SUPPORTING INFORMATION

Forward and reverse reactions of N-methylaniline-blocked polyisocyanates: a clear step into double Arrhenius plots and equilibrium temperature of thermally reversible reactions.

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Electronic supplementary information (ESI) available: FT-IR spectra of N-methylaniline-blocked polyisocyanates recorded at dynamic condition for deblocking reaction, FT-IR spectra of N-methylaniline-blocked polyisocyanates recorded at isothermal condition for blocking and deblocking reaction, kinetic plots of second order blocking reaction and kinetic plots of first order deblocking reaction.
Figure S1. FT-IR spectra recorded for different time intervals under isothermal condition for the blocking reaction of polyisocyanate with N-methyl-o-toluidine (a) 40°C (b) 50°C (c) 60°C.
Figure S2. FT-IR spectra recorded for different time intervals under isothermal condition for the blocking reaction of polyisocyanate with N-methyl-o-anisidine (a) 30°C (b) 40°C (c) 50°C
Figure S3. FT-IR spectra recorded for different time intervals under isothermal condition for the blocking reaction of polyisocyanate with 2-chloro-N-methylaniline (a) 40°C (b) 50°C (c) 60°C
Figure S4. FT-IR spectra recorded for different time intervals under isothermal condition for the blocking reaction of polyisocyanate with 4-chloro-N-methylaniline (a) 30°C (b) 40°C (c) 50°C.
Figure S5. FT-IR spectra recorded for different time intervals under isothermal condition for the blocking reaction of polyisocyanate with methyl 4-methylamino)benzoate (a) 50°C (b) 60°C (c) 70°C.
Figure S6. Second-order kinetic plots of blocking reaction of polyisocyanate with N-methyl-o-toluidine.

Figure S7. Second-order kinetic plots of blocking reaction of polyisocyanate with N-methyl-o-anisidine.

Figure S8. Second-order kinetic plots of blocking reaction of polyisocyanate with 2-chloro-N-methylaniline.
Figure S9. Second-order kinetic plots of blocking reaction of polyisocyanate with 4-chloro-N-methylaniline.

Figure S10. Second-order kinetic plots of blocking reaction of polyisocyanate with methyl 4-(methylamino)benzoate.
Figure S11. FT-IR spectra of N-methyl-o-toluidine -blocked polyisocyanate recorded at (a) different temperatures (b) zoomed range of isocyanate absorption region.
Figure S12. FT-IR spectra of N-methyl-o-anisidine-blocked polyisocyanate recorded at (a) different temperatures (b) zoomed range of isocyanate absorption region.
Figure S13. FT-IR spectra of 2-chloro-N-methylaniline-blocked polyisocyanate recorded at (a) different temperatures (b) zoomed range of isocyanate absorption region.
Figure S14. FT-IR spectra of 4-chloro-N-methylaniline-blocked polyisocyanate recorded at (a) different temperatures (b) zoomed range of isocyanate absorption region.
Figure S15. FT-IR spectra of methyl 4-(methylamino)benzoate-blocked polyisocyanate recorded at (a) different temperatures (b) zoomed range of isocyanate absorption region.
Figure 16. First-order kinetic plots of the deblocking reaction of N-methyl-o-toluidine-blocked polyisocyanate.

Figure 17. First-order kinetic plots of the deblocking reaction of N-methyl-o-anisidine-blocked polyisocyanate.

Figure 18. First-order kinetic plots of the deblocking reaction of 2-chloro-N-methylaniline-blocked polyisocyanate.
Figure 19. First-order kinetic plots of the deblocking reaction of 4-chloro-N-methylaniline-blocked polyisocyanate.

Figure 20. First-order kinetic plots of the deblocking reaction of methyl 4-(methylamino)benzoate-blocked polyisocyanate.
Figure S21. FT-IR spectra recorded for different time intervals under isothermal condition for the deblocking reaction of N-methyl-o-toluidine-blocked polyisocyanate: (a) 130°C (b) 140°C (c) 150°C (d) 160°C.
Figure S22. FT-IR spectra recorded for different time intervals under isothermal condition for the deblocking reaction of N-methyl-o-anisidine-blocked polyisocyanate: (a) 130°C (b) 140°C (c) 150°C (d) 160°C
Figure S23. FT-IR spectra recorded for different time intervals under isothermal condition for the deblocking reaction of 2-chloro-N-methylaniline-blocked polyisocyanate: (a) 120°C (b) 130°C (c) 140°C (d) 150°C
Figure S24. FT-IR spectra recorded for different time intervals under isothermal condition for the deblocking reaction of 4-chloro-N-methylaniline-blocked polyisocyanate: (a) 110°C (b) 120°C (c) 130°C (d) 140°C
Figure S25. FT-IR spectra recorded for different time intervals under isothermal condition for the deblocking reaction of methyl 4-(methylamino)benzoate-blocked polyisocyanate: (a) 100°C (b) 110°C (c) 120°C d) 130°C