Electronic Supplementary Material (ESI) for Dalton Transactions.

Reversible borohydride formation from aluminium hydrides and {H(9-BBN)}$_2$: structural, thermodynamic and reactivity studies

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Supporting Information

Contents (9 pages total)

1. Variable temperature NMR experiments

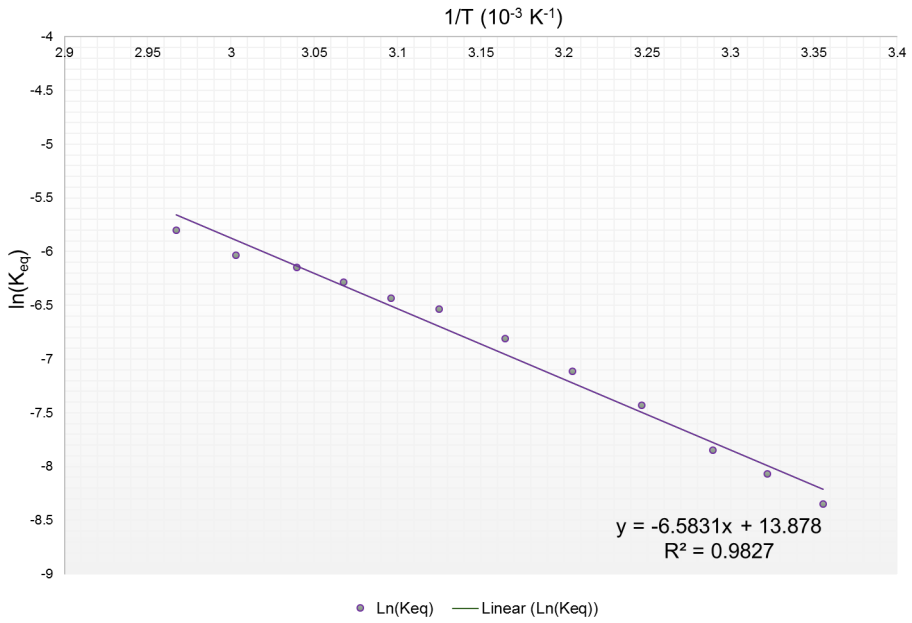


Figure s1: A Van't Hoff plot for the dissociation of the borane from [^{Dipp}**1**]Al(Et){H_2(9-BBN)}. Temperature range from 295 K to 345 K.

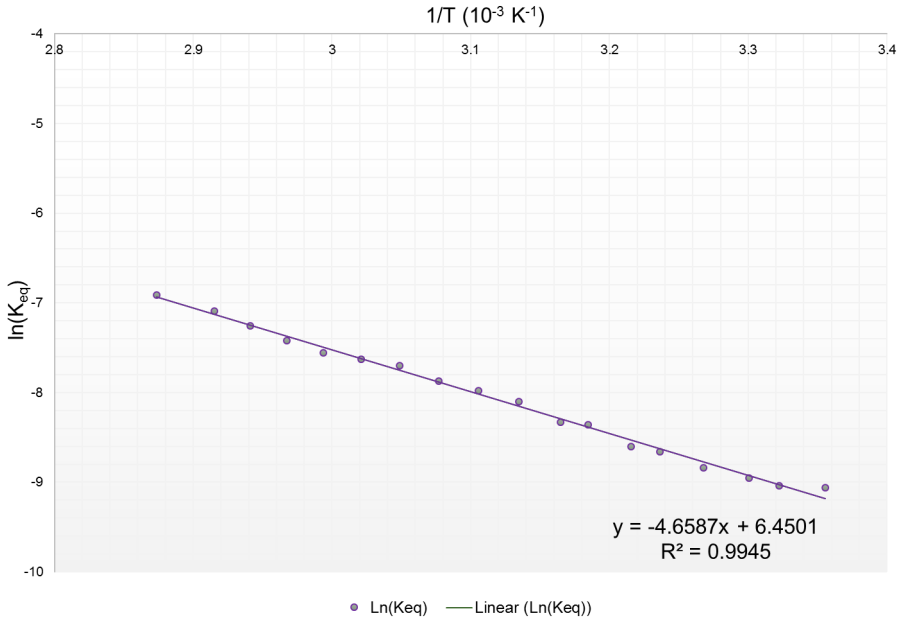


Figure s2: A Van't Hoff plot for the dissociation of the borane from [^{Dipp}**1**]Al(Me){H_2(9-BBN)}. Temperature range from 295 K to 358 K.

