Electronic Supplementary Material (ESI) for Catalysis Science & Technology


# Integration of Heterogeneous Catalysts into Complex Synthetic Routes: Sequential vs One-Pot Reactions in a (Knoevenagel + Mukaiyama-Michael + Hydrogenation + Transesterification) Sequence

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## Electronic Supplementary Information

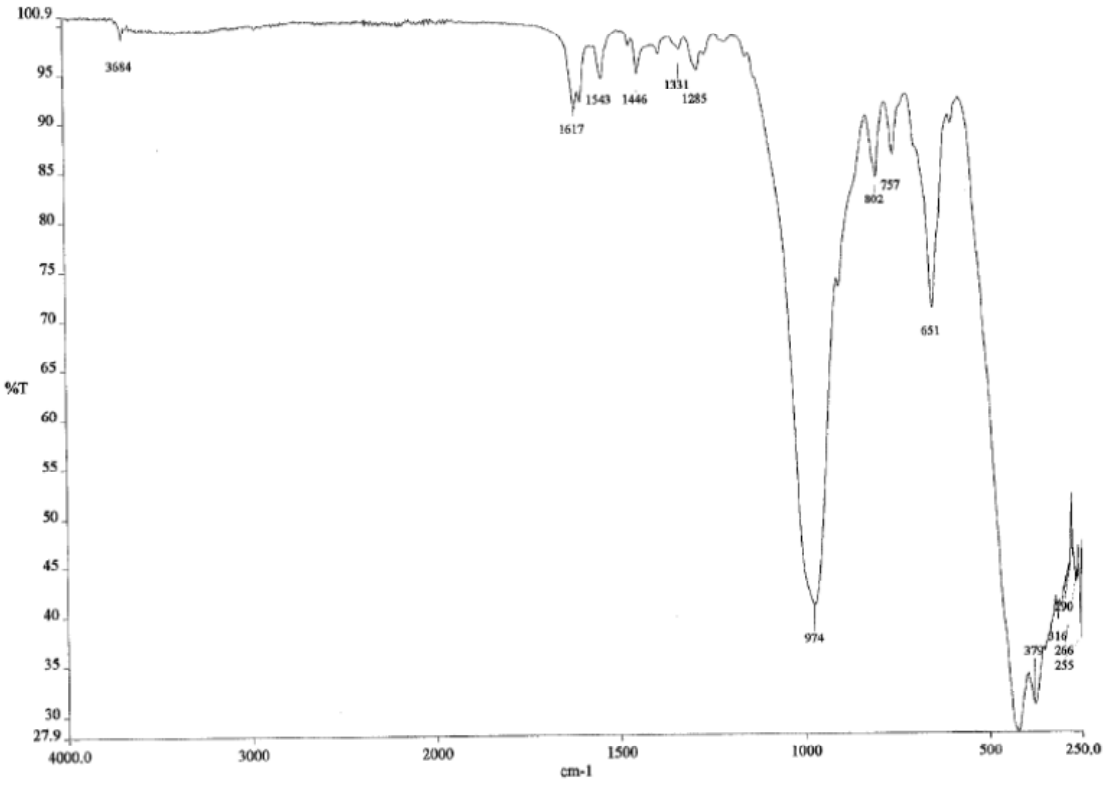


Figure S1. IR spectrum of freshly prepared Lap-Mn(salen).

