

Supporting Information

Simple and Efficient Methods for Discrimination of Chiral Diacids and Chiral alpha-methyl Amines

*Sachin Rama Chaudhari, N. Suryaprakash**

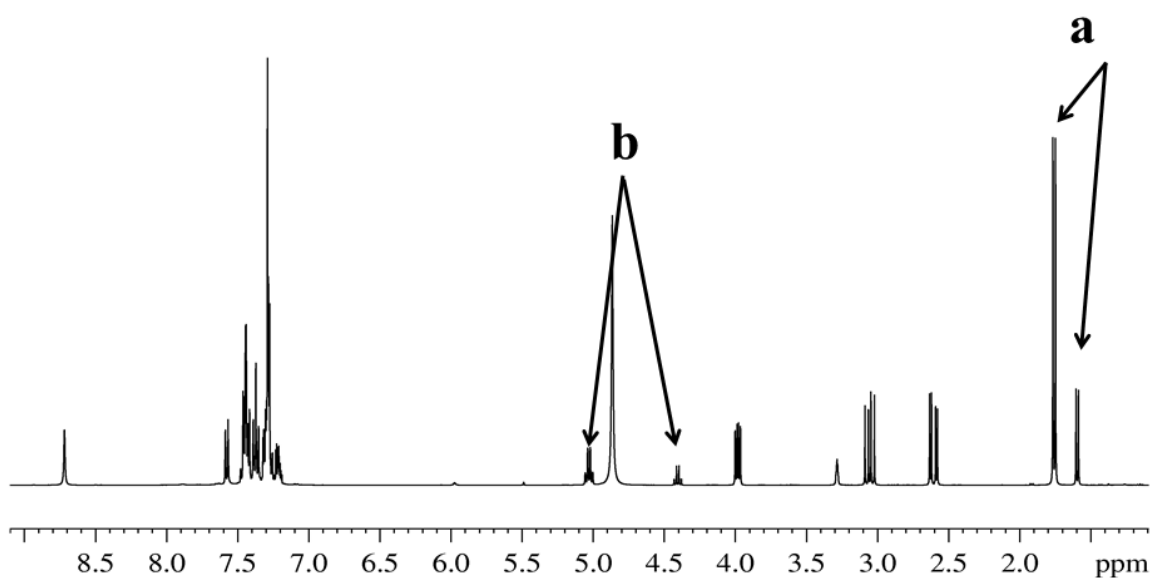
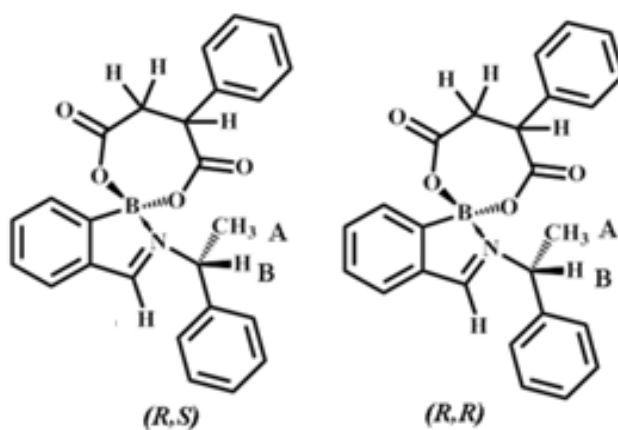
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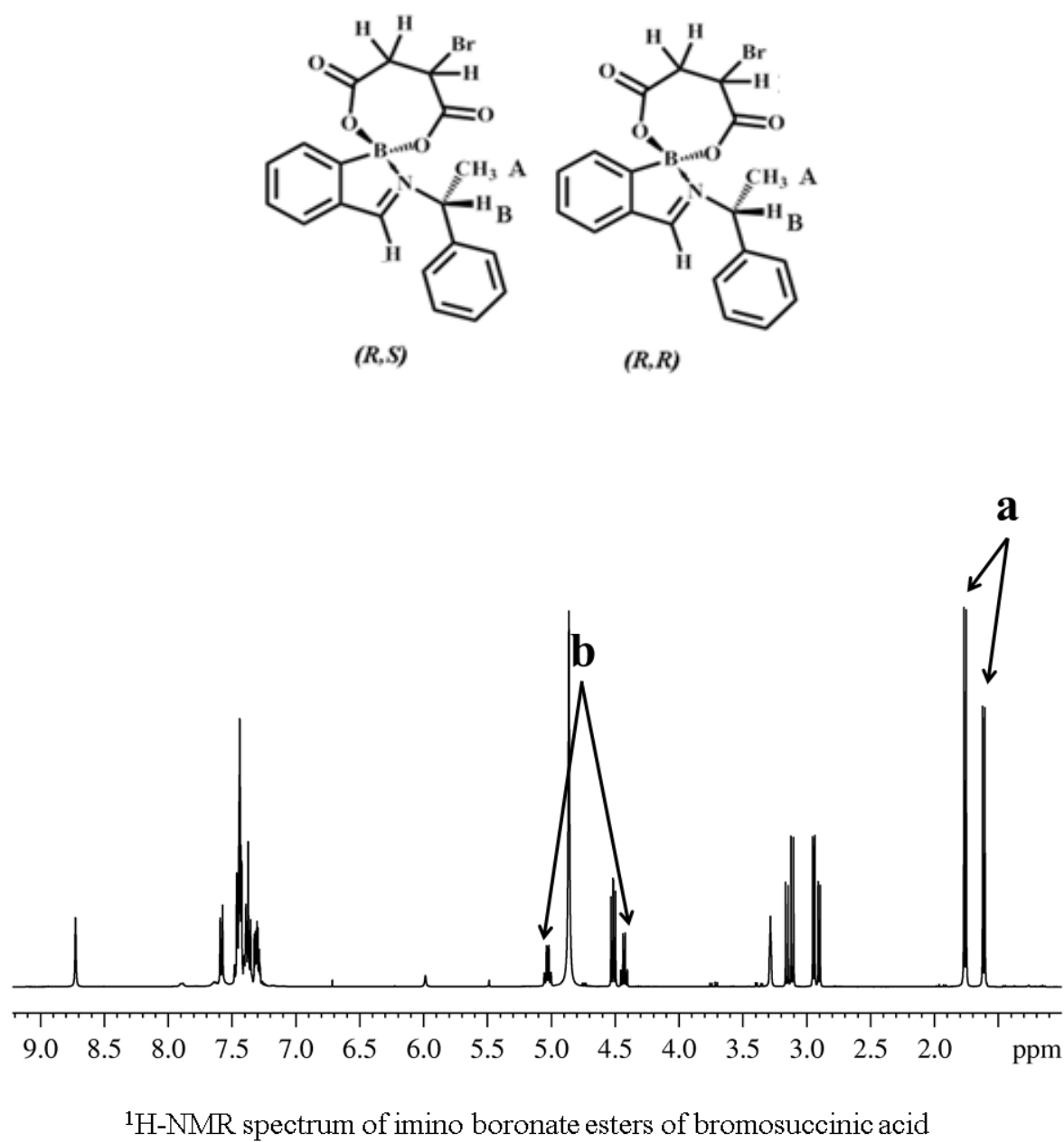
- S1:** ^1H -NMR spectrum of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of phenyl succinic acid and 2-formylphenylboronic acid
- S2:** ^1H -NMR spectrum of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of bromo succinic acid and 2-formylphenylboronic acid
- S3:** ^1H -NMR spectrum of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of 2,3-dimethyl succinic acid and 2-formylphenylboronic acid
- S4:** ^1H -NMR spectrum of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of *trans*- 1,2-Cyclopentanedicarboxylic acid and 2-formylphenylboronic acid
- S5:** ^1H and $^{19}\text{F}\{^1\text{H}\}$ -NMR spectra of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of methyl succinic acid and 3-fluoro-2-formylphenylboronic acid
- S6:** ^1H and $^{19}\text{F}\{^1\text{H}\}$ -NMR spectra of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of phenyl succinic acid and 3-fluoro-2-formylphenylboronic acid
- S7:** ^1H and $^{19}\text{F}\{^1\text{H}\}$ -NMR spectra of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of bromo succinic acid and 3-fluoro-2-formylphenylboronic acid
- S8:** ^1H and $^{19}\text{F}\{^1\text{H}\}$ -NMR spectra of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of *trans*- 1,2-Cyclopentanedicarboxylic acid and 3-fluoro-2-formylphenylboronic acid