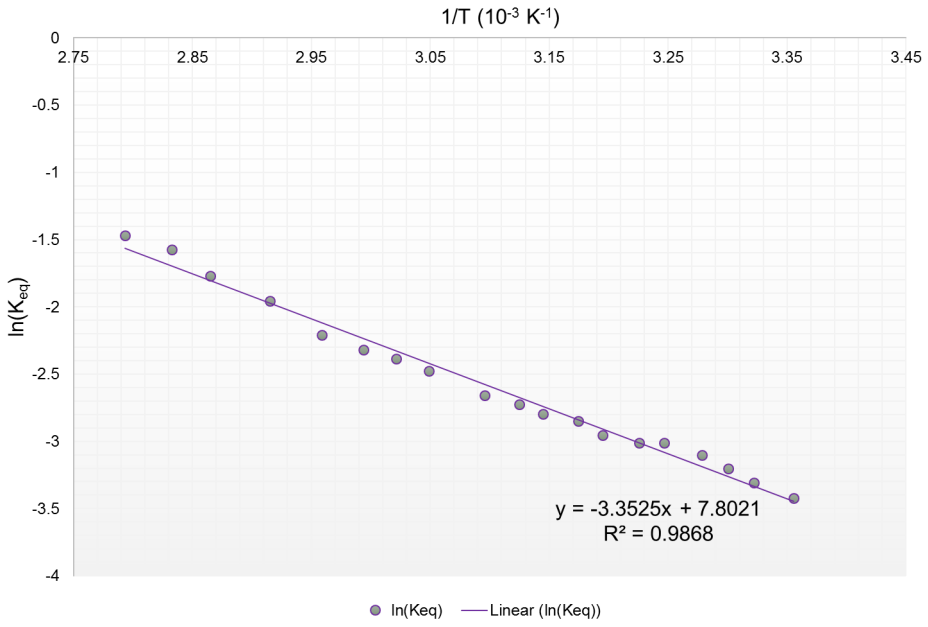


Figure s3: A Van't Hoff plot for the dissociation of the borane from [^{Dipp}**1**]Al(OTf){H_2(9-BBN)}. Temperature range from 298 K to 333 K.

