

Temperature-responsive hairy particles-supported proline for direct asymmetric Aldol reaction in water

Supporting information

1.

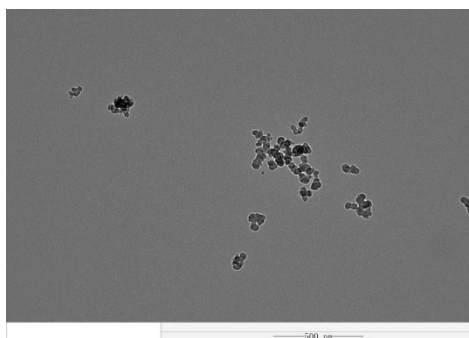


Fig.S1 TEM of 3mg/mL free copolymer (1) solution at room temperature.

2.



Fig.S2 The image of 3mg/mL free copolymer (1) solution at 0°C and 35°C.

2. Recovery and recycling of the hairy particle (1) supported catalytic system was studied using the same Aldol reaction between 4-nitrobenzaldehyde and cyclohexanone. This adjustment was done to keep the Aldol reaction at 10 mol % catalyst loading throughout the different cycles at 25°C (Table.s1).

Table s1. Recycle data for the aldol reaction using the hairy particles (1) supported catalyst at 25°C for 72 h.

cycle	Recovery rate (%)	% Conversion	Anti/sy n ^a	% ee ^b (Anti)
1	98	96	10/90	97
2	99	89	9/91	96
3	99	90	11/89	95
4	96	87	14/86	92
5	97	83	14/86	92
6	98	82	15/85	95

7	98	79	14/86	93
8	97	76	16/84	91
9	98	77	14/86	92
10	96	69	20/80	90
11	97	68	29/71	92
