Figure S1 ^{1}H-NMR spectra of monomers St and *f*St, homopolymers PS and PF, and copolymer PSF
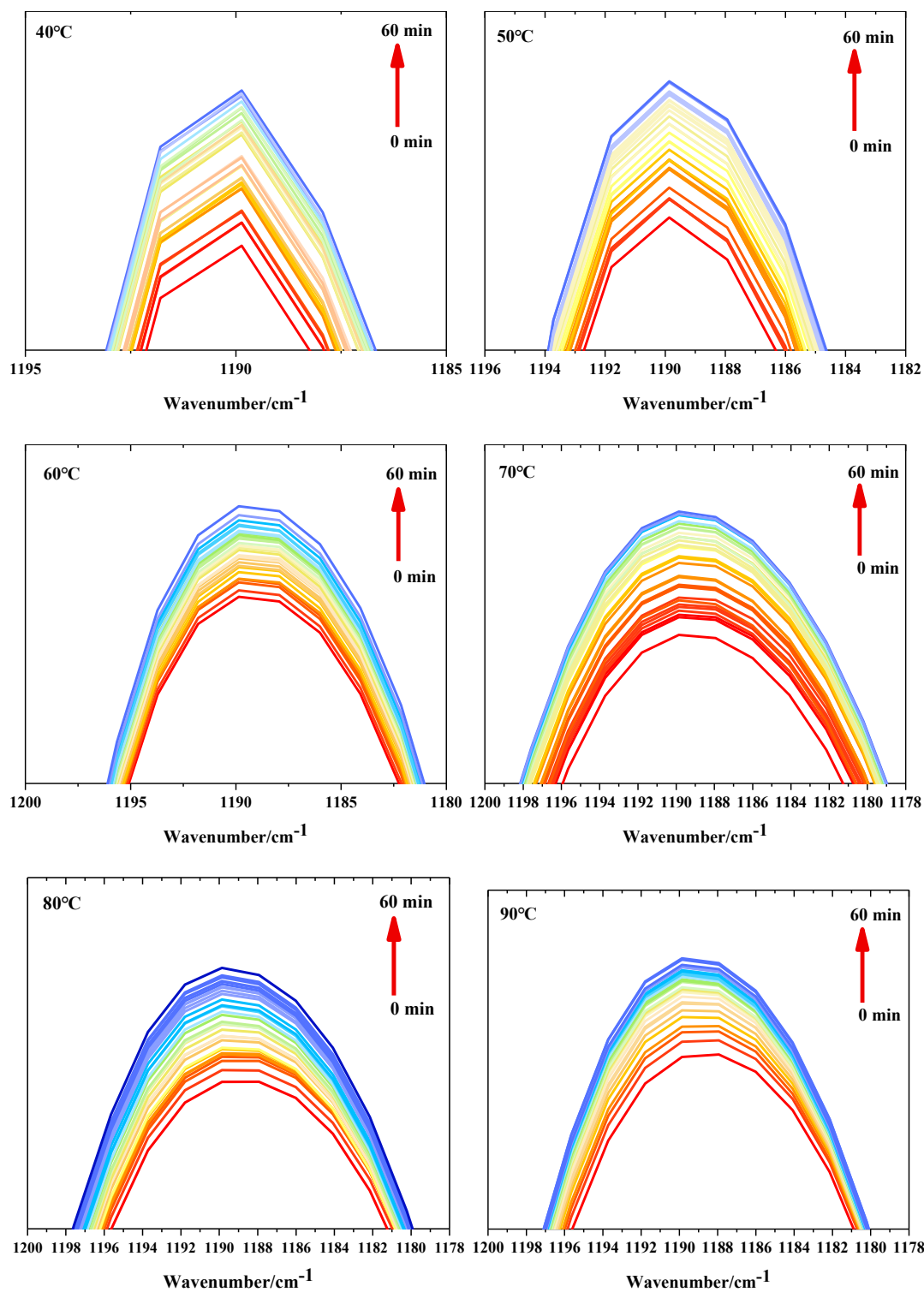
Figure S2 The FTIR absorbance during the D-A reaction between PSF and Ma recorded with time at different temperatures: 40℃, 50℃, 60℃, 70℃, 80℃ and 90℃