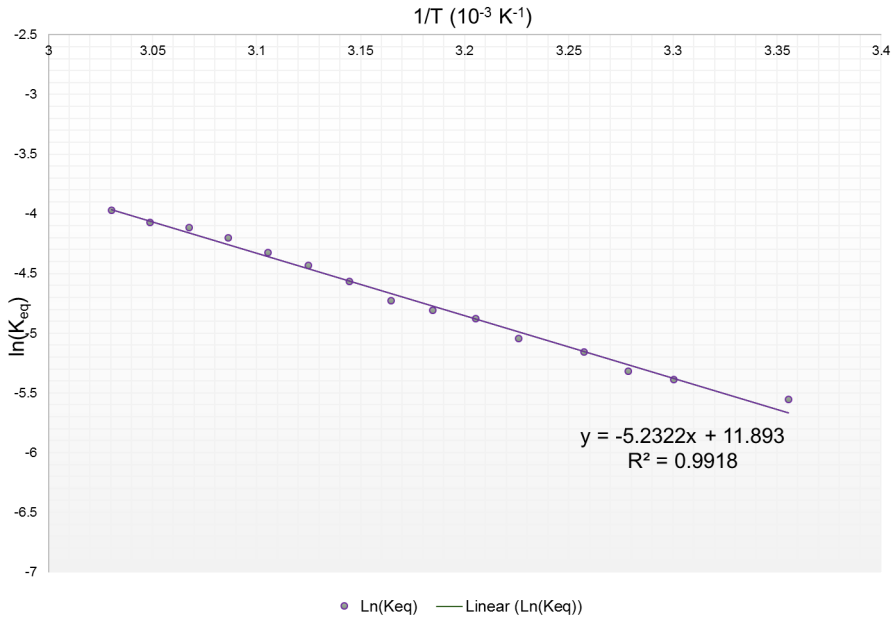
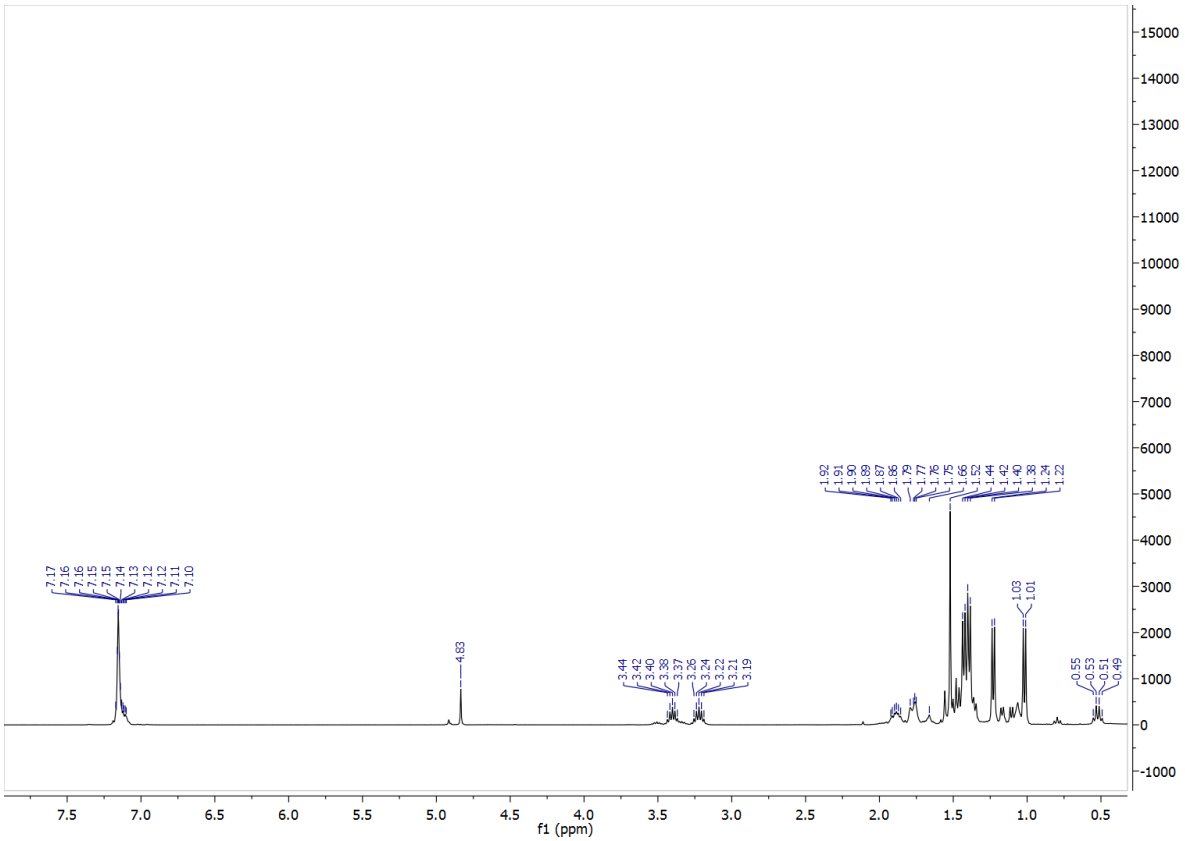
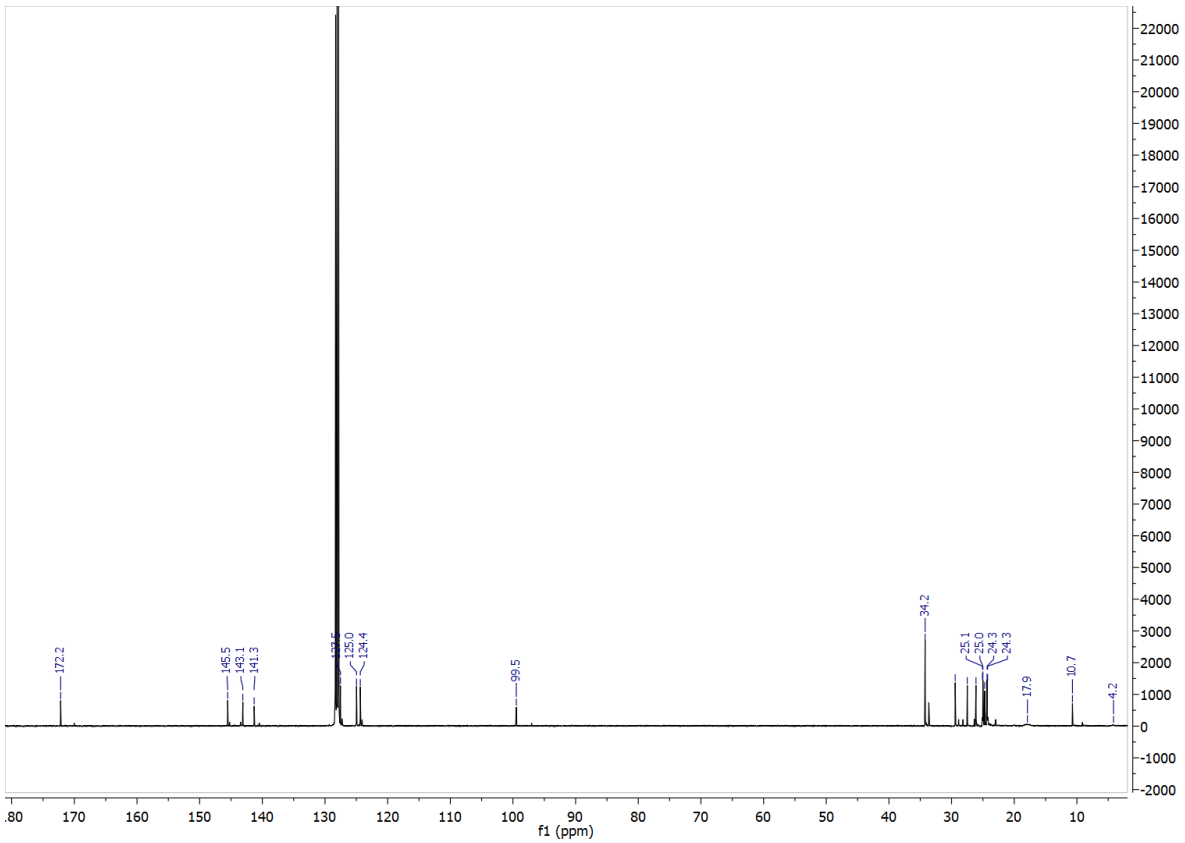


Figure s4: A Van't Hoff plot for the dissociation of the borane from [^{Dipp}**2**]Al(Et){H_2(9-BBN)}. Temperature range from 298 K to 333 K.