- S9:** ^1H and $^{19}\text{F}\{^1\text{H}\}$ -NMR spectra of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of 2,3-dimethyl succinic acid and 3-fluoro-2-formylphenylboronic acid
- S10:** ^1H -NMR spectrum of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of 4-methyl- α -phenylethylamine and 2-formylphenylboronic acid
- S11:** ^1H -NMR spectrum of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of 4-Fluoro- α -phenylethylamine and 2-formylphenylboronic acid
- S12:** ^1H -NMR spectrum of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of 1-(1-Naphthyl)ethylamine and 2-formylphenylboronic acid
- S13:** ^1H and $^{19}\text{F}\{^1\text{H}\}$ -NMR spectra of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of methyl benzylamine and 3-fluoro-2-formylphenylboronic acid
- S14:** ^1H and $^{19}\text{F}\{^1\text{H}\}$ -NMR spectra of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of 4-methyl- α -phenylethylamine and 3-fluoro-2-formylphenylboronic acid respectively
- S15:** ^1H and $^{19}\text{F}\{^1\text{H}\}$ -NMR spectra of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of 4-Fluoro- α -phenylethylamine and 3-fluoro-2-formylphenylboronic acid respectively
- S16:** ^1H and $^{19}\text{F}\{^1\text{H}\}$ -NMR spectra of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of 1-(1-Naphthyl)ethylamine and 3-fluoro-2-formylphenylboronic acid respectively
- S17:** $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of methyl succinic acid and 2-formylphenylboronic acid and 3-fluoro-2-formylphenylboronic acid respectively