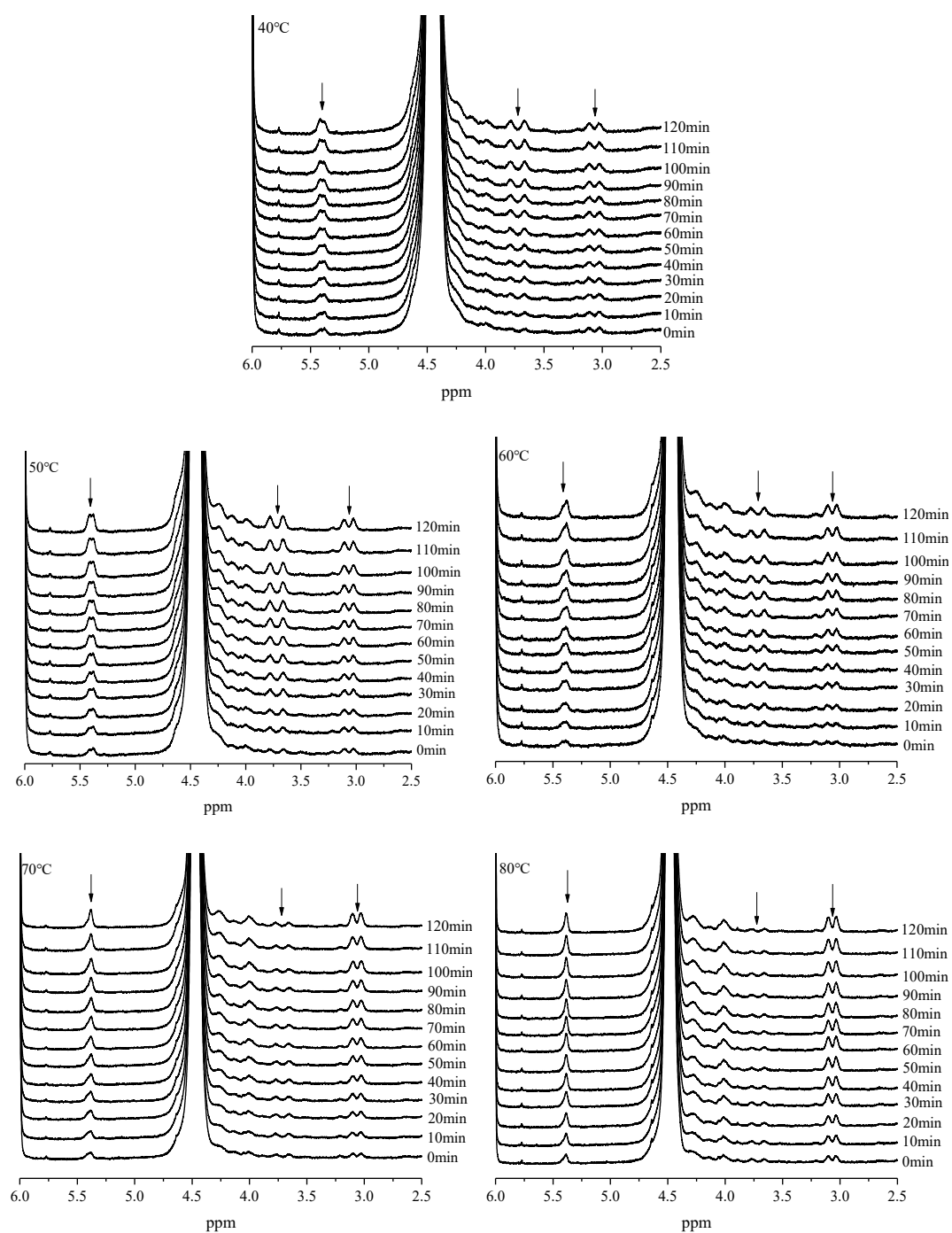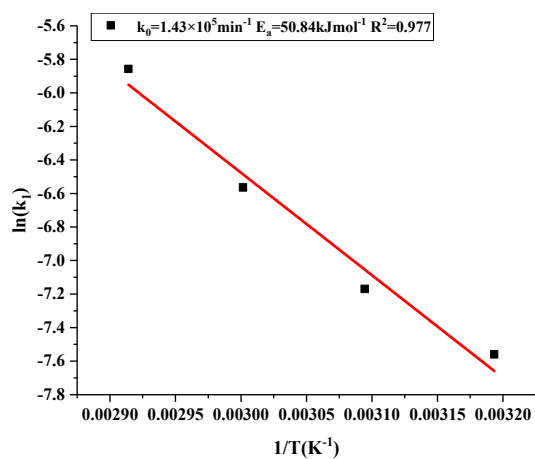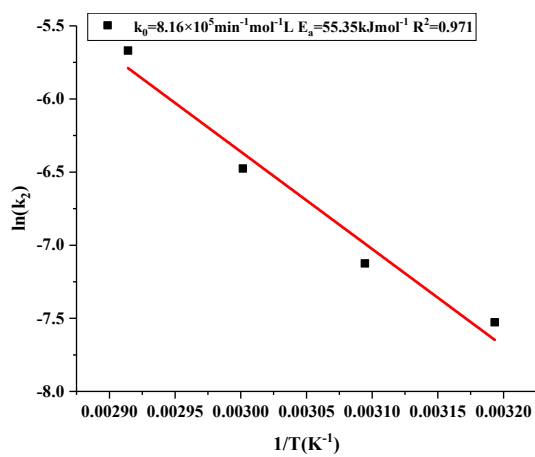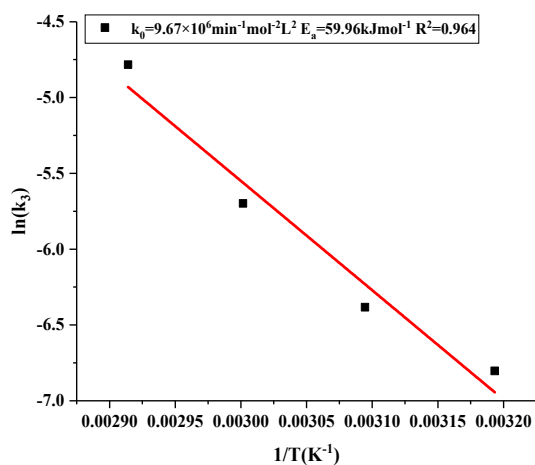
Figure S3 The ^{1}H-NMR spectra during the D-A reaction between PSF and Ma recorded with time at different temperatures: 40℃, 50℃, 60℃, 70℃ and 80℃