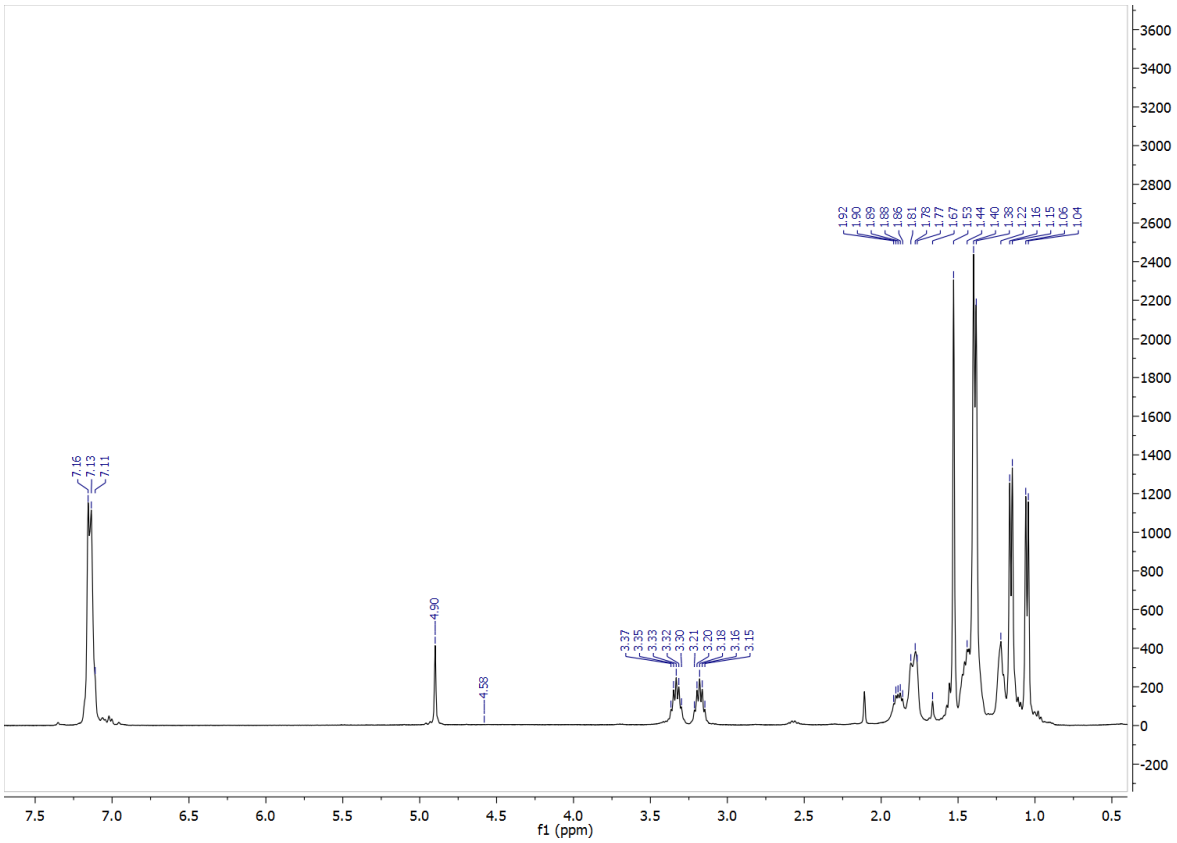
2. ^{1}H and ^{13}C NMR spectra of novel compounds