- S18:** $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of phenyl succinic acid and 2-formylphenylboronic acid and 3-fluoro-2-formylphenylboronic acid respectively
- S19:** $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of bromo succinic acid and 2-formylphenylboronic acid and 3-fluoro-2-formylphenylboronic acid respectively
- S20:** $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of 2,3-dimethyl succinic acid and 2-formylphenylboronic acid and 3-fluoro-2-formylphenylboronic acid respectively
- S21:** $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of *trans*- 1,2-Cyclopentanedicarboxylic acid and 2-formylphenylboronic acid and 3-fluoro-2-formylphenylboronic acid respectively
- S22:** $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of alpha-methylbenzylamine and 2-formylphenylboronic acid and 3-fluoro-2-formylphenylboronic acid respectively
- S23:** $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of 4-methyl-alpha-phenylethylamine and 2-formylphenylboronic acid and 3-fluoro-2-formylphenylboronic acid respectively
- S24:** $^{13}\text{C}\{^1\text{H}\}$ -NMR spectrum of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of 4-Fluoro-alpha-phenylethylamine and 2-formylphenylboronic acid and 3-fluoro-2-formylphenylboronic acid respectively
- S25:** $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of mixture of (*R,R*) and (*R,S*) derived from racemic mixture of 1-(1-Naphthyl)ethylamine and 2-formylphenylboronic acid and 3-fluoro-2-formylphenylboronic acid respectively

