

## Supplementary Material

# Organocatalytic enantioselective Michael addition of $\beta$ -diketones to $\beta$ -nitrostyrene: The first Michael addition of dipivaloylmethane to an activated olefin

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### Table of Contents

1. NMR spectra	S2
2. HPLC Chromatograms	S11

## 1. NMR Spectra

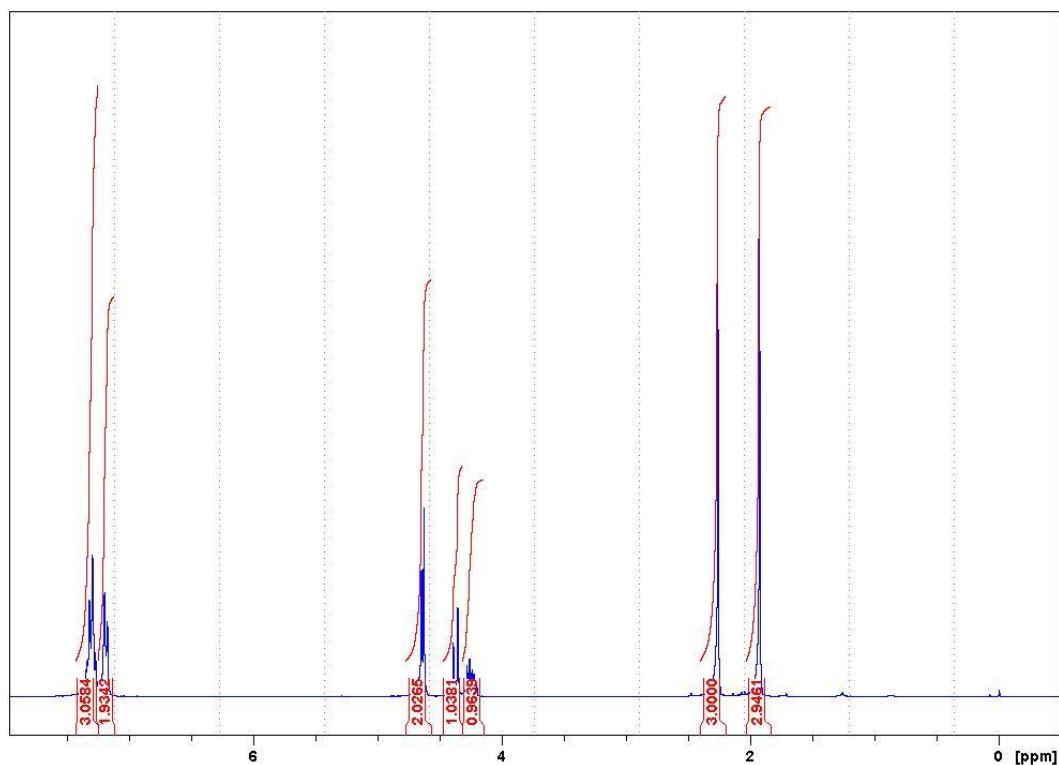


Figure S1. <sup>1</sup>H NMR spectrum for **6a**.

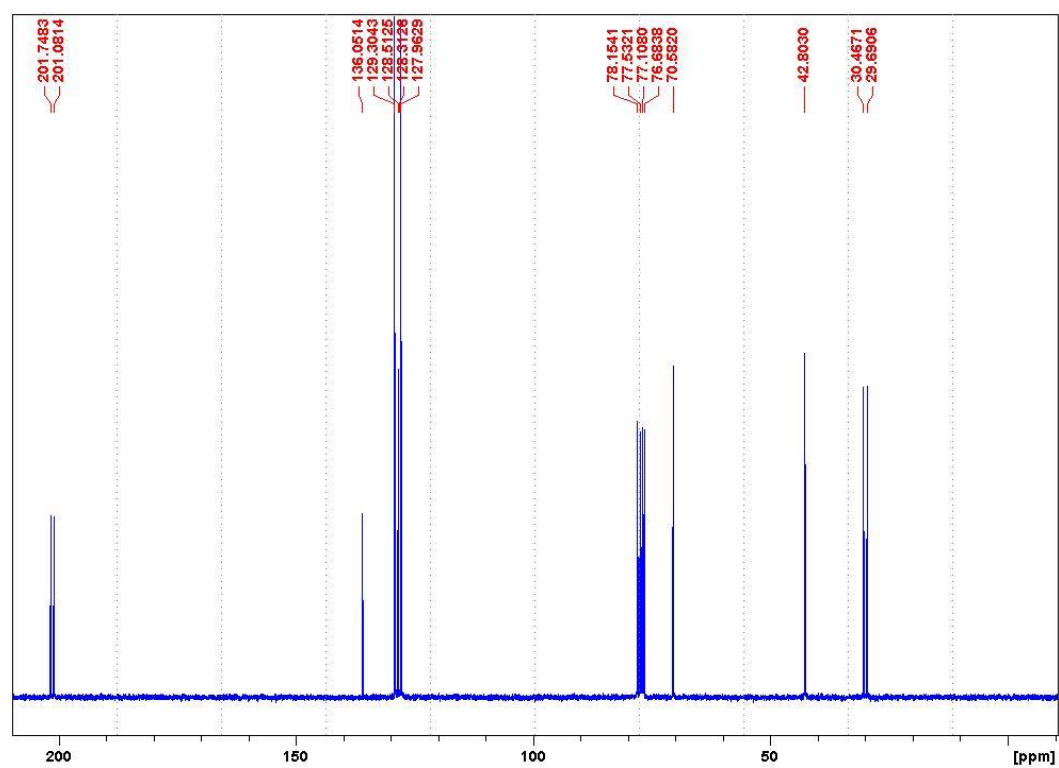
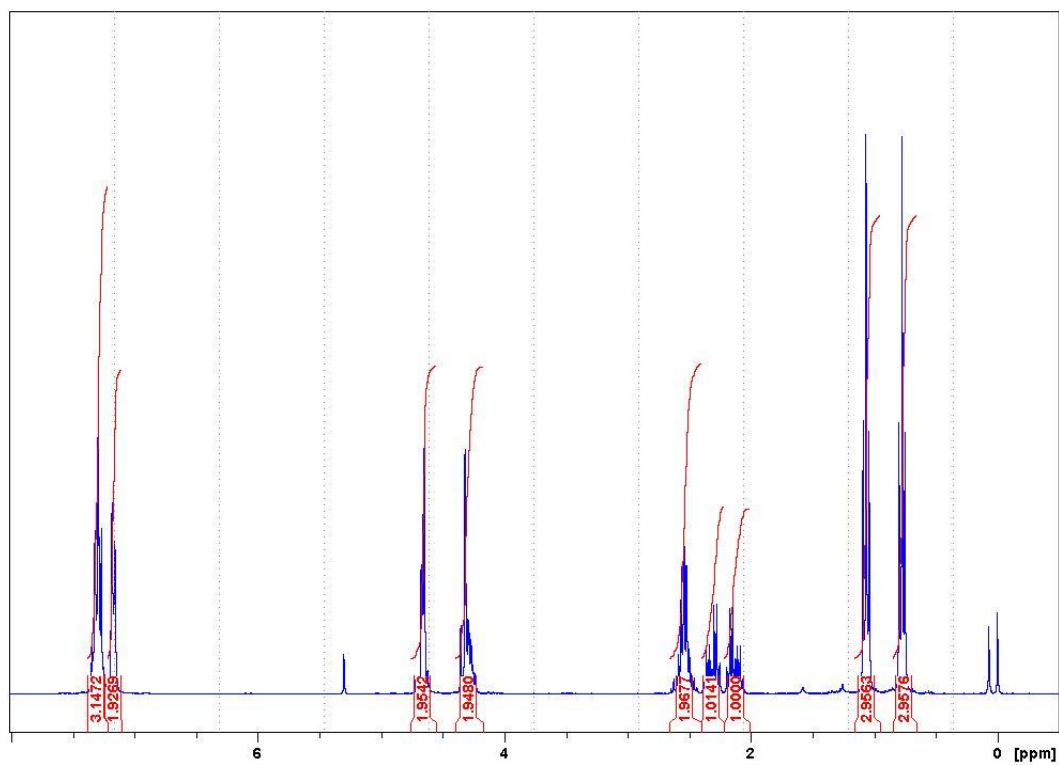
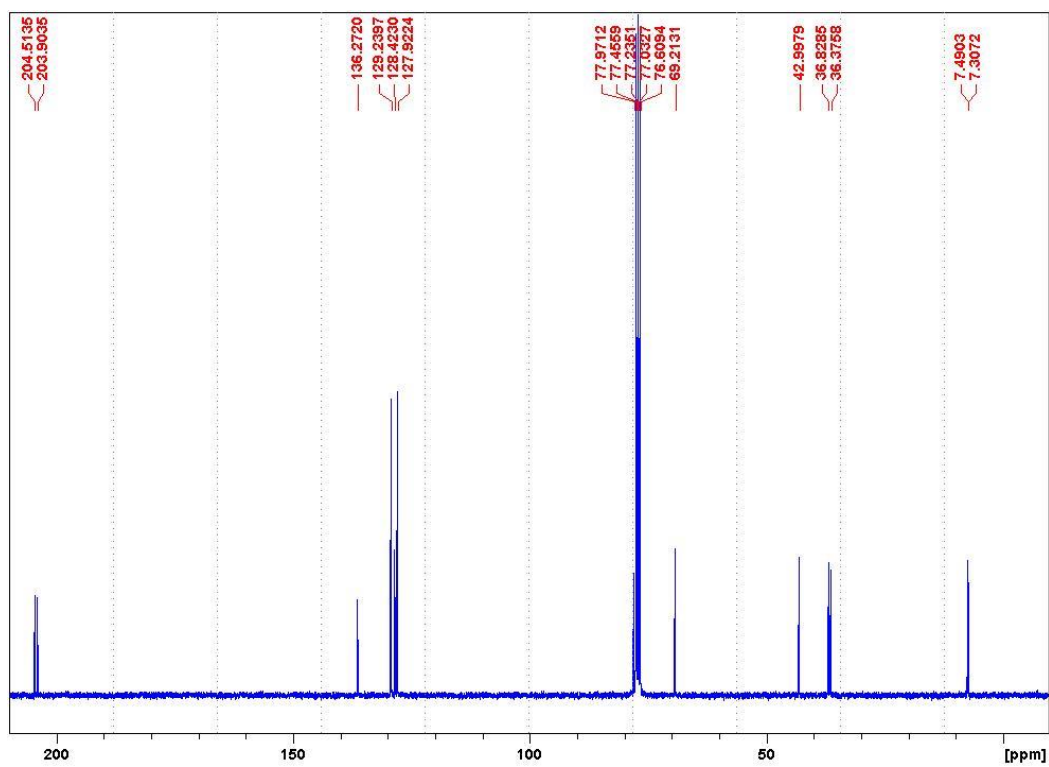


Figure S2. <sup>13</sup>C NMR spectrum for **6a**.