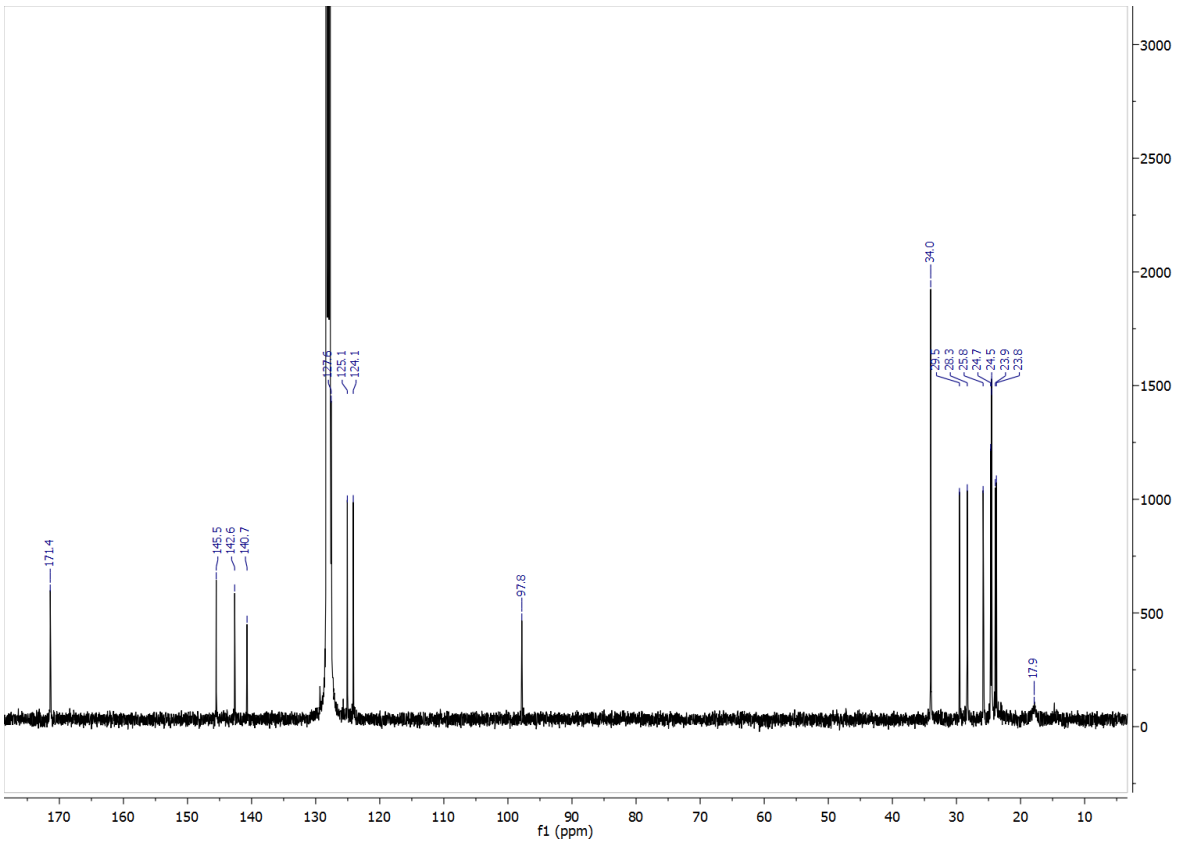
[^{Dipp}1]Al(Et){H_2(9-BBN)}



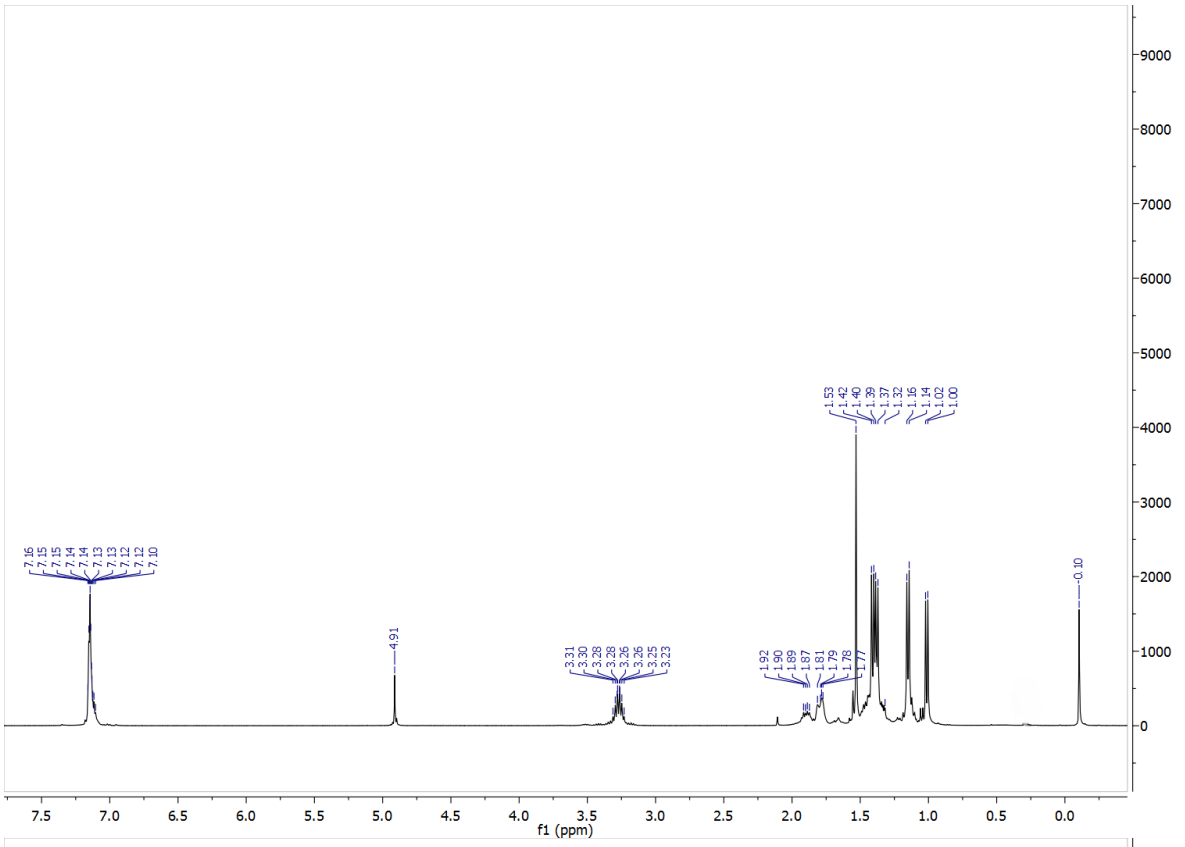