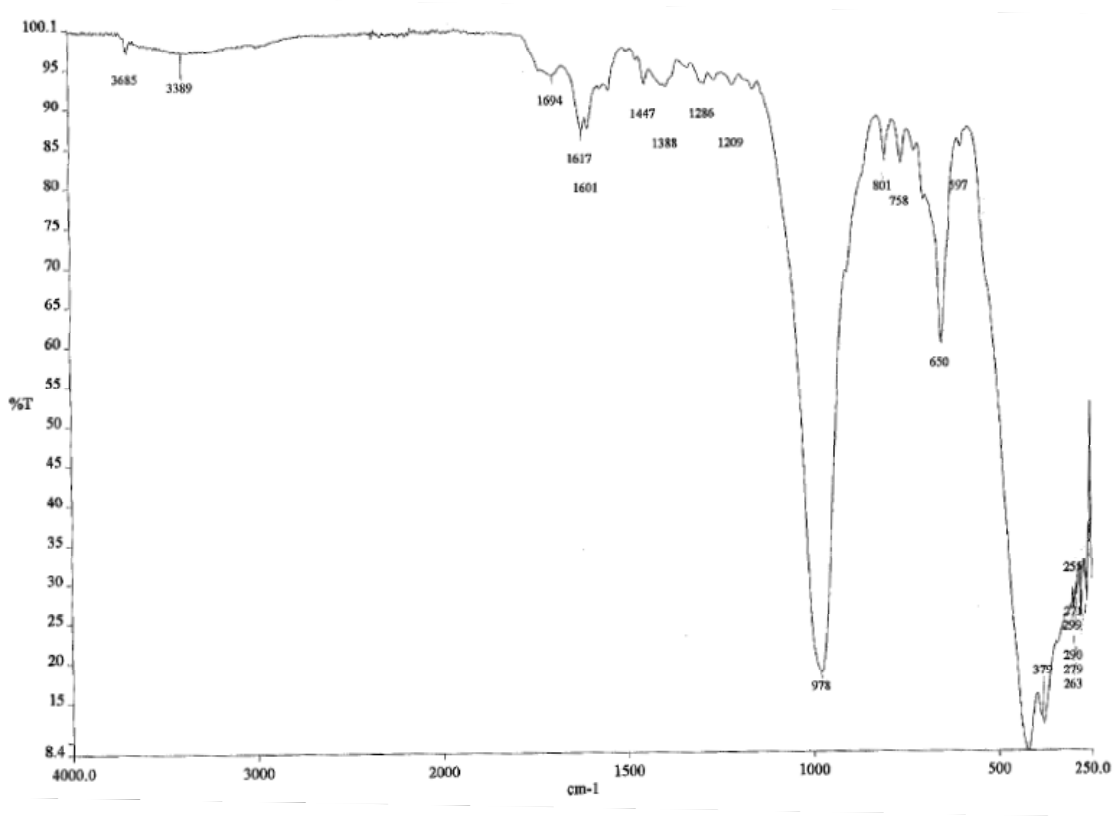


Figure S2. IR spectrum of used Lap-Mn(salen).

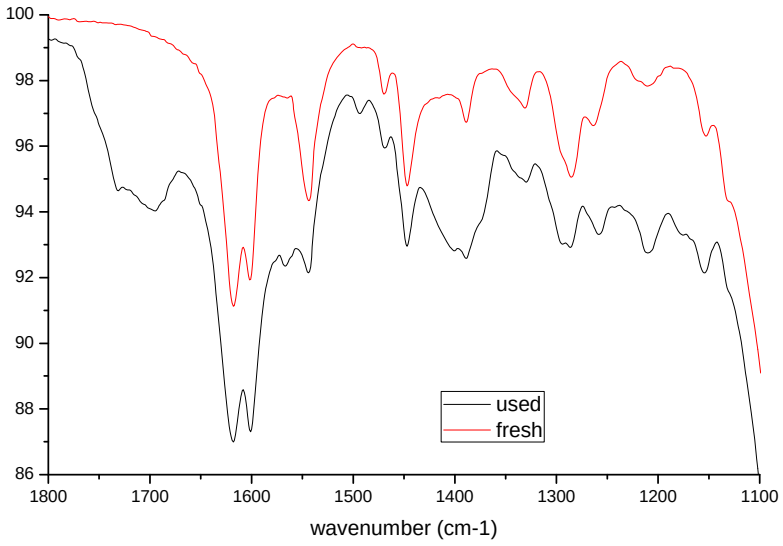


Figure S3. Comparison of IR spectra of freshly prepared and used Lap-Mn(salen) in the 1800-1100 $cm^{-1}$ range. The broad band around 1700 $cm^{-1}$ may correspond to any of the reagents (benzaldehyde 1696 $cm^{-1}$, malonate 1729 $cm^{-1}$) or products (benzylidene malonate 1721 $cm^{-1}$). The rest of additional bands in the used catalyst are more difficult to assign.