Figure S3.  $^1\text{H}$  NMR spectrum for **6b**.Figure S4.  $^{13}\text{C}$  NMR spectrum for **6b**.

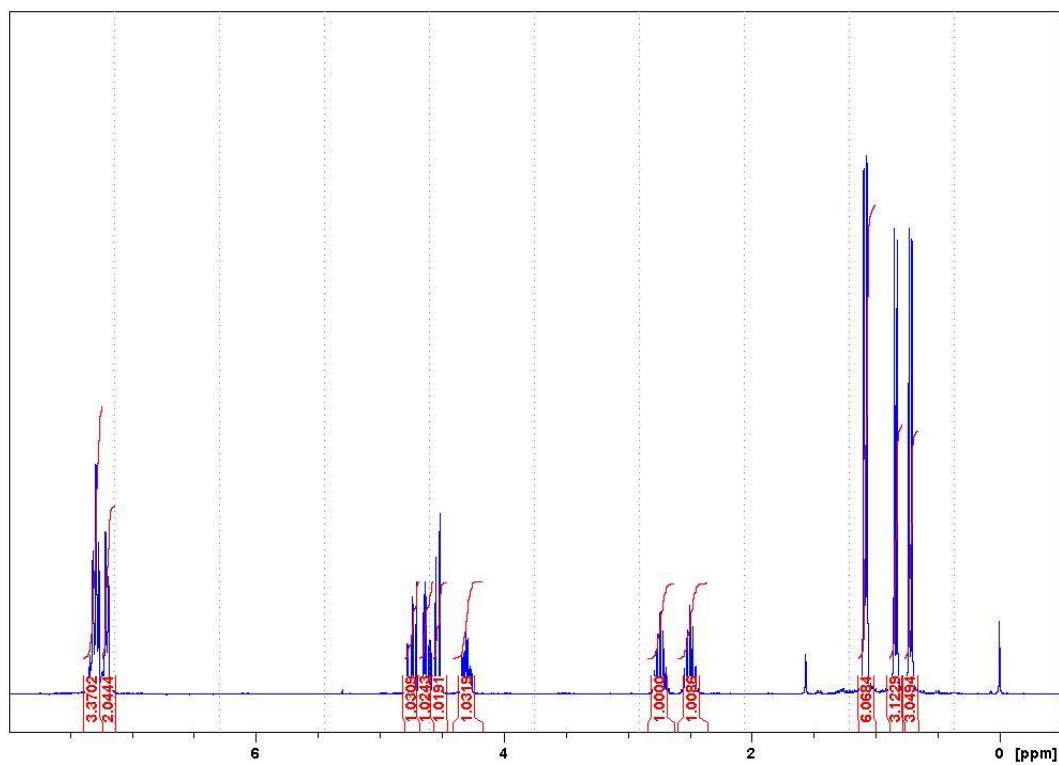


Figure S5. <sup>1</sup>H NMR spectrum for **6c**.

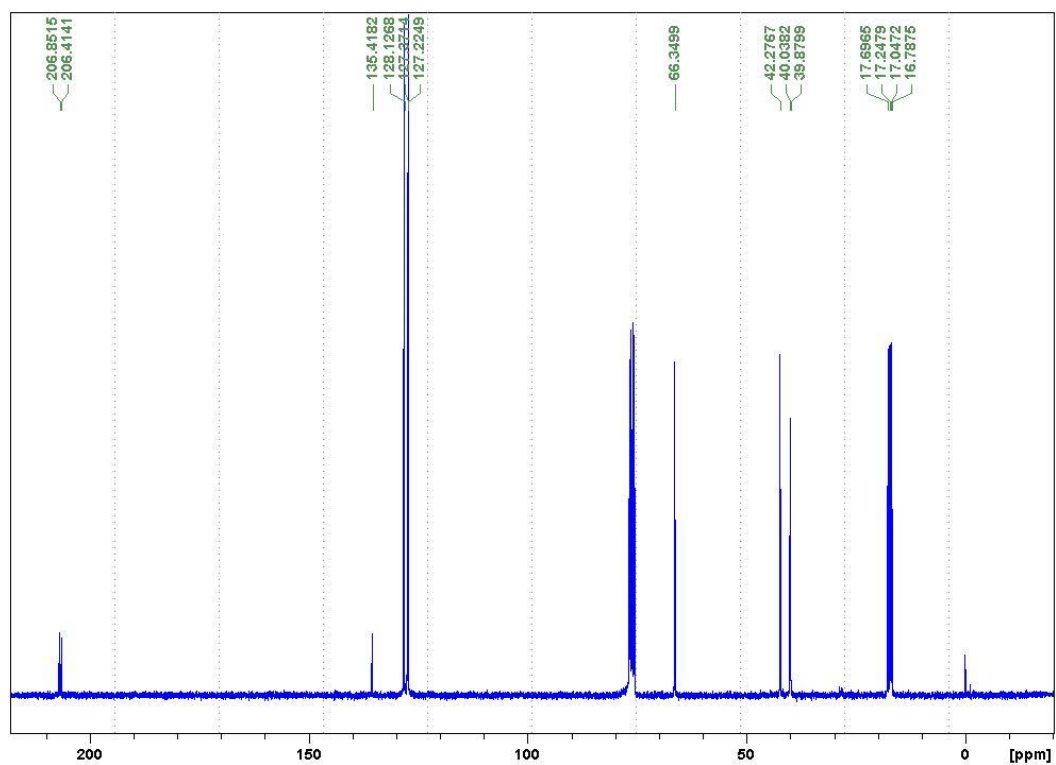


Figure S6. <sup>13</sup>C NMR spectrum for **6c**.

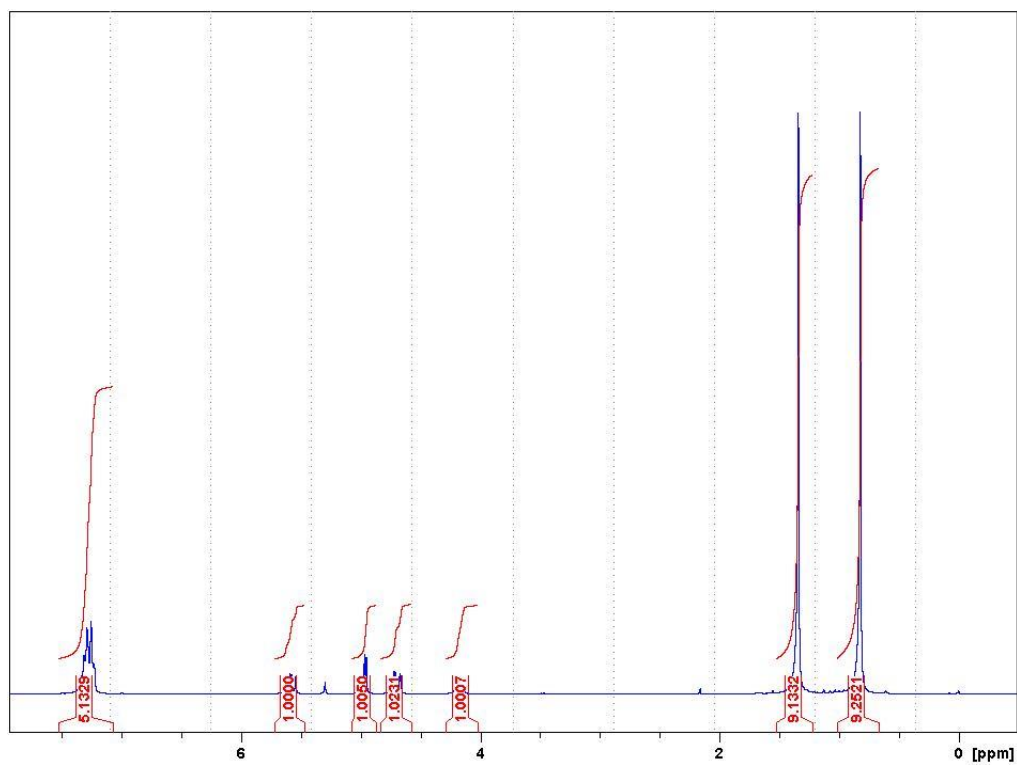


Figure S7.  $^1\text{H}$  NMR spectrum for **6d**.

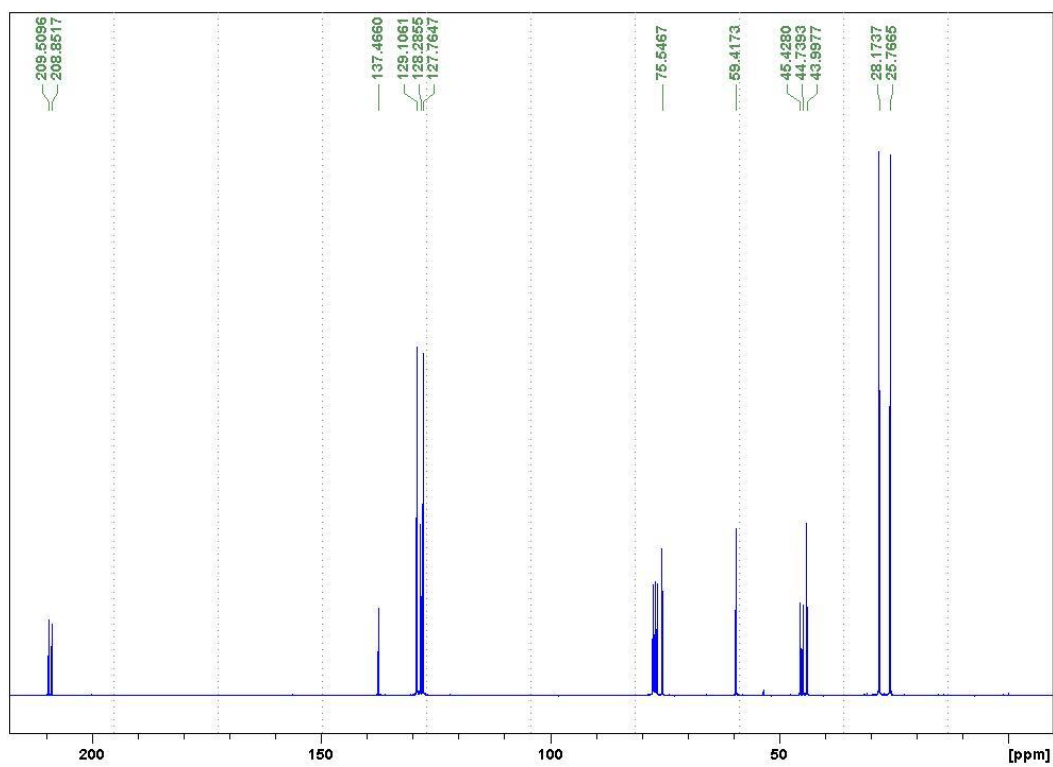


Figure S8.  $^{13}\text{C}$  NMR spectrum for **6d**.