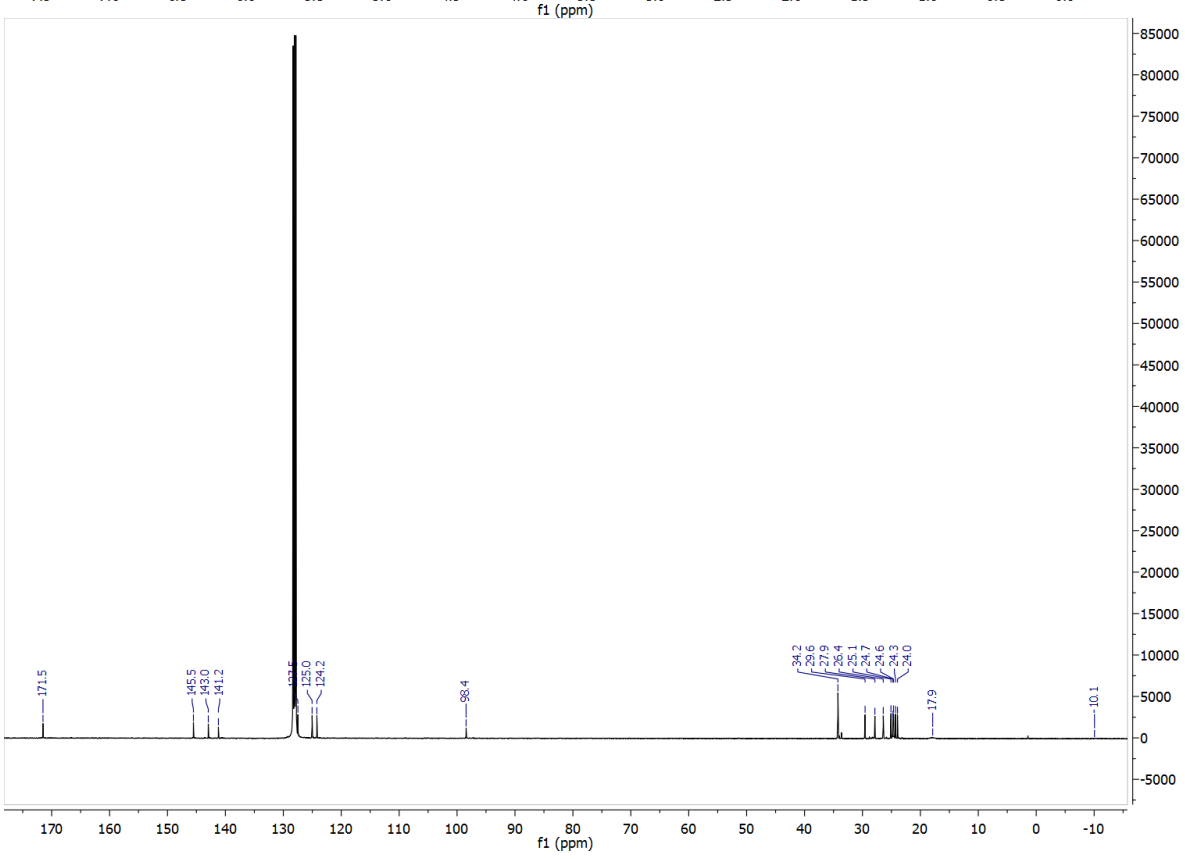
[^{Dipp}1]Al(H){H_2(9-BBN)}



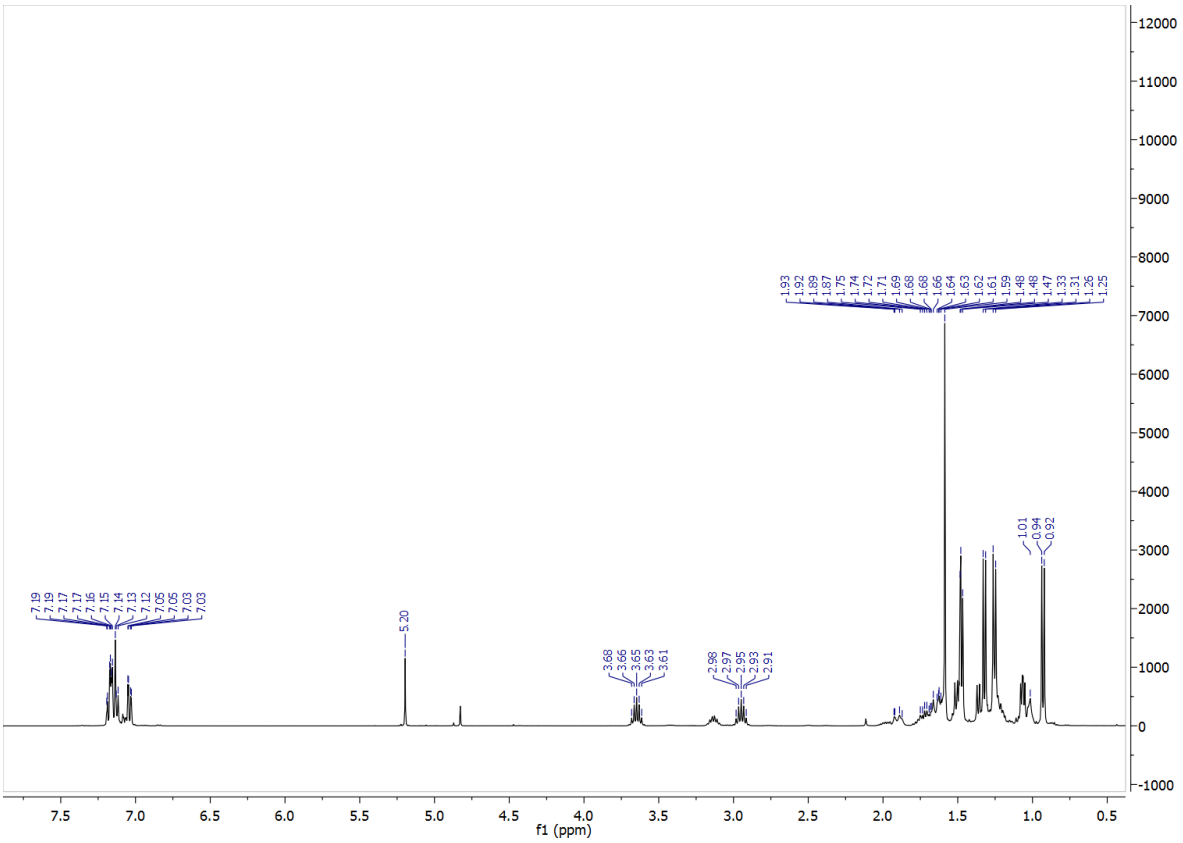