(A)

(B)

(C)

Figure S4 Fitting the Arrhenius plot to (A) first-order, (B) second-order, and (C) third-order reaction to determine the $E_{a,D\text{-}A}$ and $k_{0,D\text{-}A}$ of the D-A reaction between PSF and Ma based on the ^{1}H-NMR results
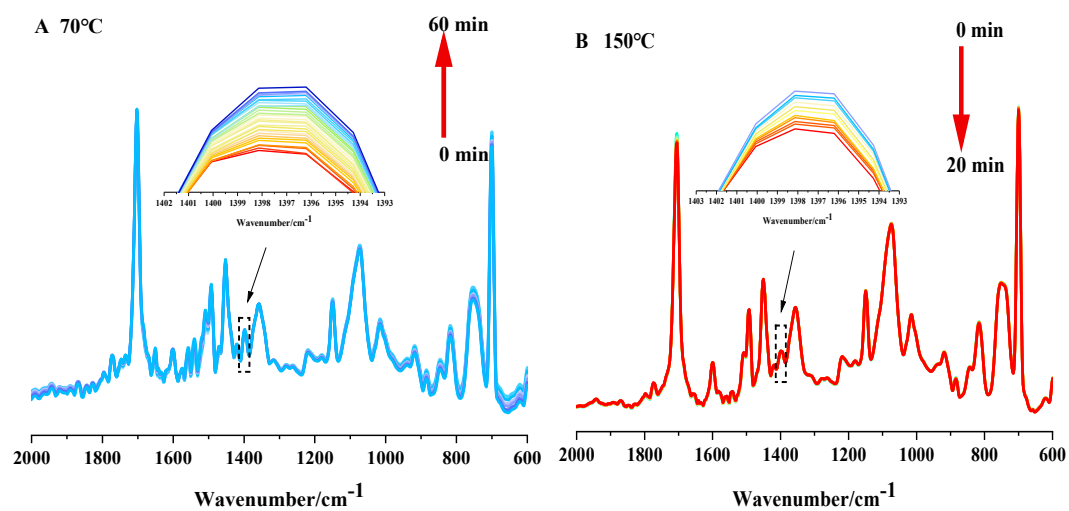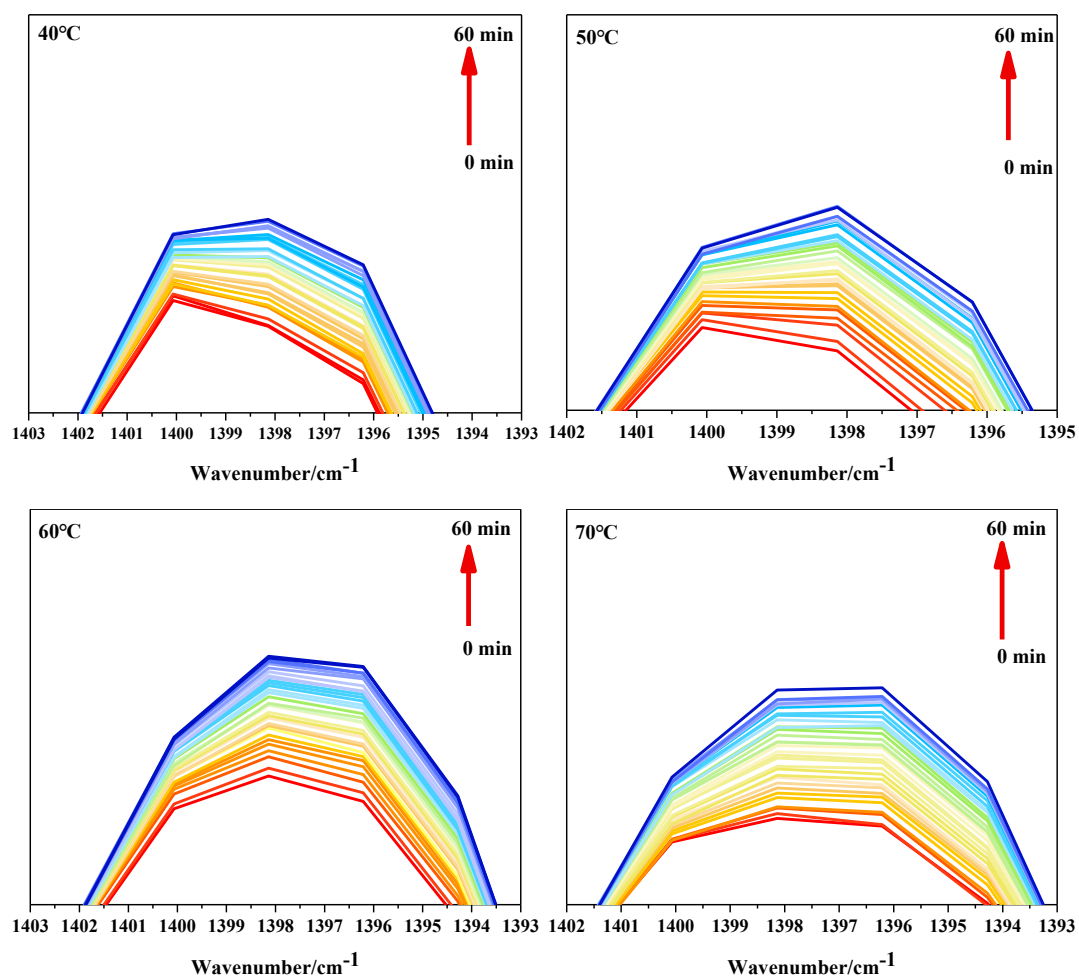