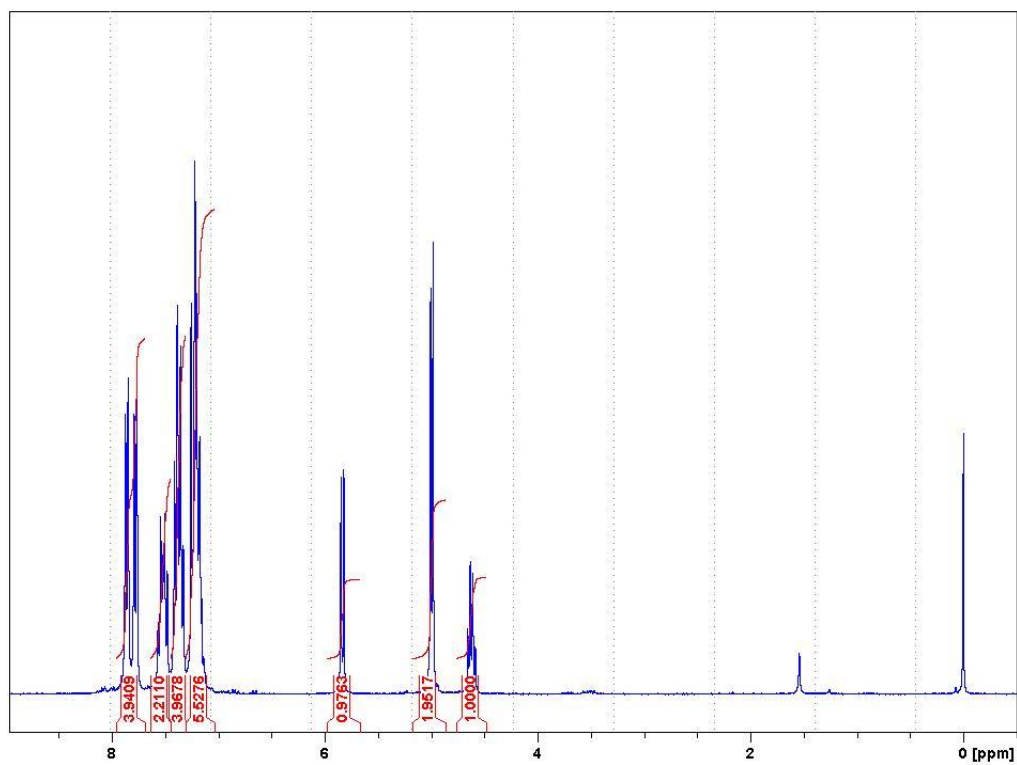


Figure S9. <sup>1</sup>H NMR spectrum for **6e**.

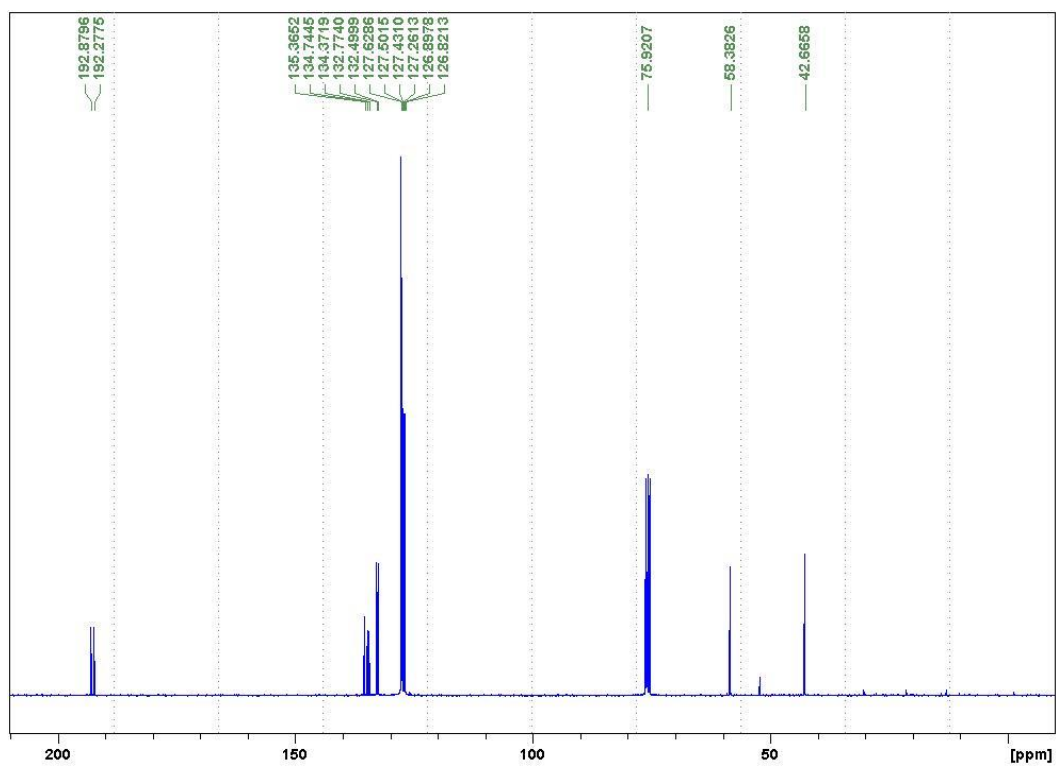


Figure S10. <sup>13</sup>C NMR spectrum for **6e**.

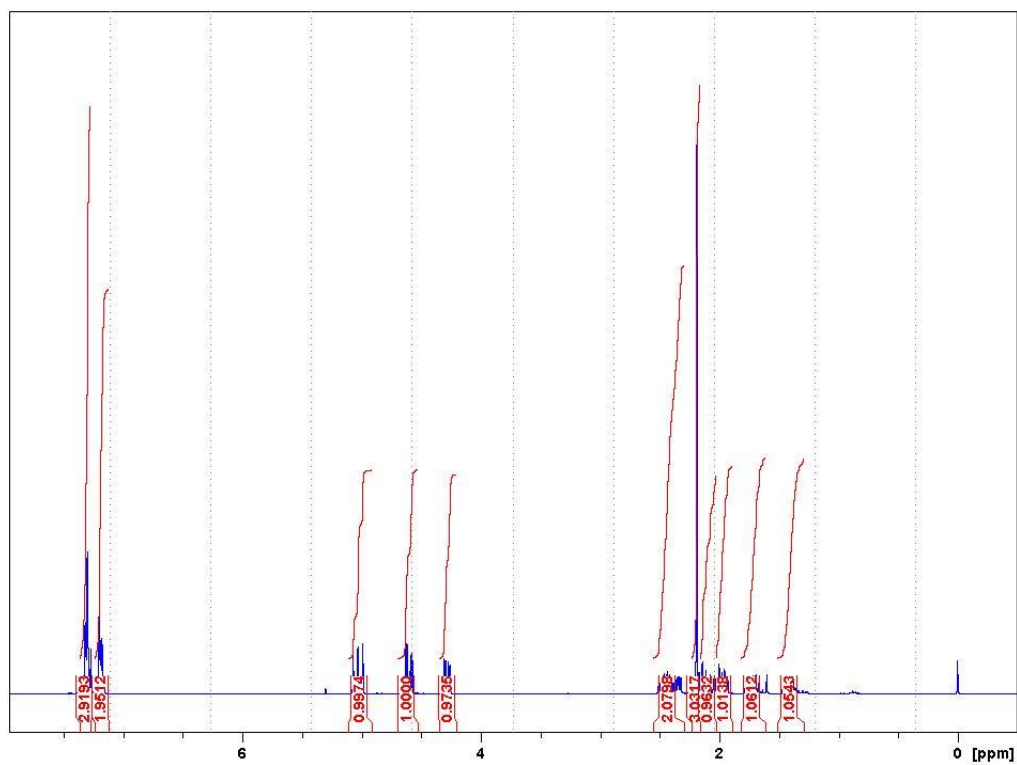


Figure S11.  $^1\text{H}$  NMR spectrum for **6f** (major diastereomer).

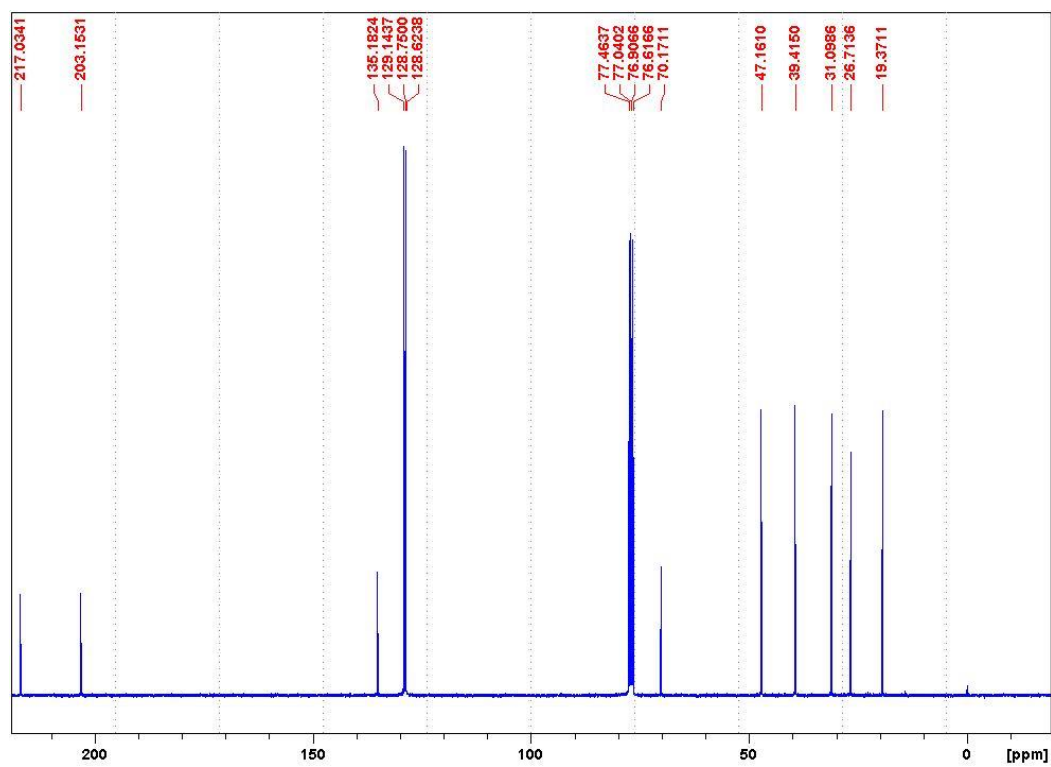


Figure S12.  $^{13}\text{C}$  NMR spectrum for **6f** (major diastereomer).