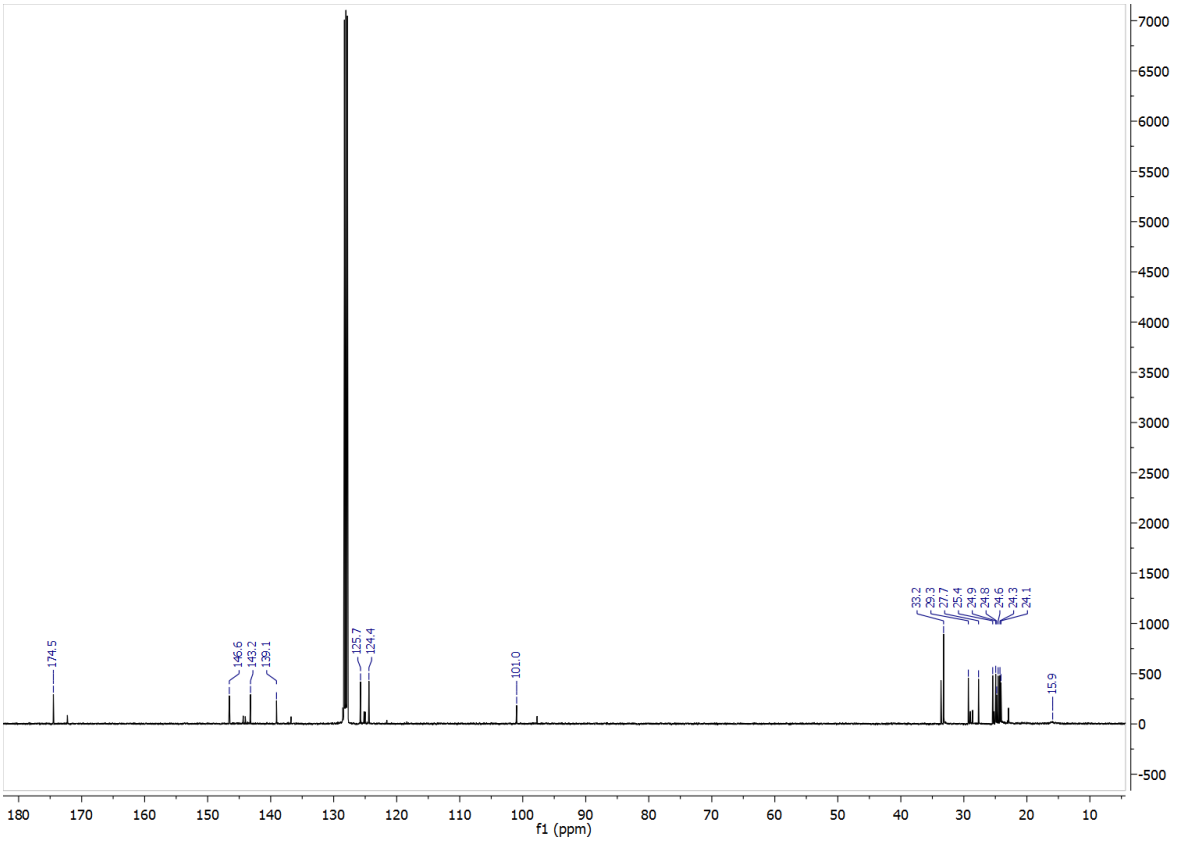
[^{Dipp}1]Al(Me){H_2(9-BBN)}



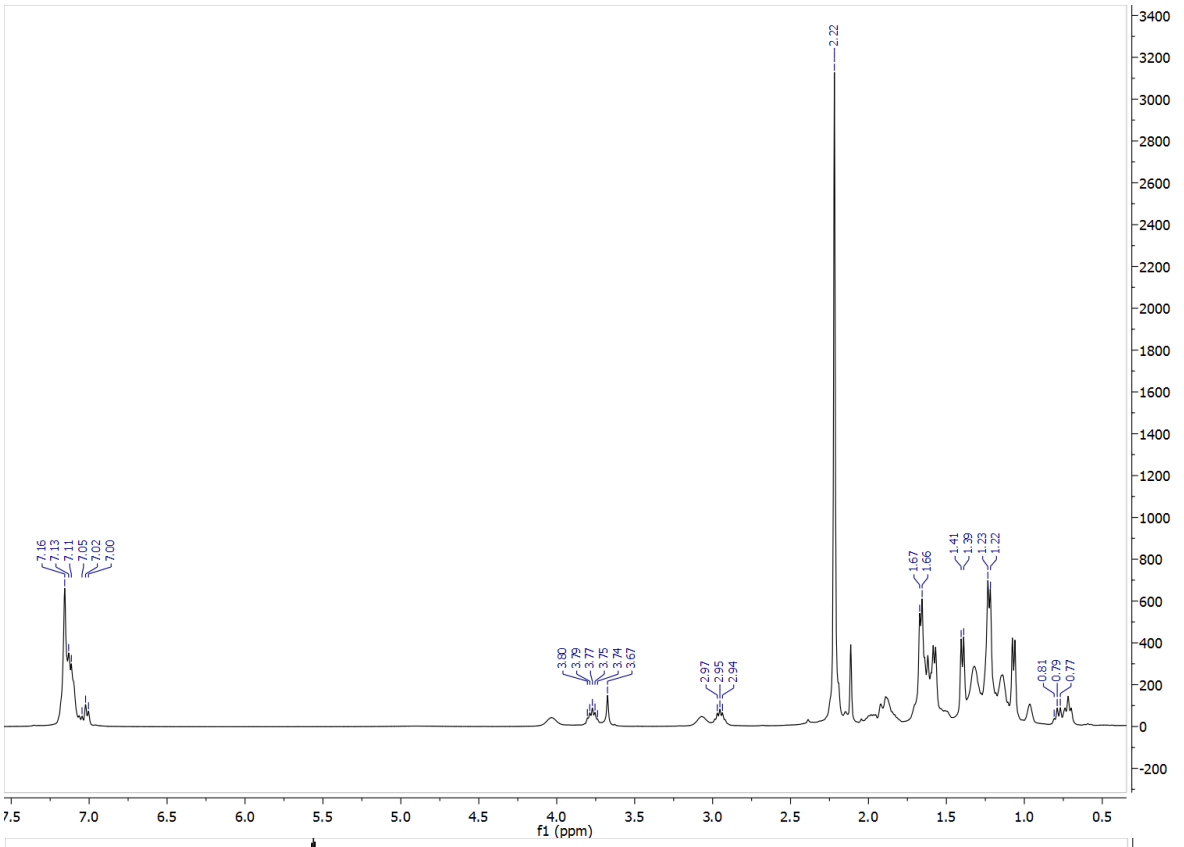