Figure S5 FTIR spectra of (A) holding the temperature at 70℃ for 60 min and (B) holding the temperature at 150℃ for 20min
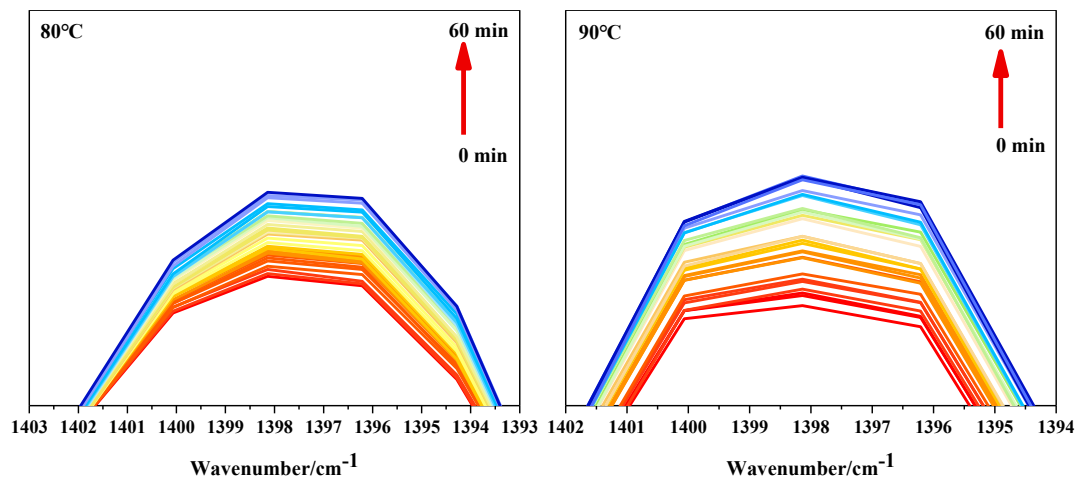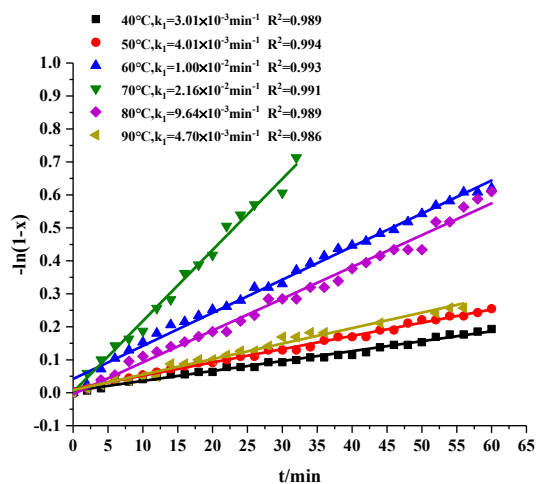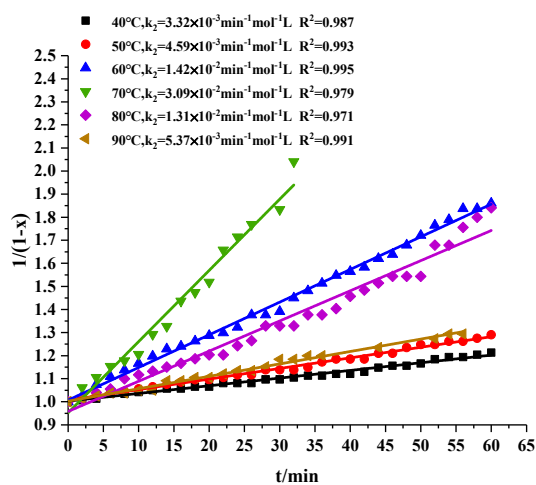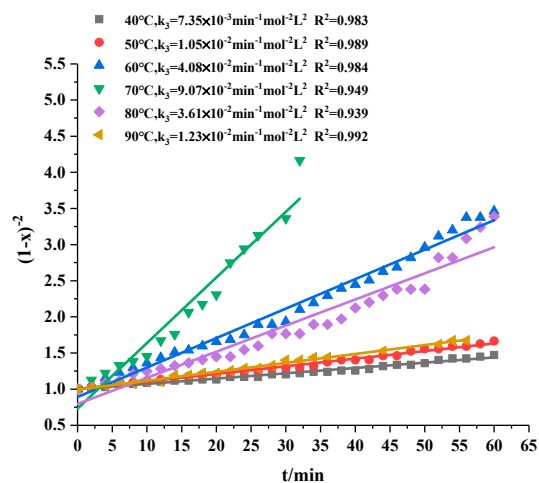