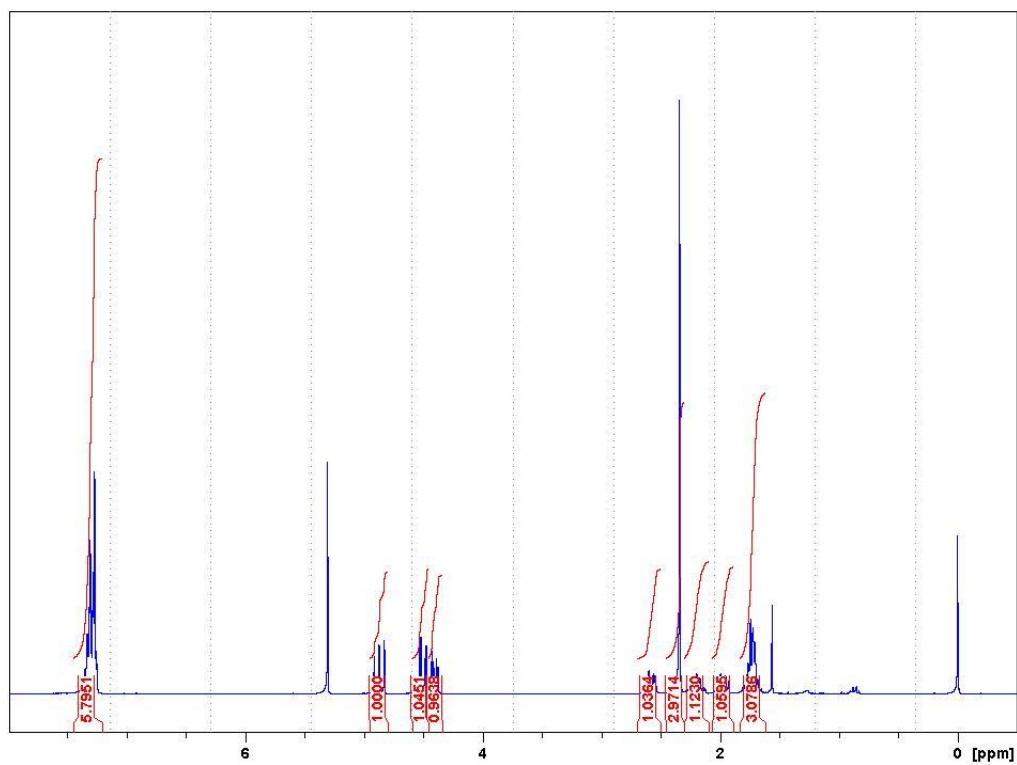


Figure S13.  $^1\text{H}$  NMR spectrum for **6f** (minor diastereomer).

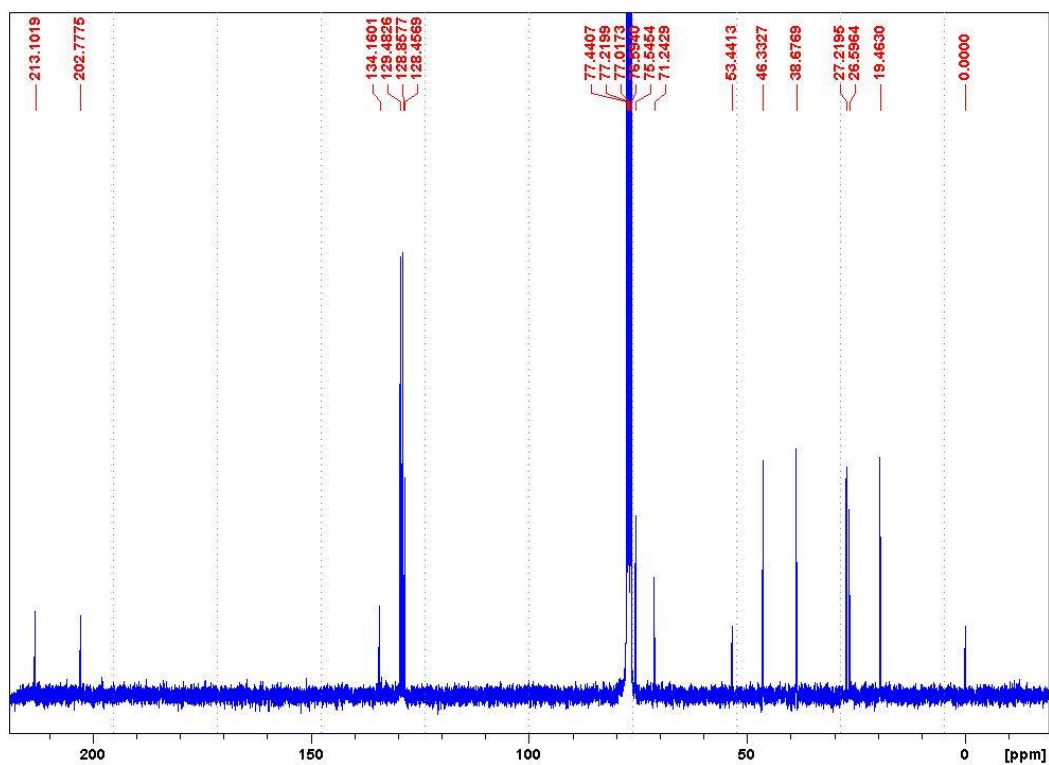


Figure S14.  $^{13}\text{C}$  NMR spectrum for **6f** (minor diastereomer).



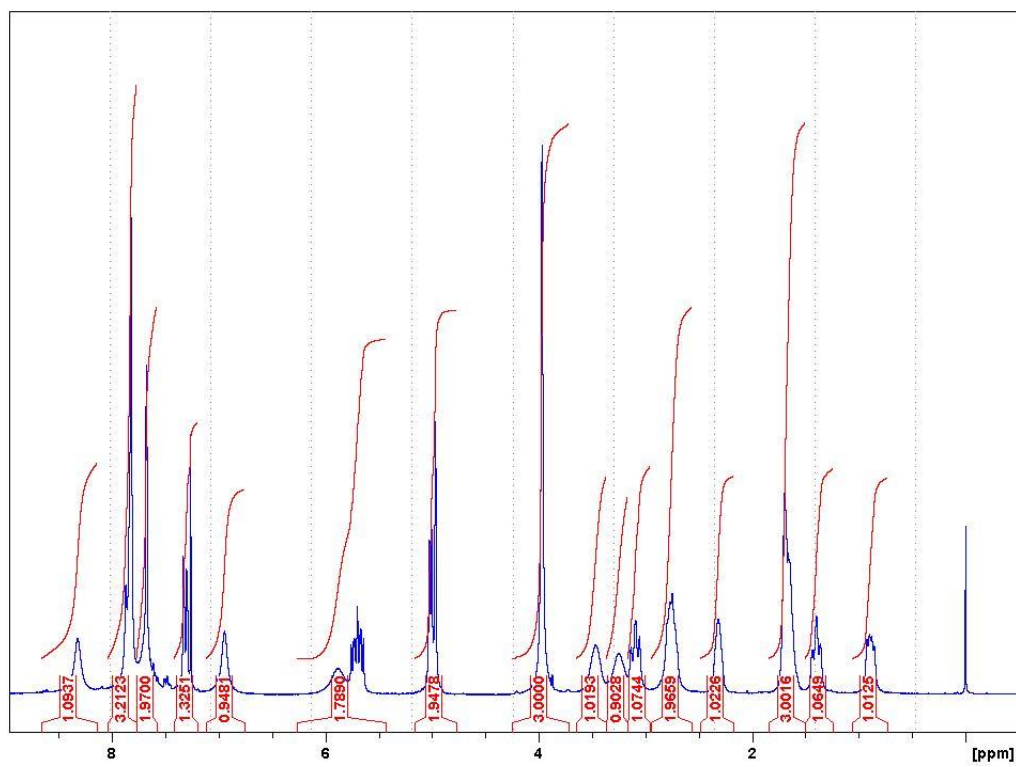


Figure S15.  $^1\text{H}$  NMR spectrum for organocatalyst **2**.