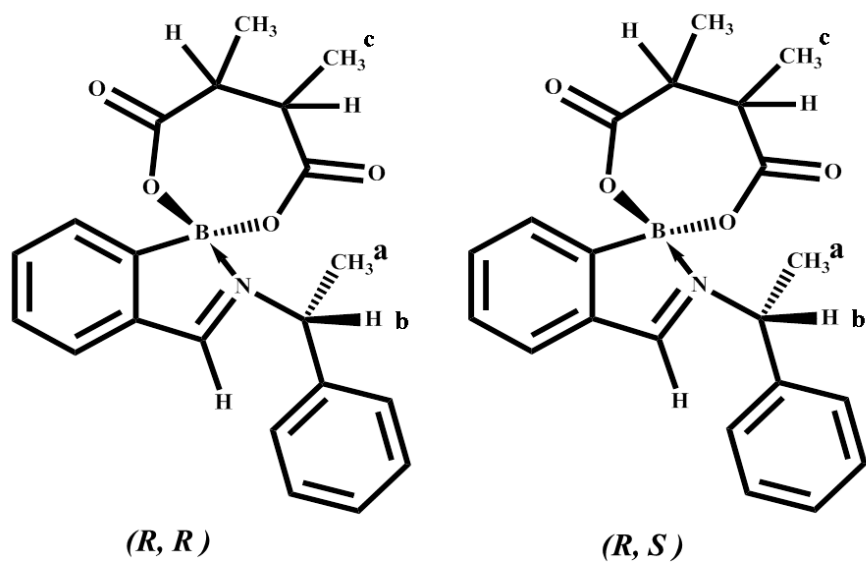


^1H -NMR spectrum of imino boronate esters of phenylsuccinic acid