Figure S6 The FTIR absorbance during the D-A reaction between PSF and Mb recorded with time at different temperatures: 40℃, 50℃, 60℃, 70℃, 80℃ and 90℃
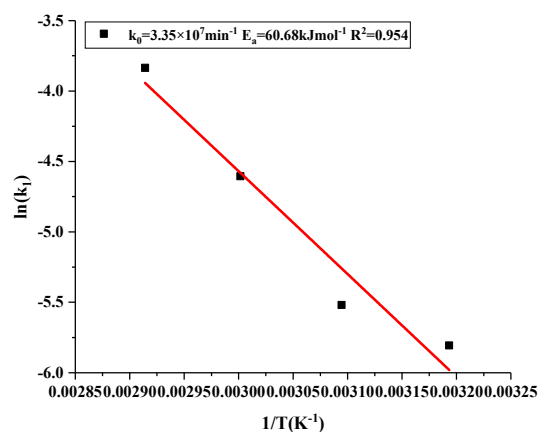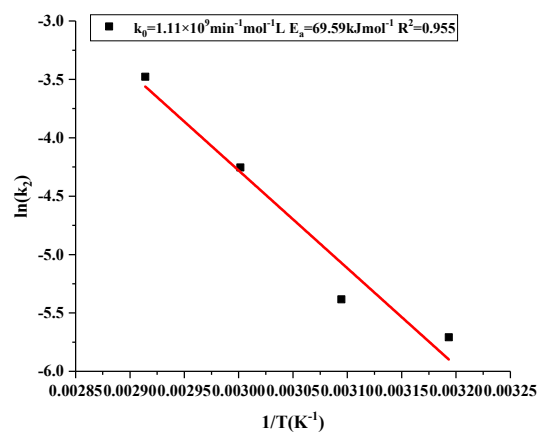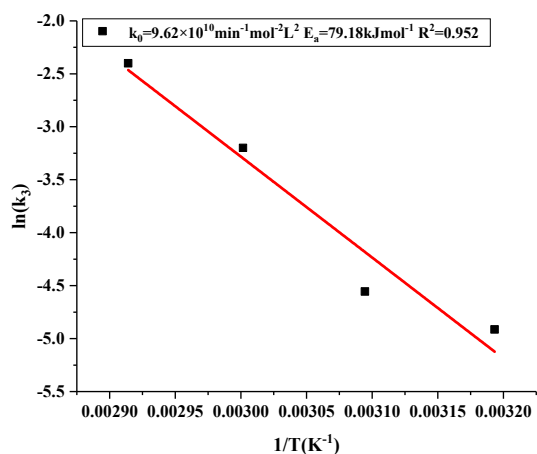