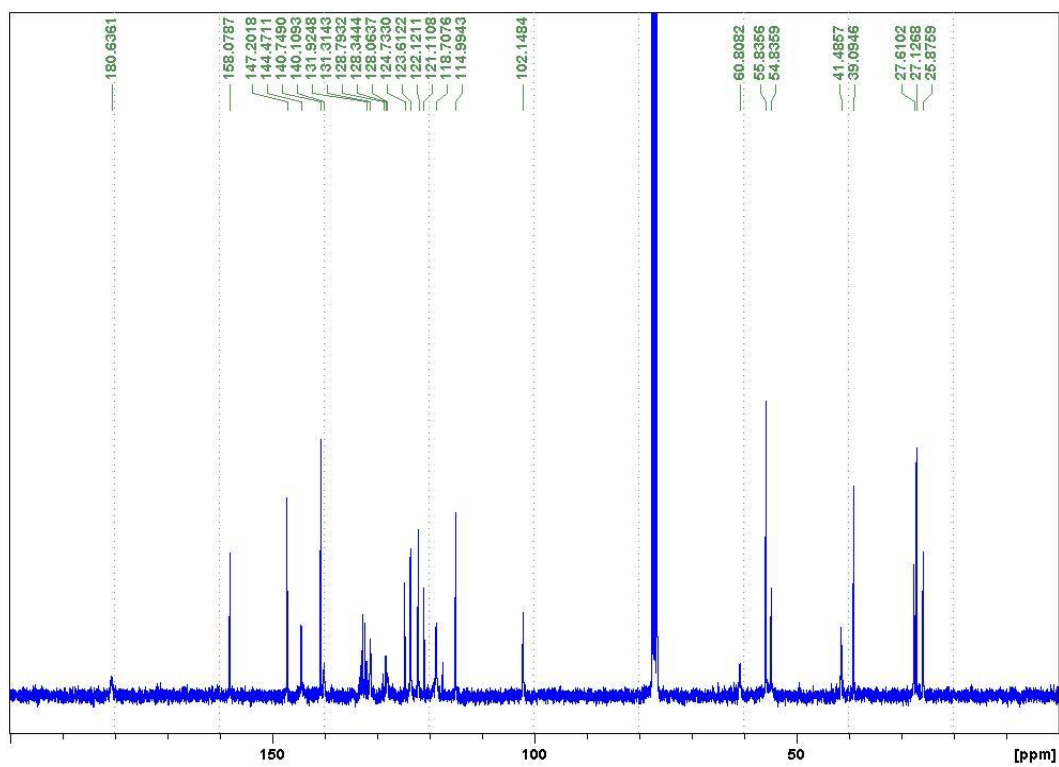


Figure S16.  $^{13}\text{C}$  NMR spectrum for organocatalyst **2**.

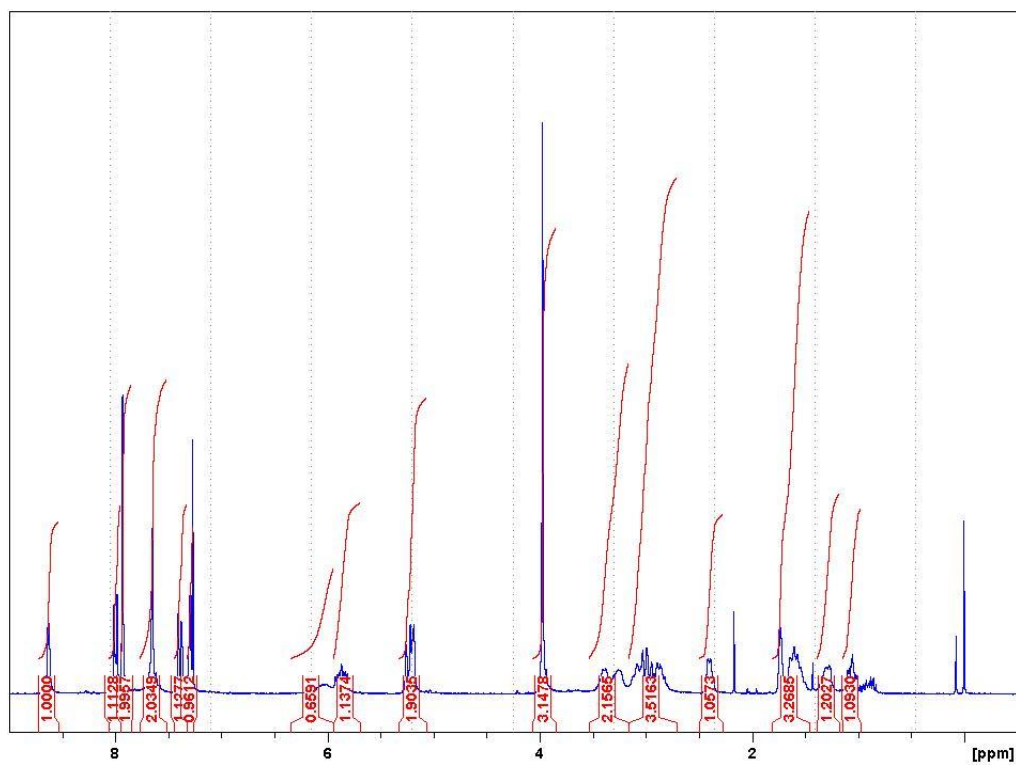


Figure S17.  $^1\text{H}$  NMR spectrum for organocatalyst **14**.

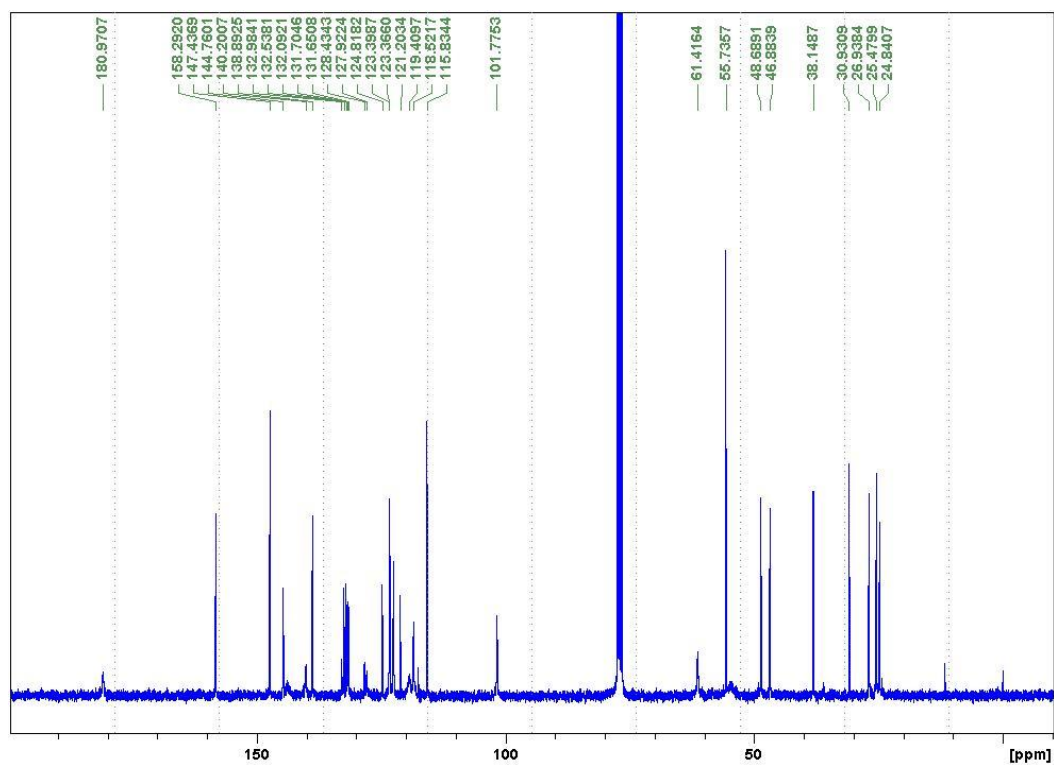
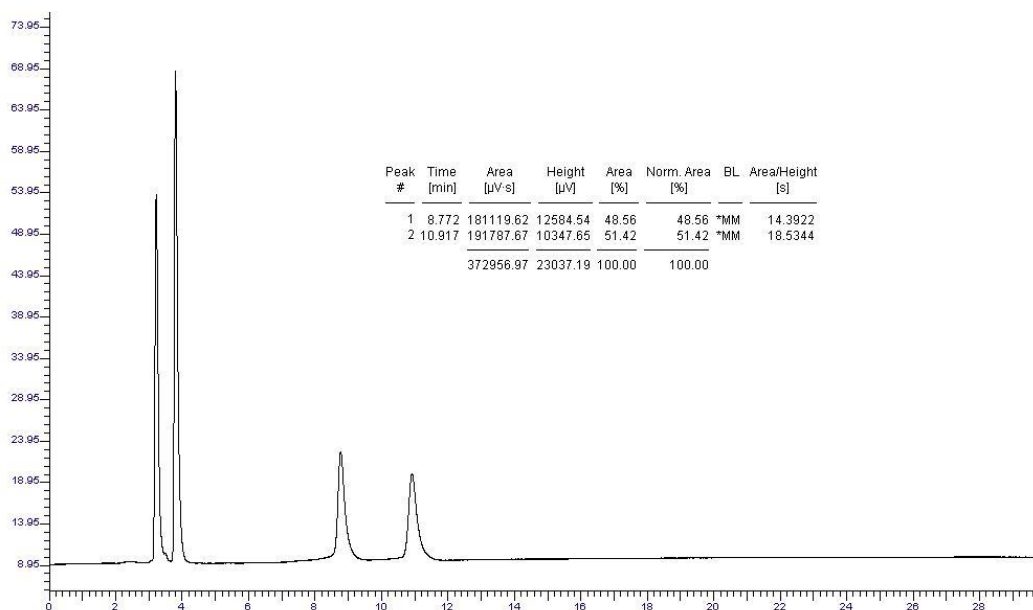
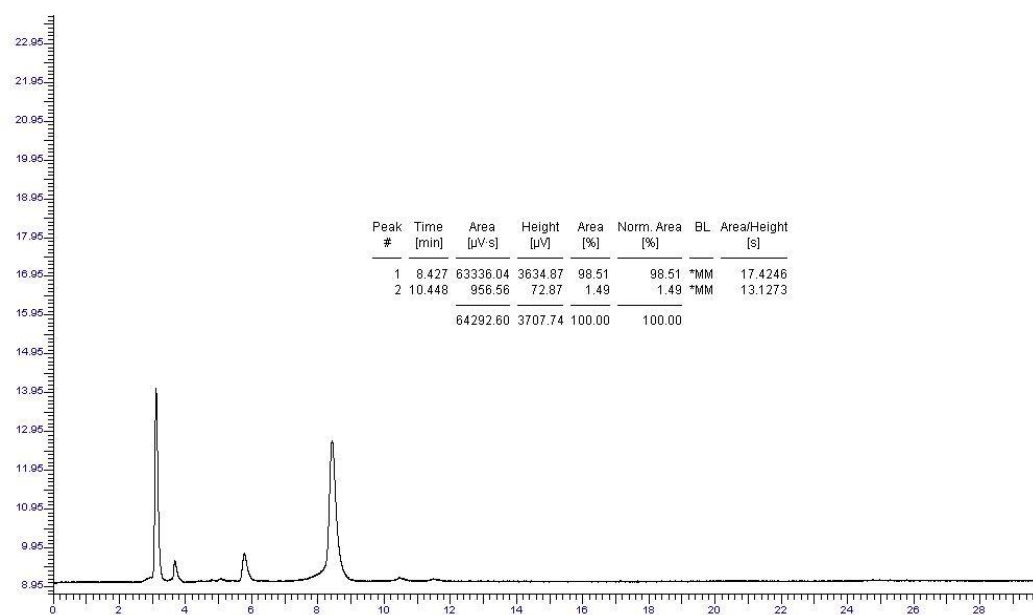


Figure S18.  $^{13}\text{C}$  NMR spectrum for organocatalyst **14**.