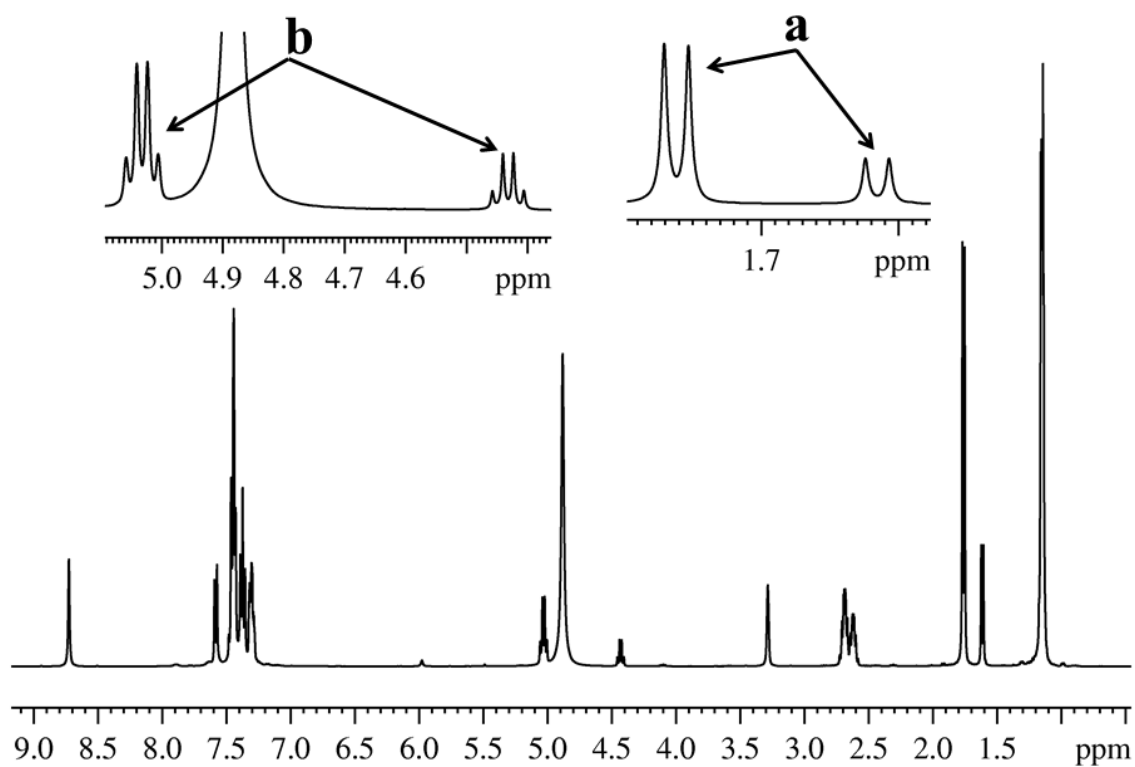
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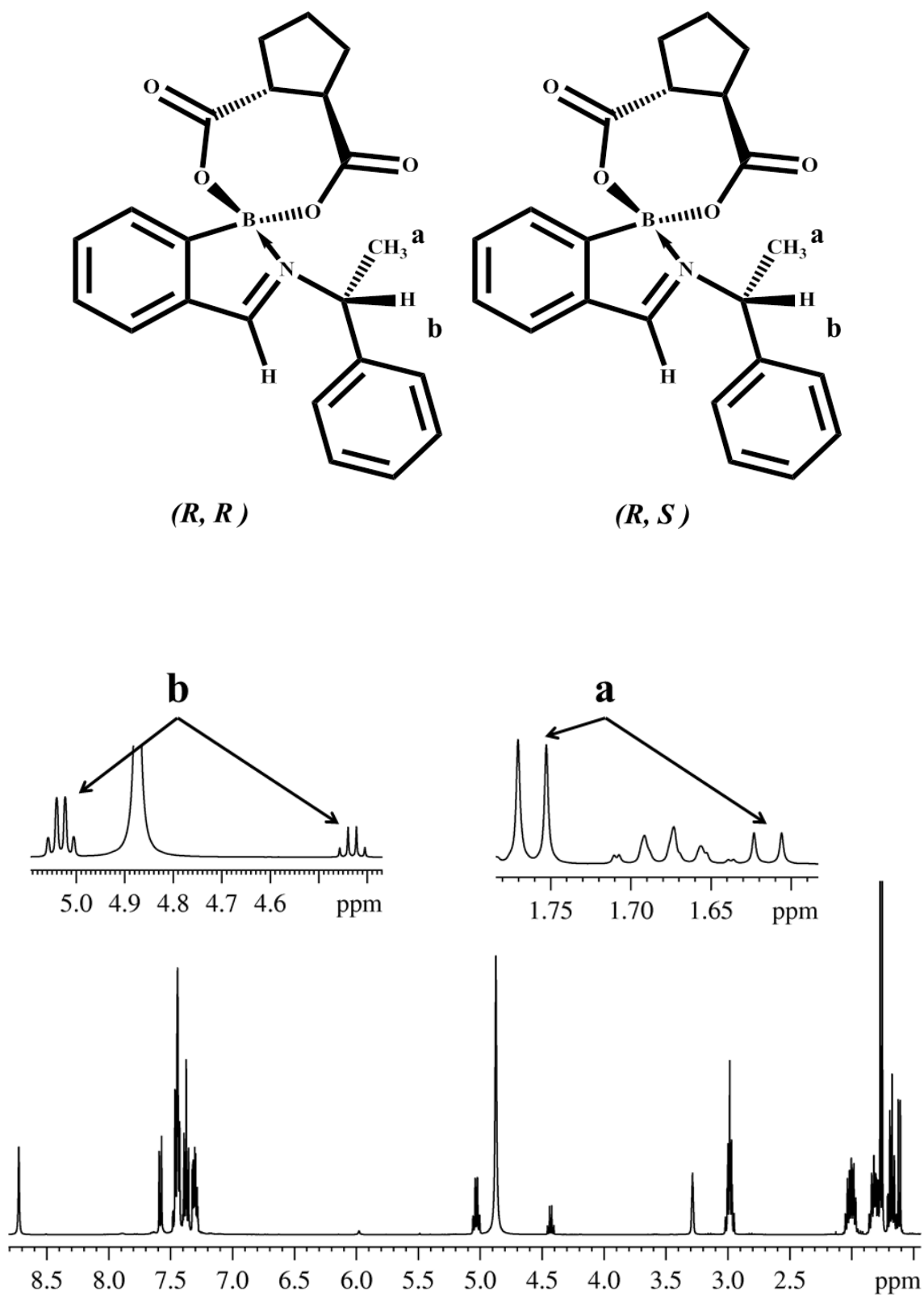