(A)

(B)

(C)

Figure S7 Fitting the conversion data to (A) first-order, (B) second-order, and (C) third-order reaction kinetics to determine the apparent kinetic coefficient k_{app} of D-A reaction between PSF and Mb at 40°C, 50°C, 60°C, 70°C, 80°C and 90°C based on the FTIR results
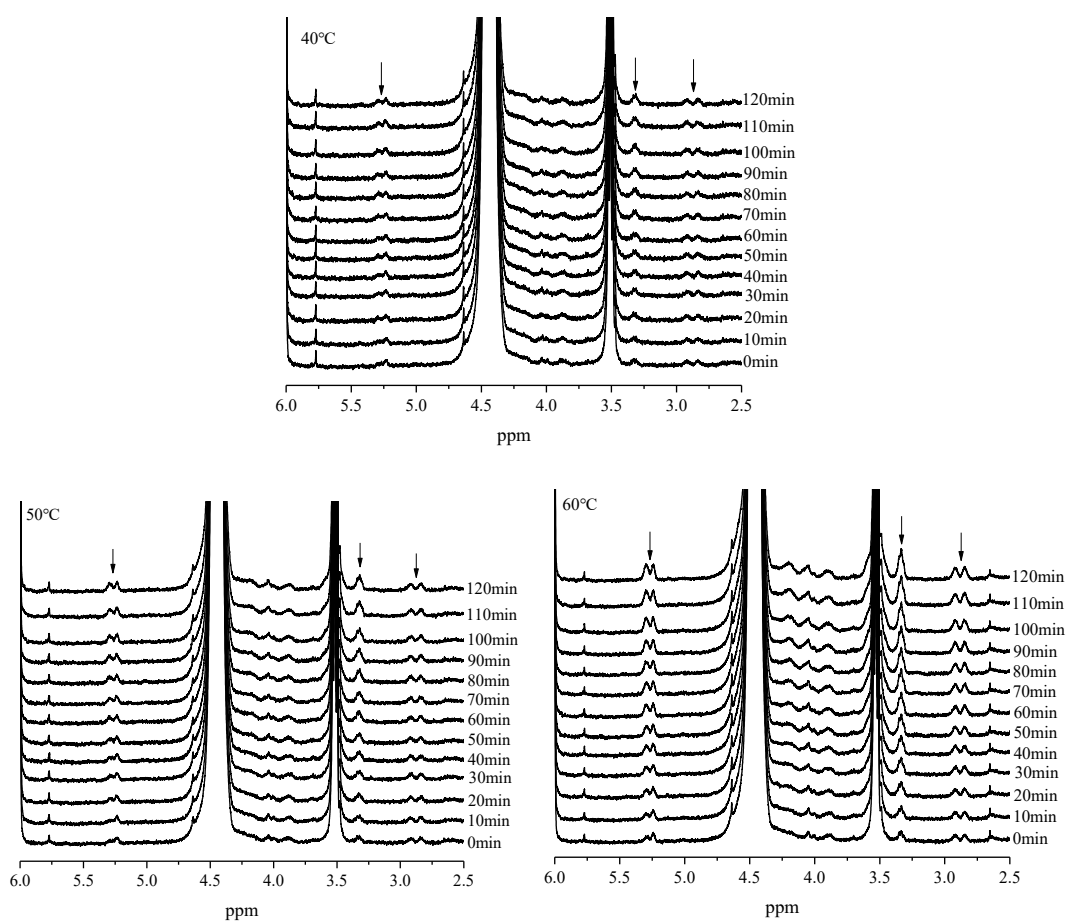