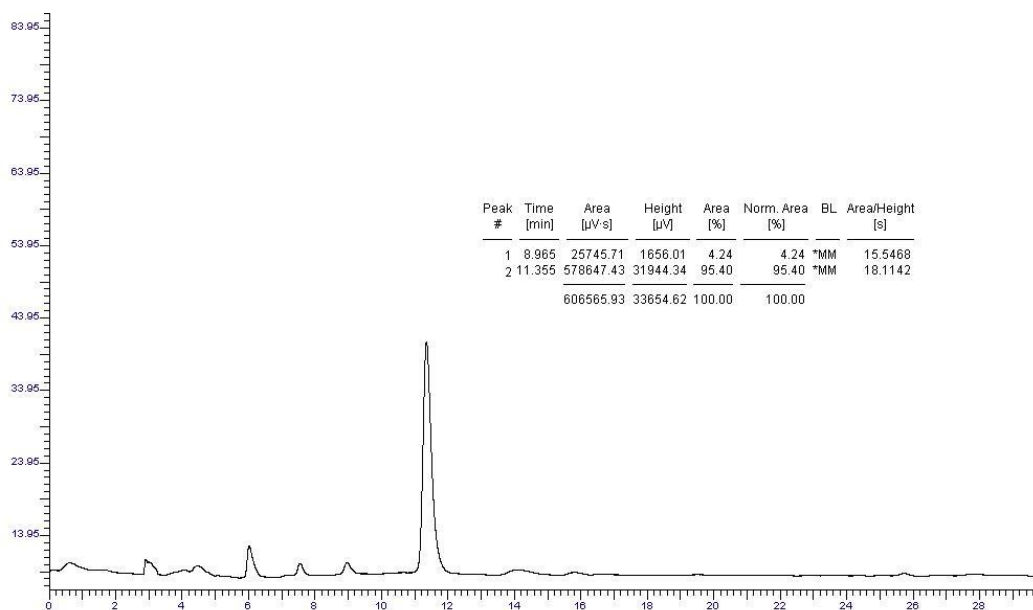
## 2. HPLC Chromatograms



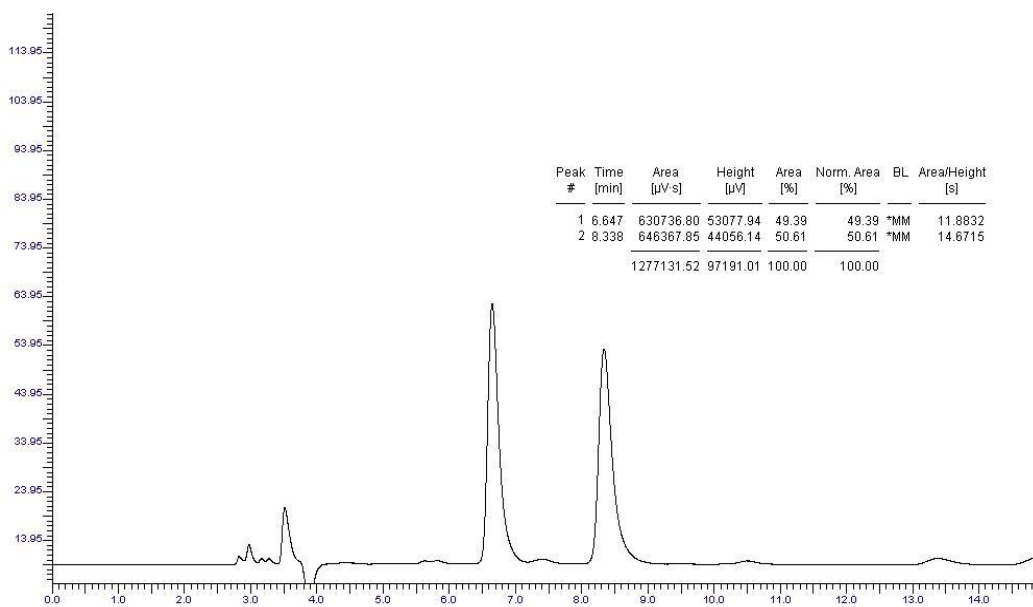
**Figure S19.** Racemic product **6a**.



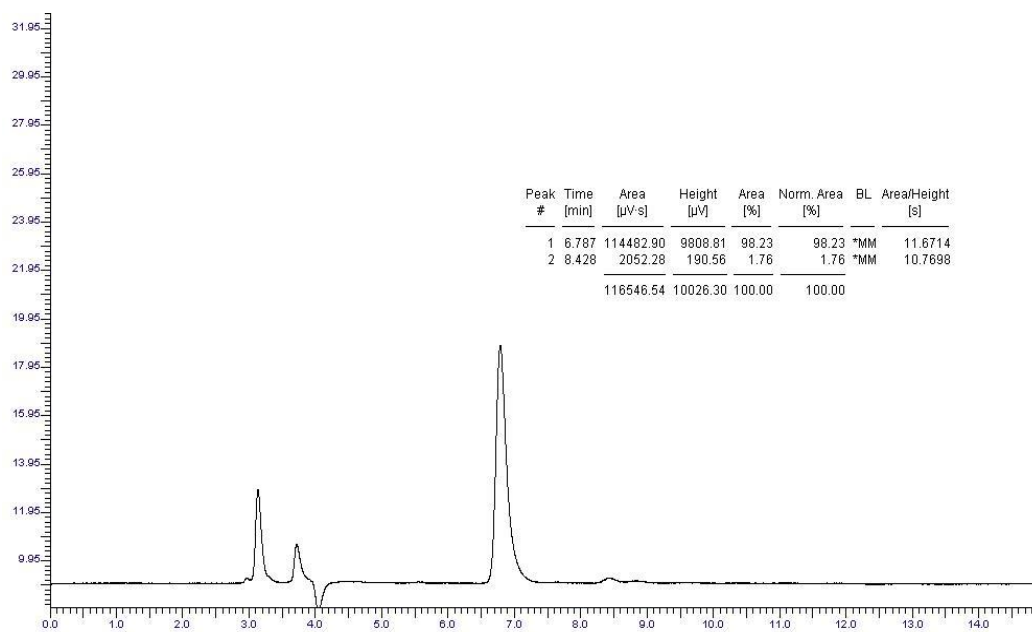
**Figure S20.** Product **6a** resulting from reaction catalysed by organocatalyst **2**.



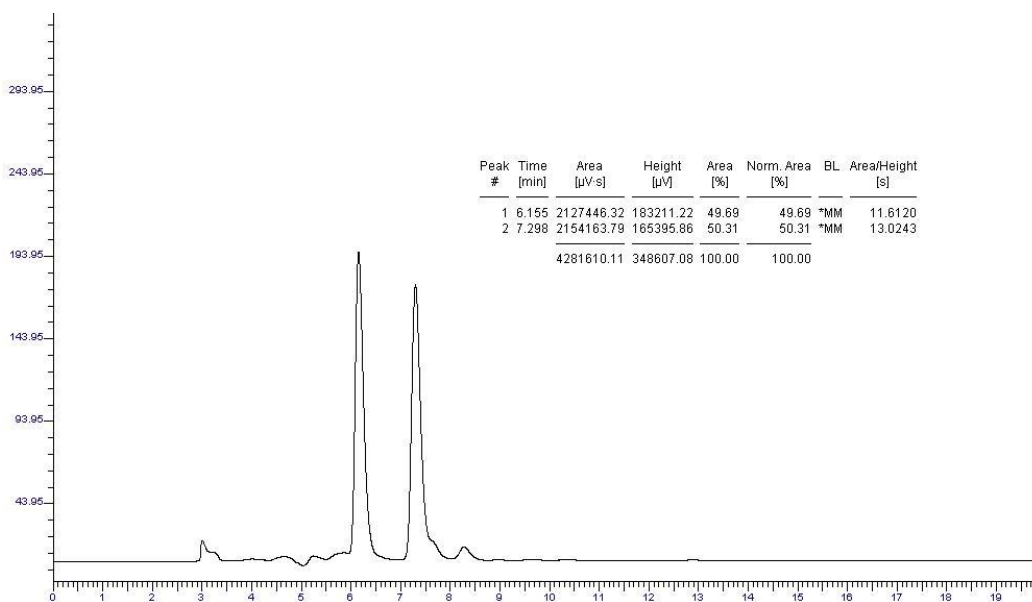
**Figure S21.** Product **6a** resulting from reaction catalysed by organocatalyst **14**.



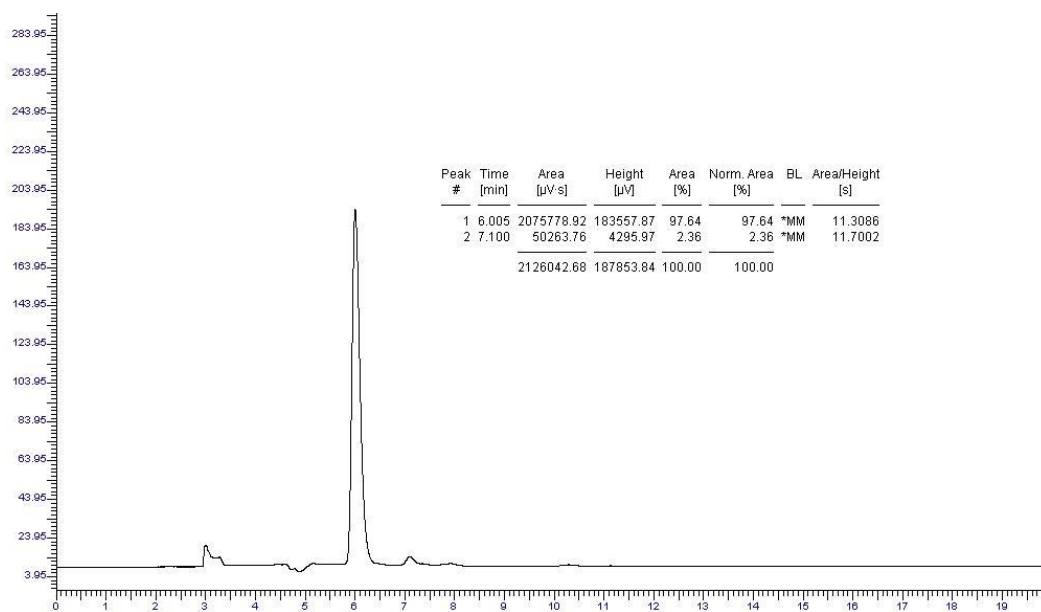
**Figure S22.** Racemic product **6b**.



