

Fig. S1 UV spectrum of cardanol, CPE and after soaking PVC-CPE in *n*-heptane at 40 °C for respectively 30, 150, 270, 390, 510, 630, 1230, 1470 and 3210 minutes.

Preparation of the Absorbance-Concentration standard curve of DOP

4.12, 9.04, 13.75, 17.69, 20.61, 25.81 and 34.35 mg of dioctyl phthalate (DOP) are respectively introduced into conical flasks, and then 10.00 mL of *n*-heptane are added and well mixed. After that, transfer 0.50 mL of the solution to a conical flask and dilute with 5.0 mL of *n*-heptane. The corresponding concentrations of DOP in the diluted solutions are therefore 0.04, 0.08, 0.13, 0.16, 0.19, 0.23 and 0.31 mg/mL, respectively. These diluted solutions are recorded at ambient temperature for 273 nm assigned to the aromatic structure of DOP through a Shimadzu UV-2501PC spectrophotometer (Japan) using *n*-heptane as the contrast agents. The absorbances are 0.1128, 0.2552, 0.3488, 0.4636, 0.5466, 0.6747 and 0.9942, respectively. Finally, the Absorbance-Concentration standard curve of DOP in *n*-heptane can be constructed using concentrations and the corresponding absorbances as Fig. S2 shown.

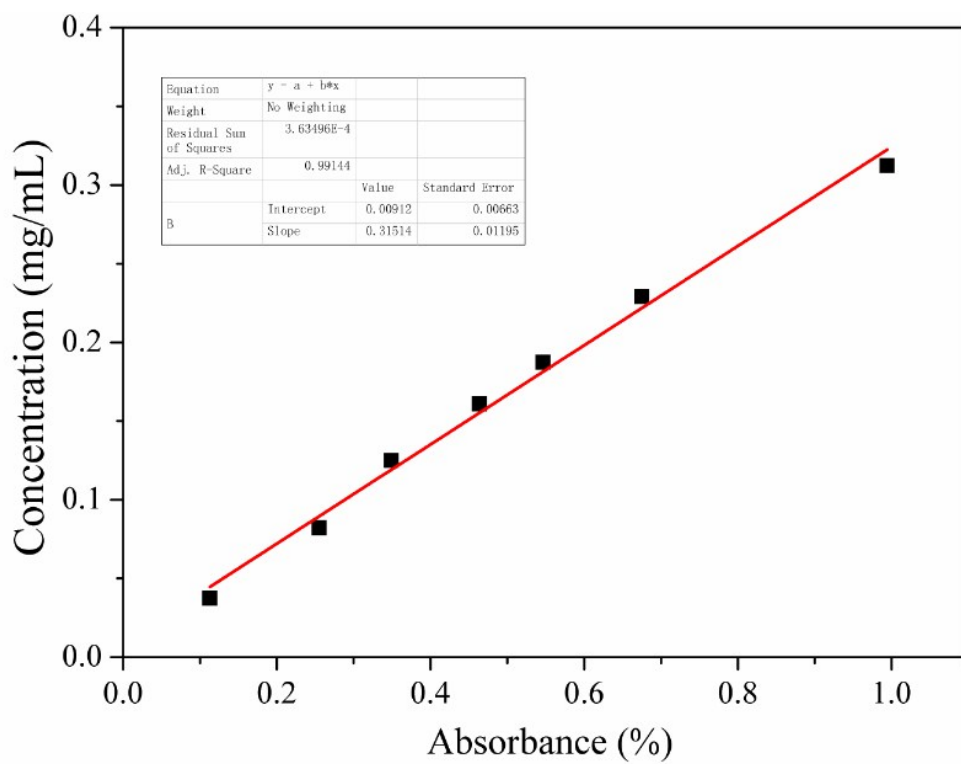


Fig. S2 The Absorbance-Concentration standard curve of DOP in *n*-heptane.