(A)

(B)

(C)

Figure S8 Fitting the Arrhenius plot to (A) first-order, (B) second-order, and (C) third-order reaction to determine the $E_{a,D-A}$ and $k_{0,D-A}$ of the D-A reaction between PSF and Mb based on the FTIR results
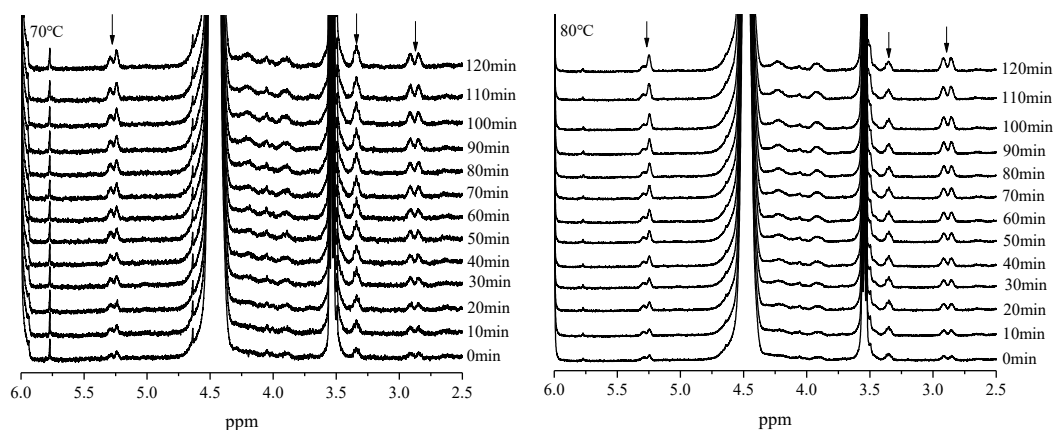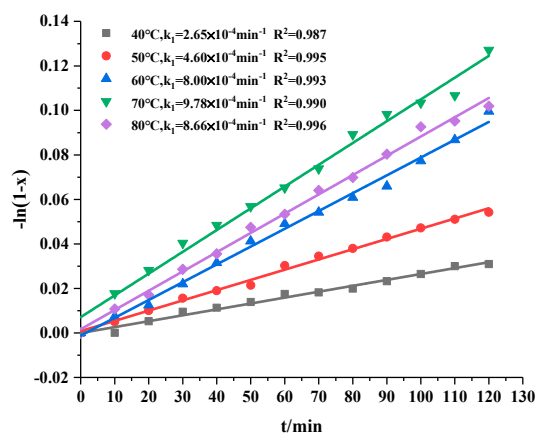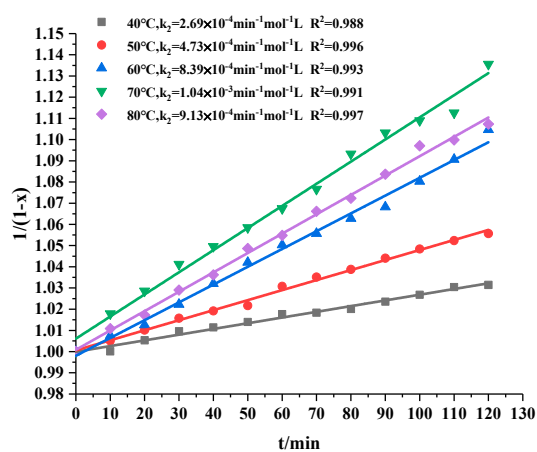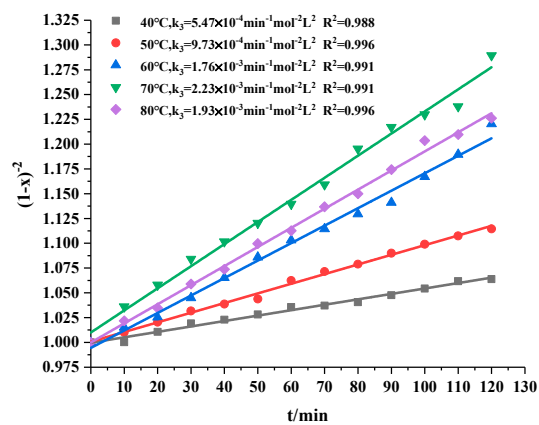
Figure S9 The ^{1}H-NMR spectra during the D-A reaction between PSF and Mb recorded with time at different temperatures: 40℃, 50℃, 60℃, 70℃ and 80℃