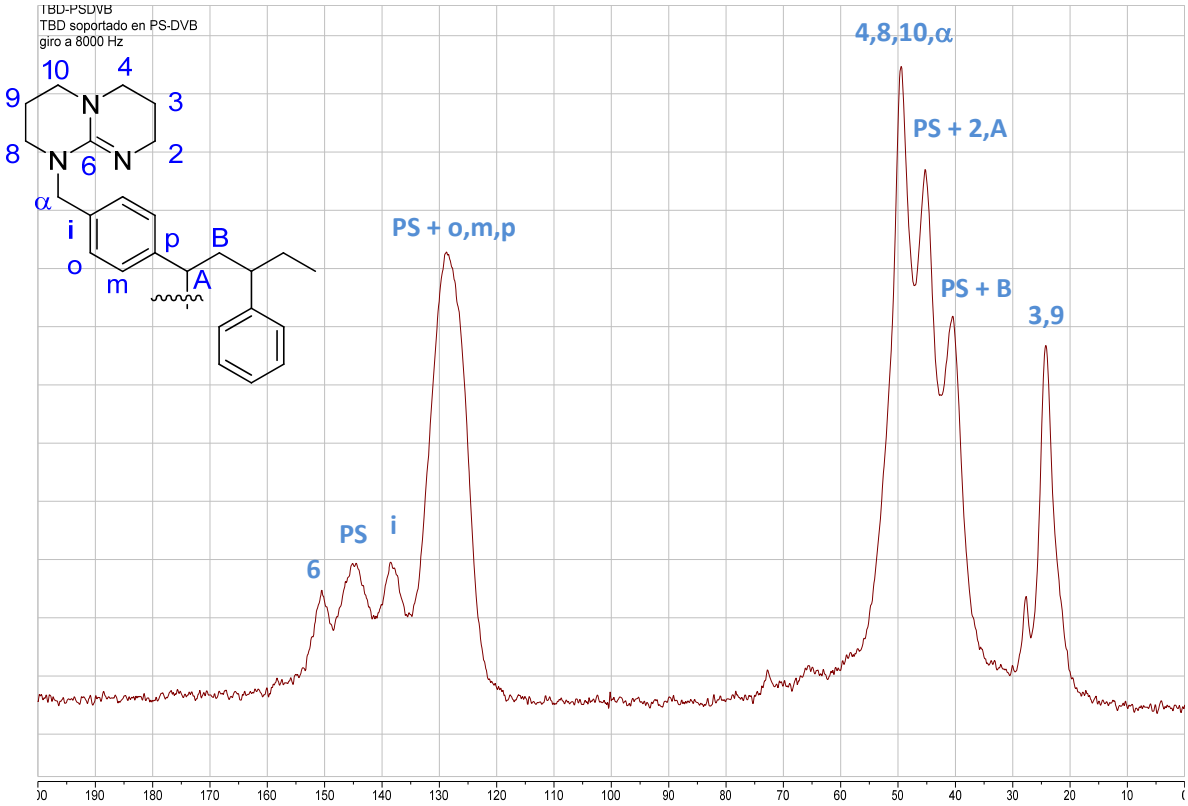


Figure S4. $^{13}C$ CP-MAS-NMR spectrum of TBD-PS. Bands are assigned according to data in the literature for solution spectra and to estimations by additive methods.

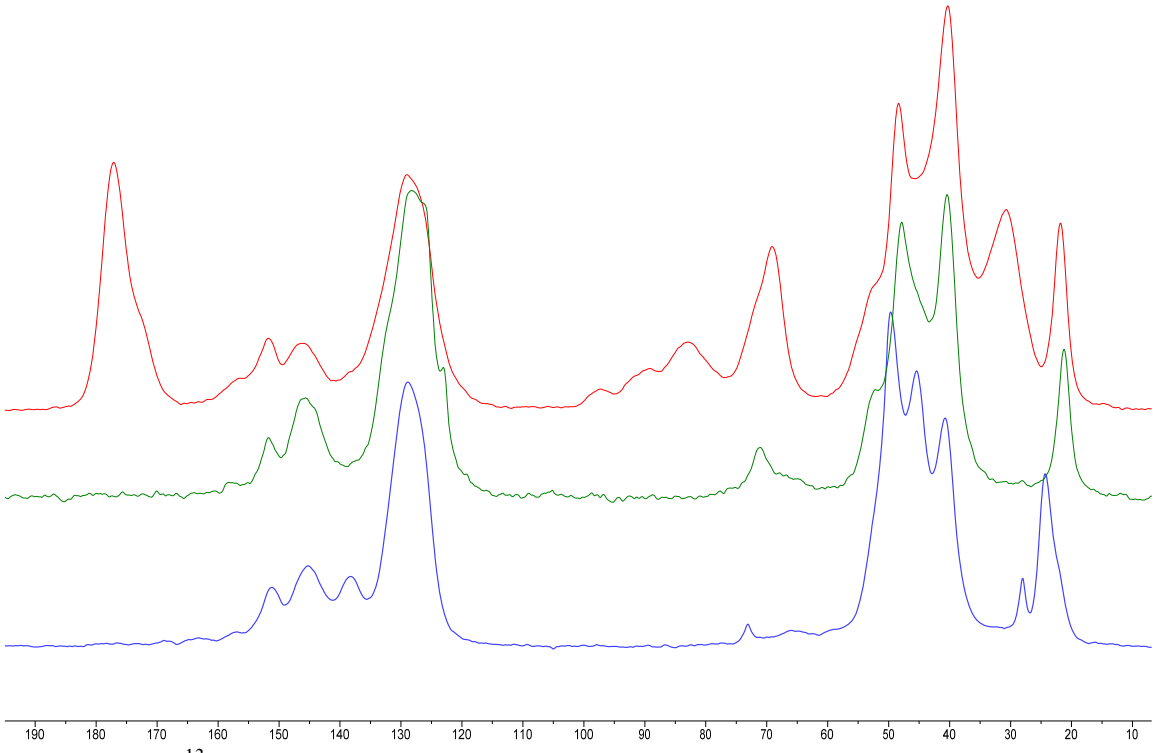


Figure S5. $^{13}C$ CP-MAS-NMR spectra of TBD-PS: unused (blue), treated with HFIP (green), and treated with HFIP and 2-(trimethylsilyloxy)furan (red). The changes in the bands corresponding to TBD seem to indicate a chemical transformation, responsible for deactivation.