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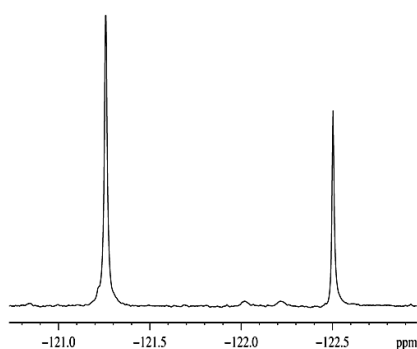
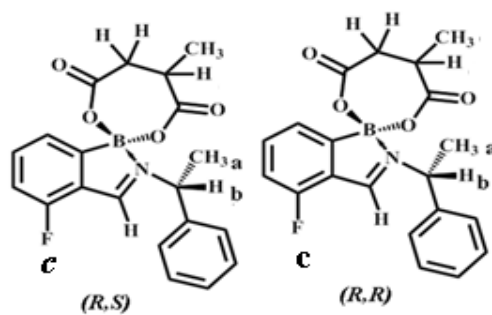


^1H -NMR spectrum of imino boronate esters of 2,3-dimethylsuccinic acid

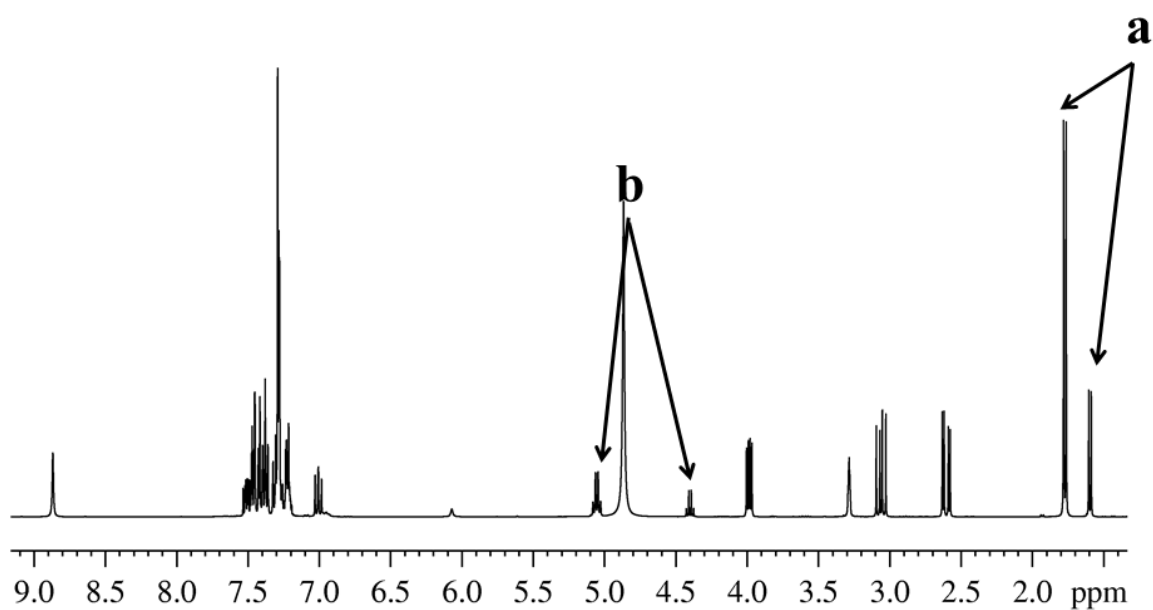




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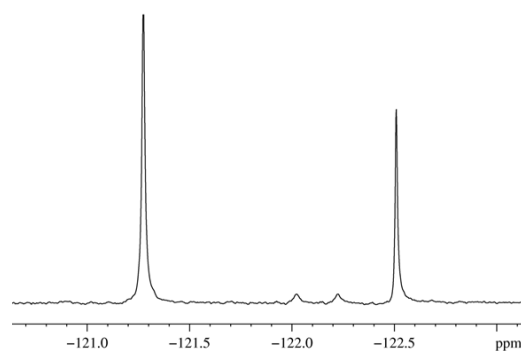
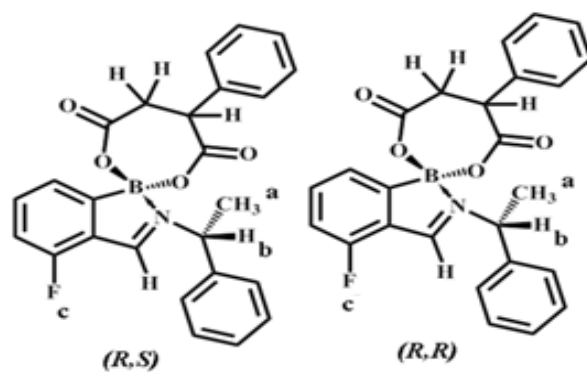