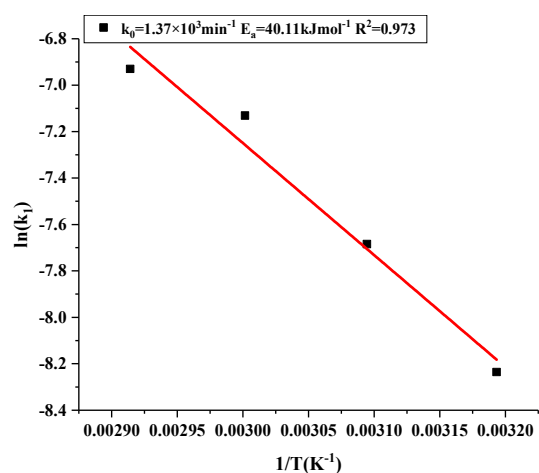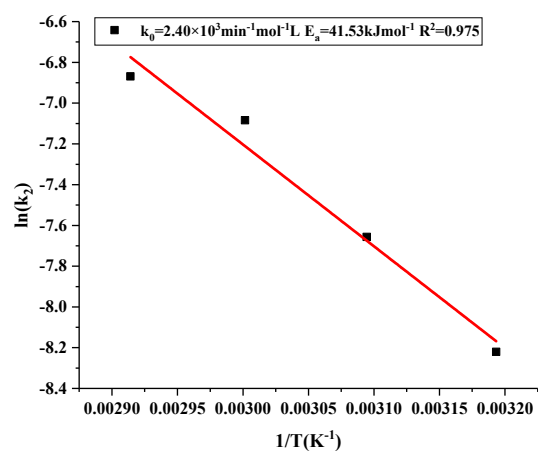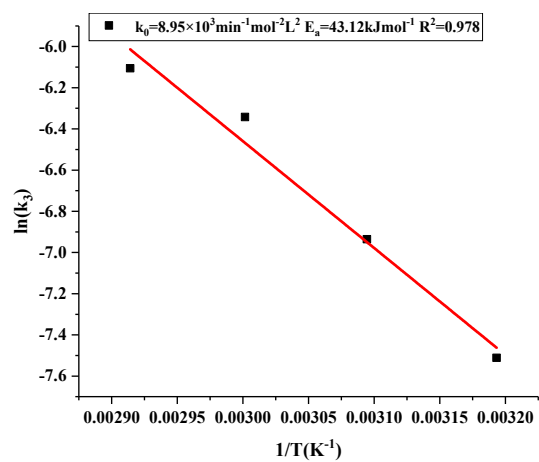

(A)

(B)

(C)

Figure S10 Fitting the conversion data to (A) first-order, (B) second-order, and (C) third-order reaction kinetics to determine the apparent kinetic coefficient *k*~app~ of D-A reaction between PSF and Mb at 40℃, 50℃, 60℃, 70℃ and 80℃ based on the ^{1}H-NMR results

(A)

(B)

(C)

Figure S11 Fitting the Arrhenius plot to (A) first-order, (B) second-order, and (C) third-order reaction to determine the $E_{a,D-A}$ and $k_{0,D-A}$ of the D-A reaction between PSF and Mb based on the ^{1}H-NMR results