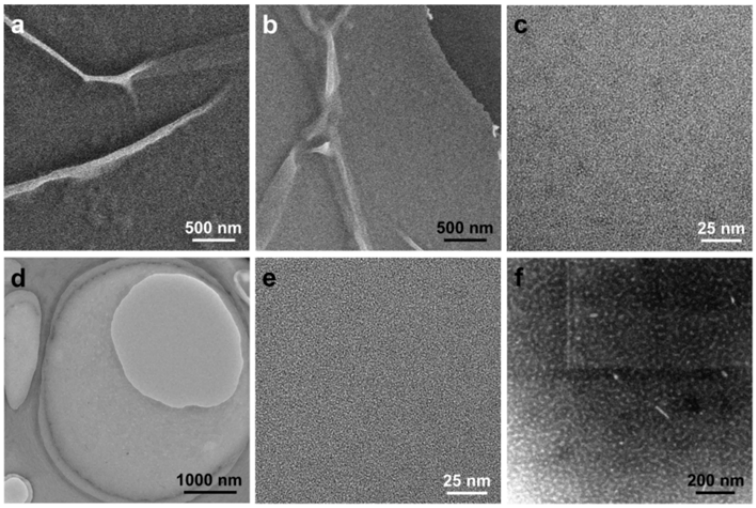

Fig. S3. SEM and TEM images of SAPt-1 obtained from the toluene/methanol mixture solvents with methanol volume ratios of 33 (a−c) and 67% (d−f).

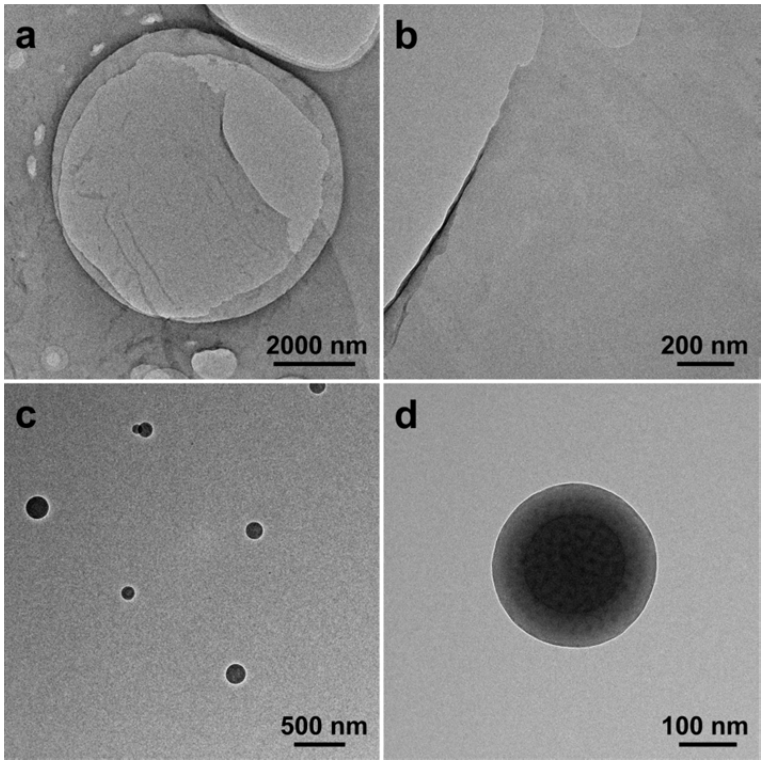

Fig. S4. The dispersions were also prepared by layering methanol into the toluene solution of SAPt-1 with methanol volume ratios of 50% (a and b) and 90% (c and d). During this procedure, the methanol was added extremely slowly to the polymer solution. Again, the precipitates emerged within 10 min. They were also cast onto carbon-coated copper grids and copper grids coated with a porous polymer membrane for TEM observations. The resulting TEM images showed that the sheet- and vesiclelike nanostructures formed with similar sizes, respectively. These results indicated that the rate of methanol addition did not influence the formation of nanostructures in the present case. This situation is different from the self-assembly process of amphiphilic block copolymers in selective solvents, presumably due to their different formation mechanism of the self-assemblied nanostructures.