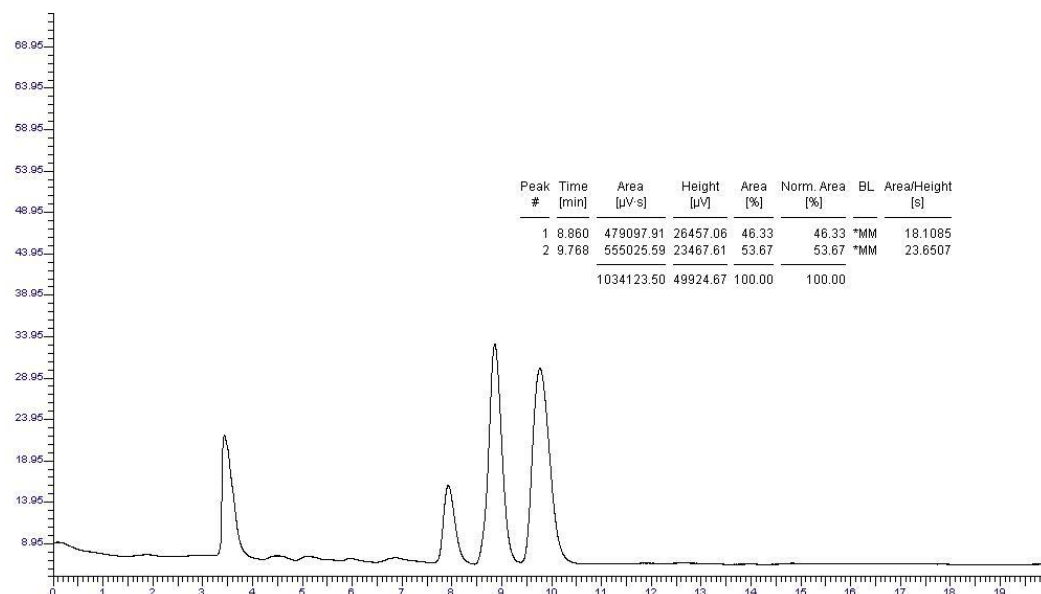
**Figure S23.** Product **6b** resulting from reaction catalysed by organocatalyst **2**.



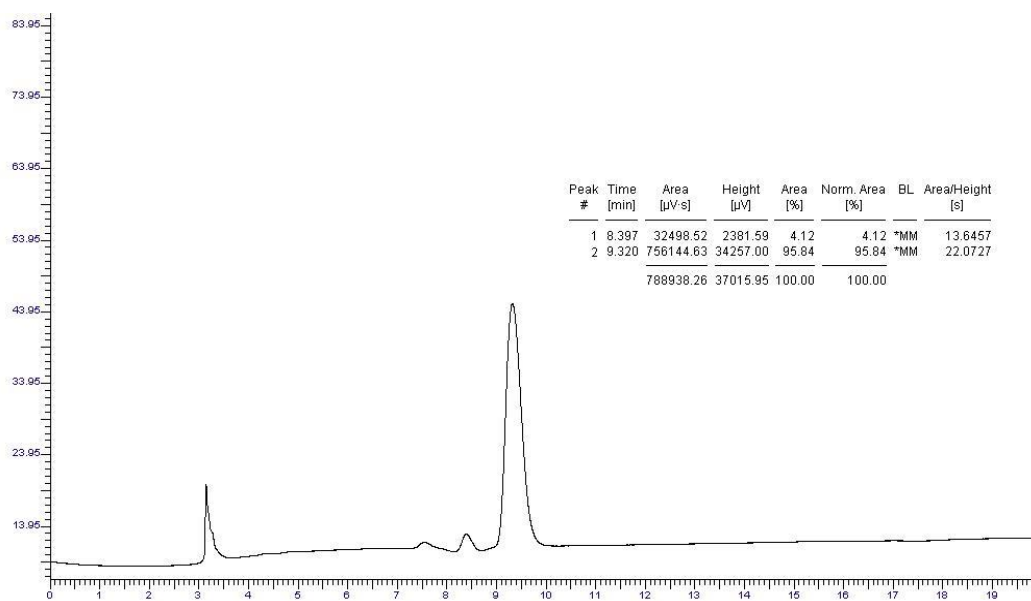
**Figure S24.** Racemic product **6c**.



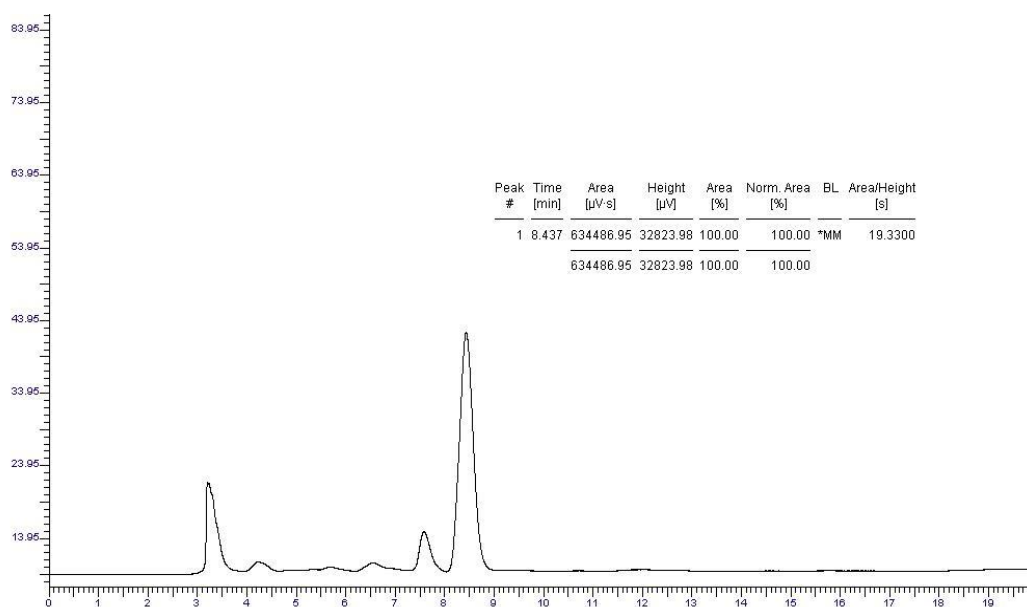
**Figure S25.** Product **6c** resulting from reaction catalysed by organocatalyst **2**.



**Figure S26.** Product **6d** resulting from reaction catalysed by a mixture of organocatalysts **2** and **14**.



**Figure S27.** Product **6d** resulting from reaction catalysed by organocatalyst **14**.



**Figure S28.** Product **6d** resulting from reaction catalysed by organocatalyst **2**.

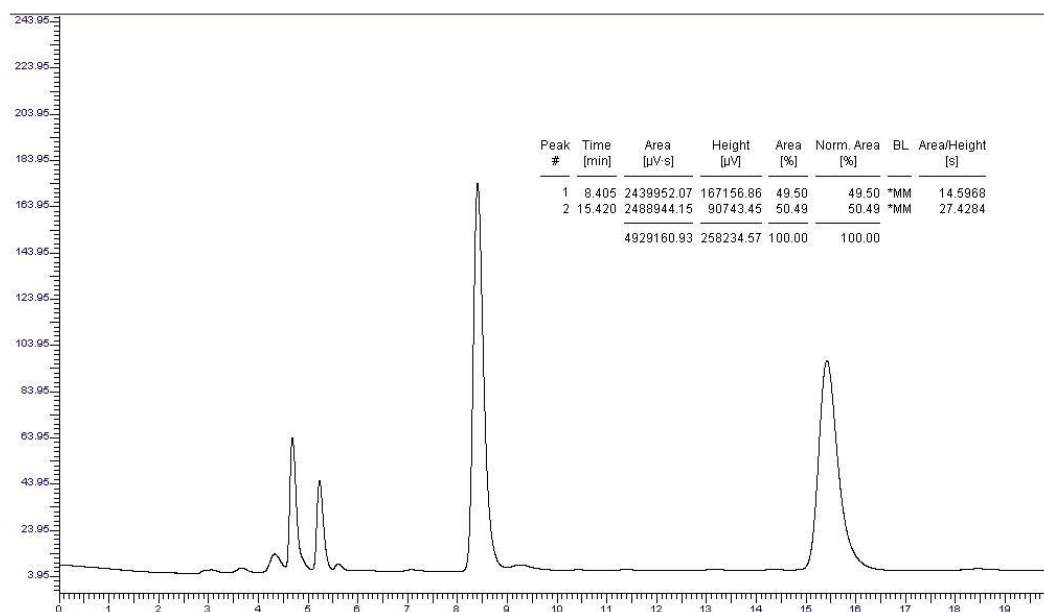


Figure S29. Racemic product 6e.