^{19}F -NMR spectrum of imino boronate esters of methylsuccinic acid

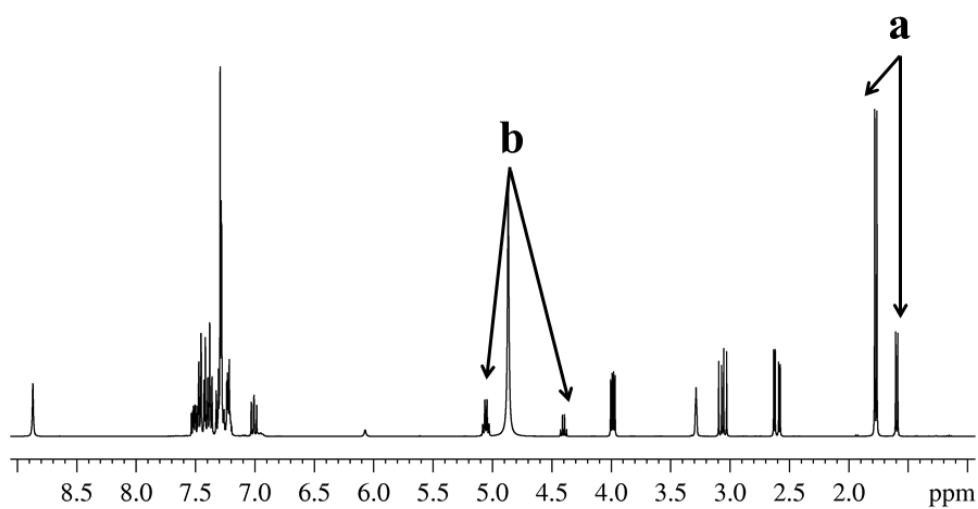


^1H -NMR spectrum of imino boronate esters of methylsuccinic acid

S5

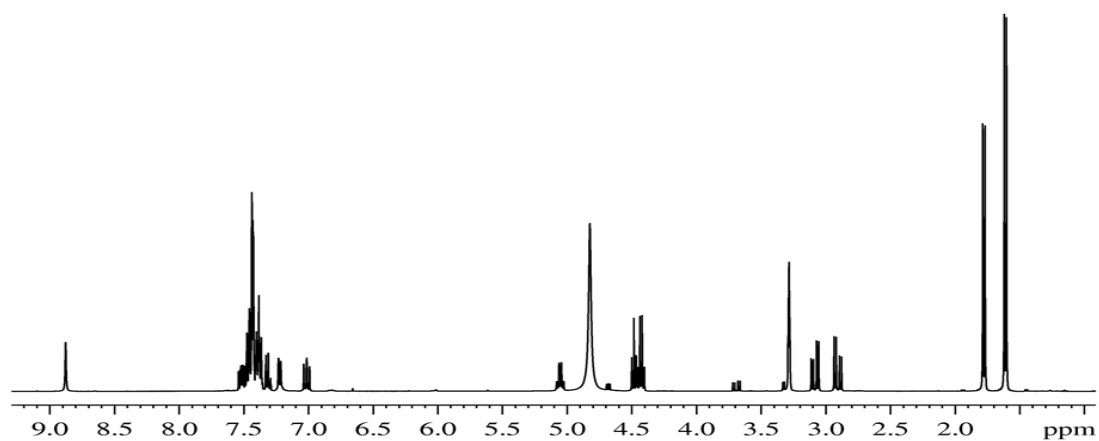
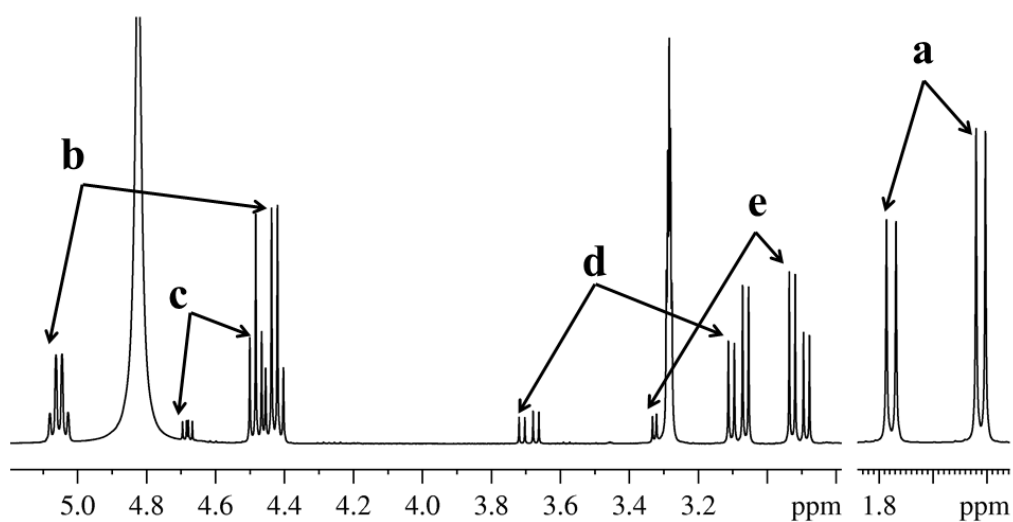
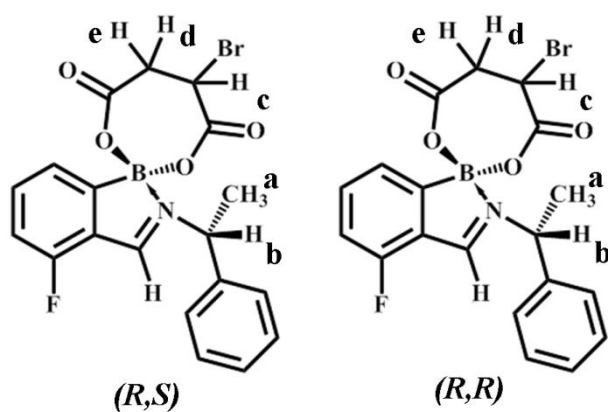