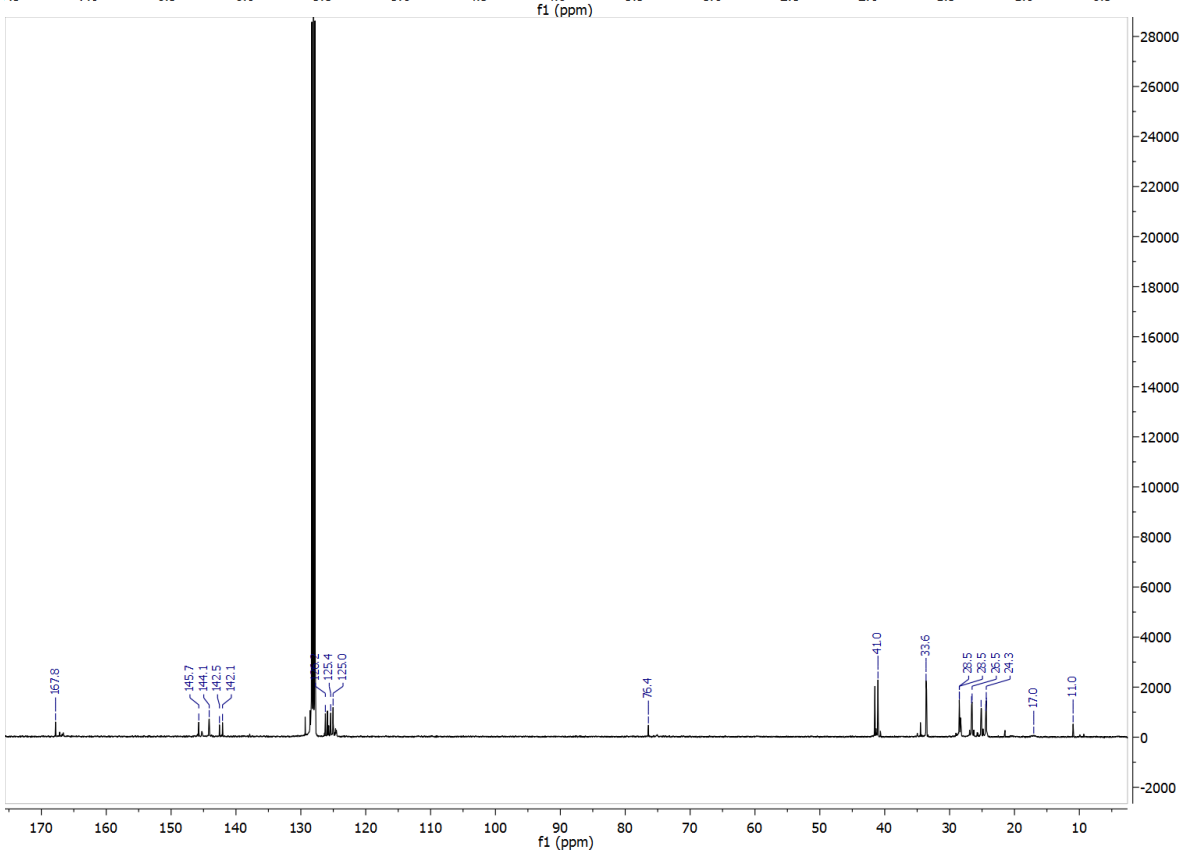
[^{Dipp}1]Al(OTf){H_2(9-BBN)}





[^{Dipp}2]Al(Et){H_2(9-BBN)}





[^{Dipp}2]Al(H){H_2(9-BBN)}