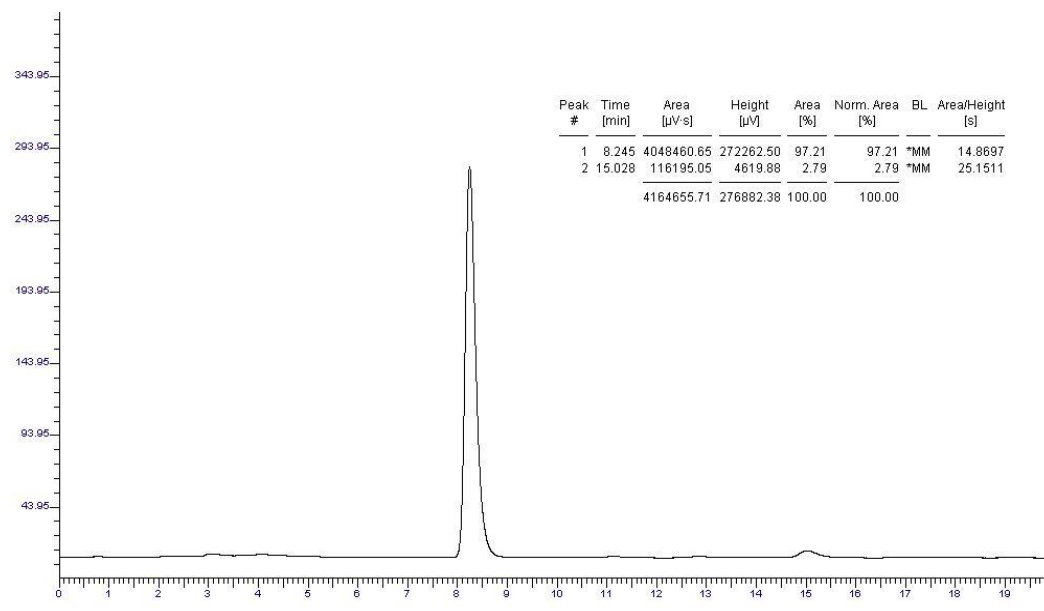
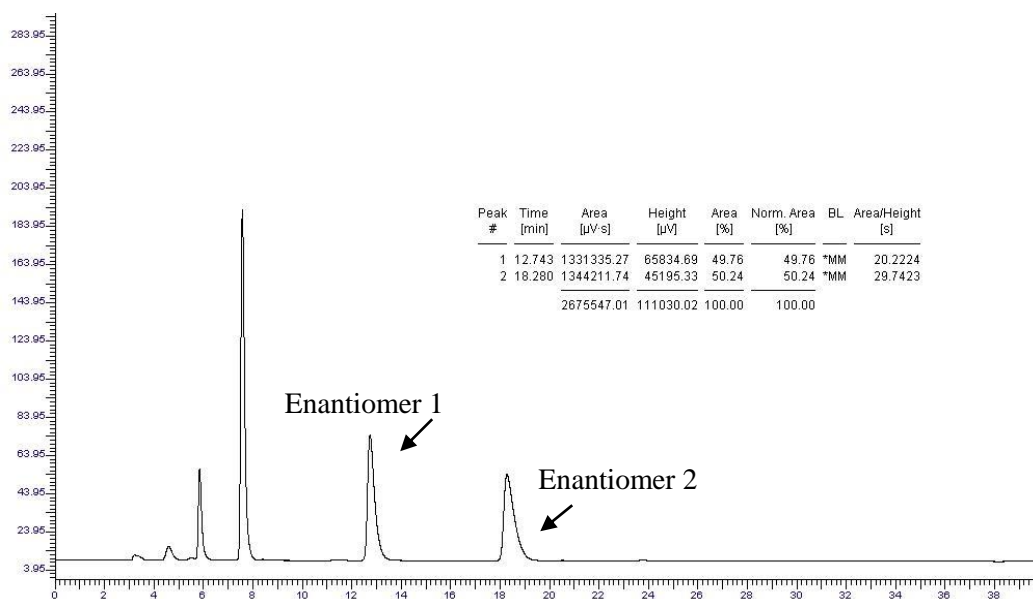
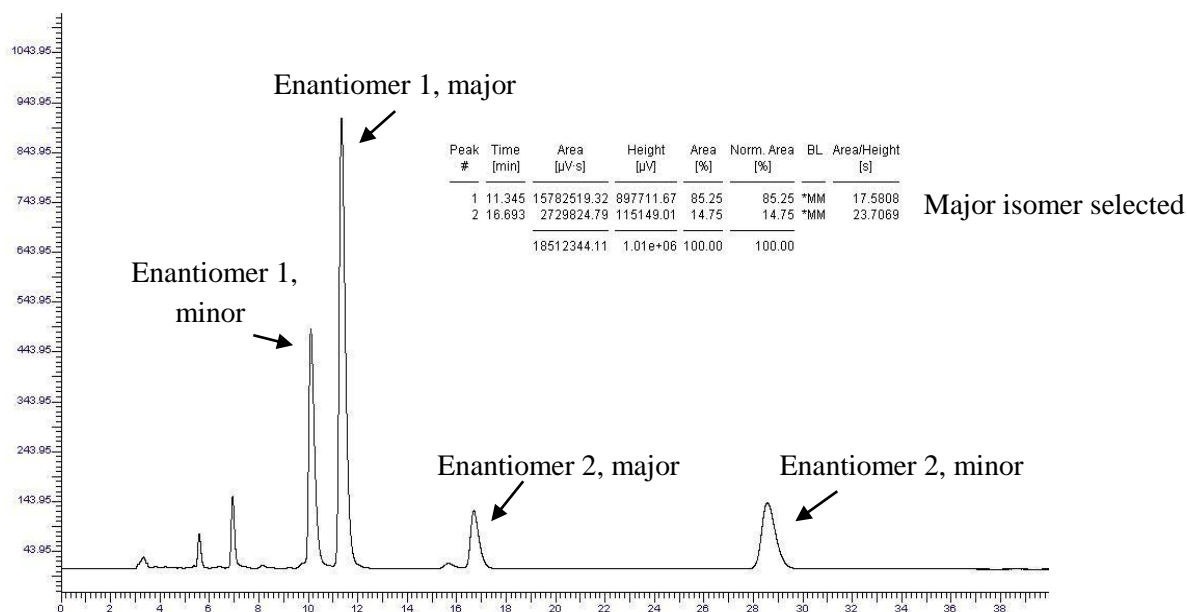


Figure S30. Product 6e resulting from reaction catalysed by organocatalyst 2.

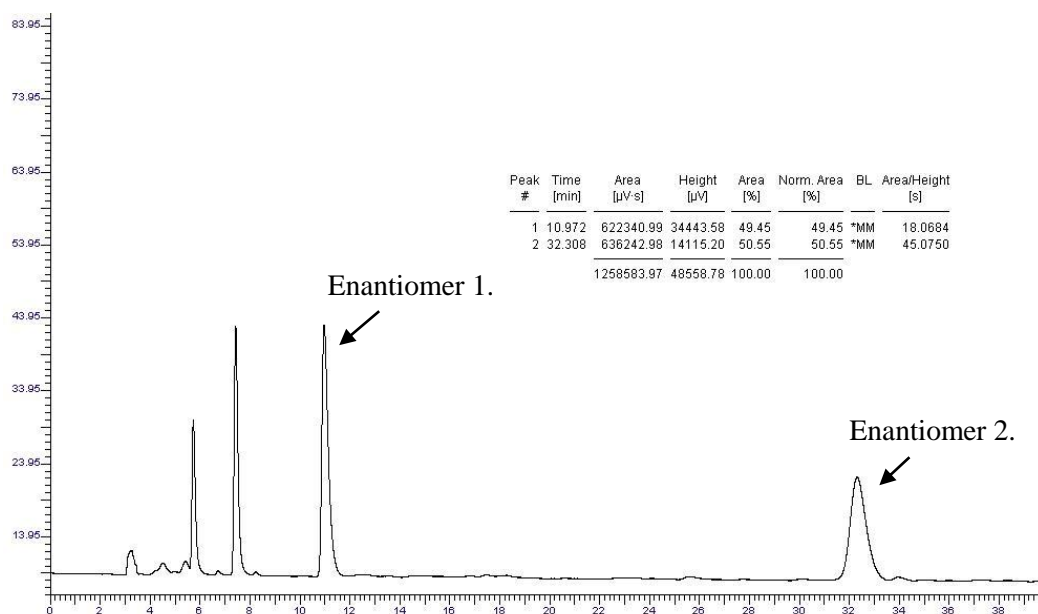




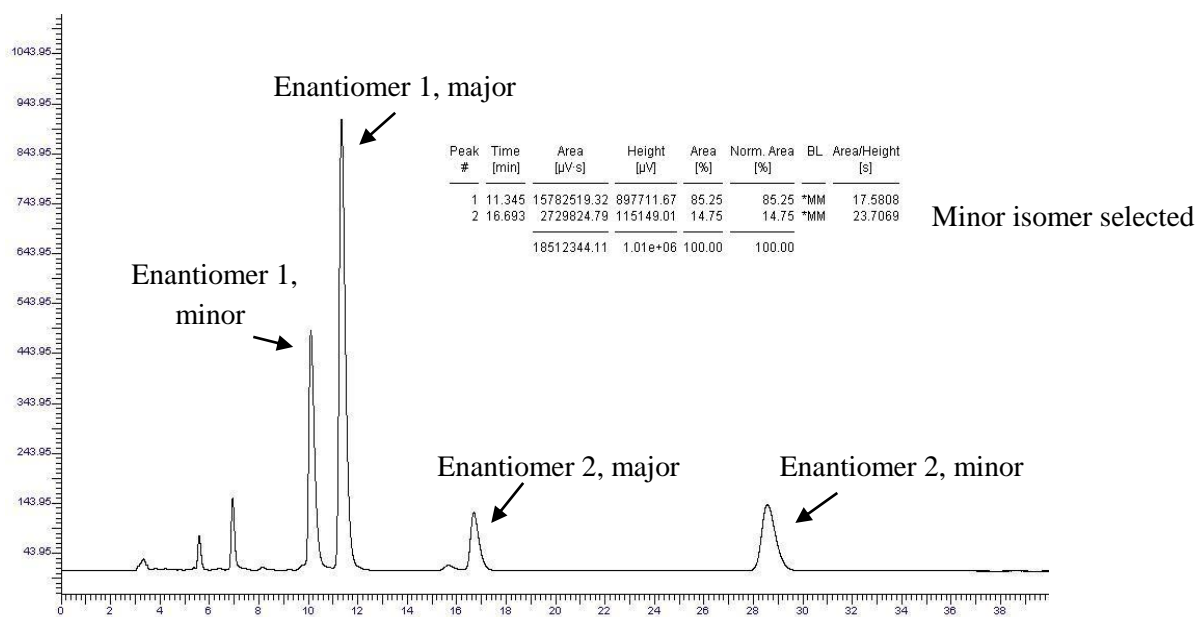
**Figure S31.** Product **6h** resulting from reaction catalysed by KOtBu (major diastereomer).



**Figure S32.** Product **6f** resulting from reaction catalysed by organocatalyst **2**.



**Figure S33.** Product **6f** resulting from reaction catalysed by KOTBu (minor diastereomer).



**Figure S34.** Product **6f** resulting from reaction catalysed by organocatalyst **2**.