^{19}F -NMR spectrum of imino boronate esters of phenylsuccinic acid

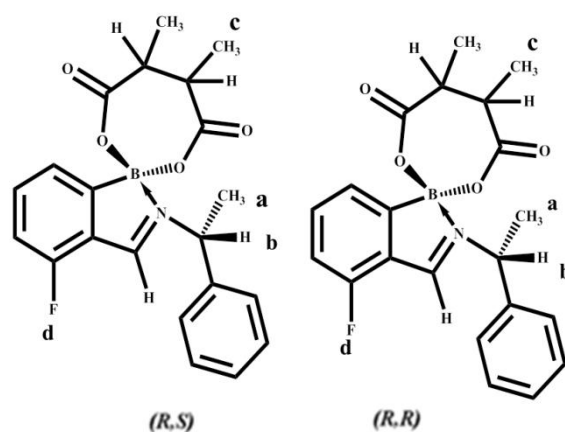


^1H -NMR spectrum of imino boronate esters of phenylsuccinic acid

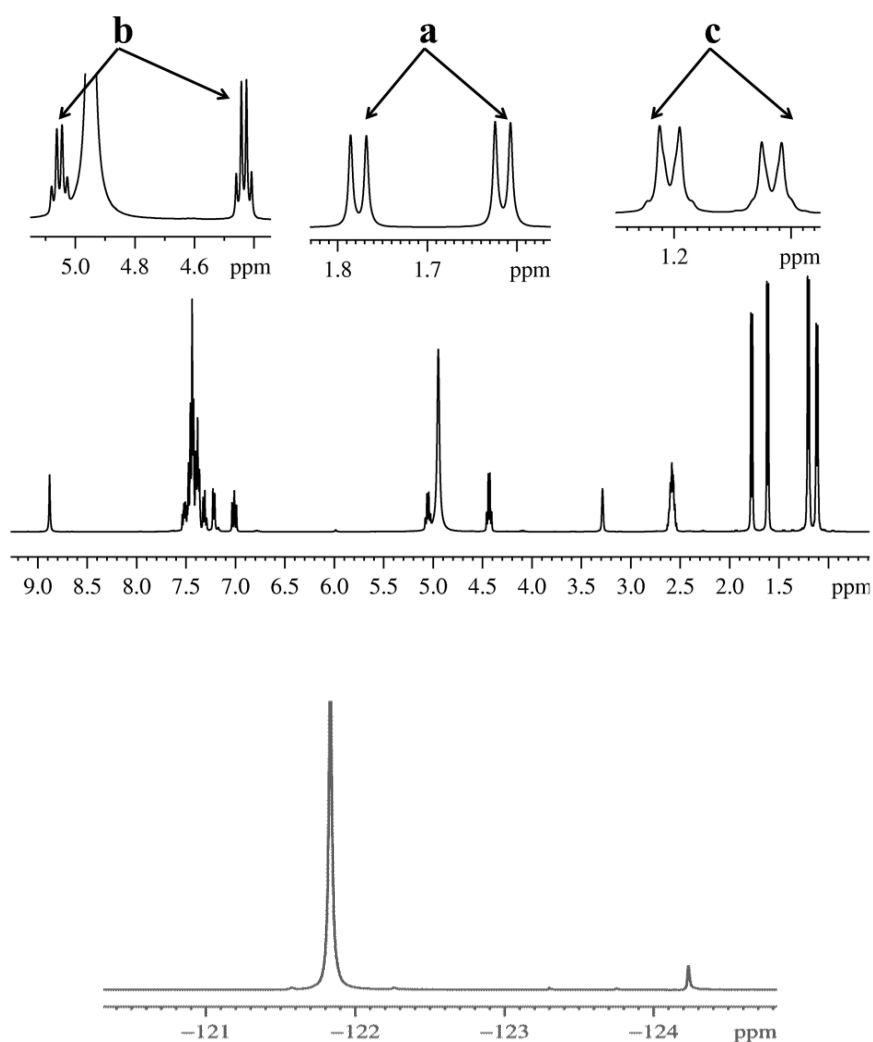
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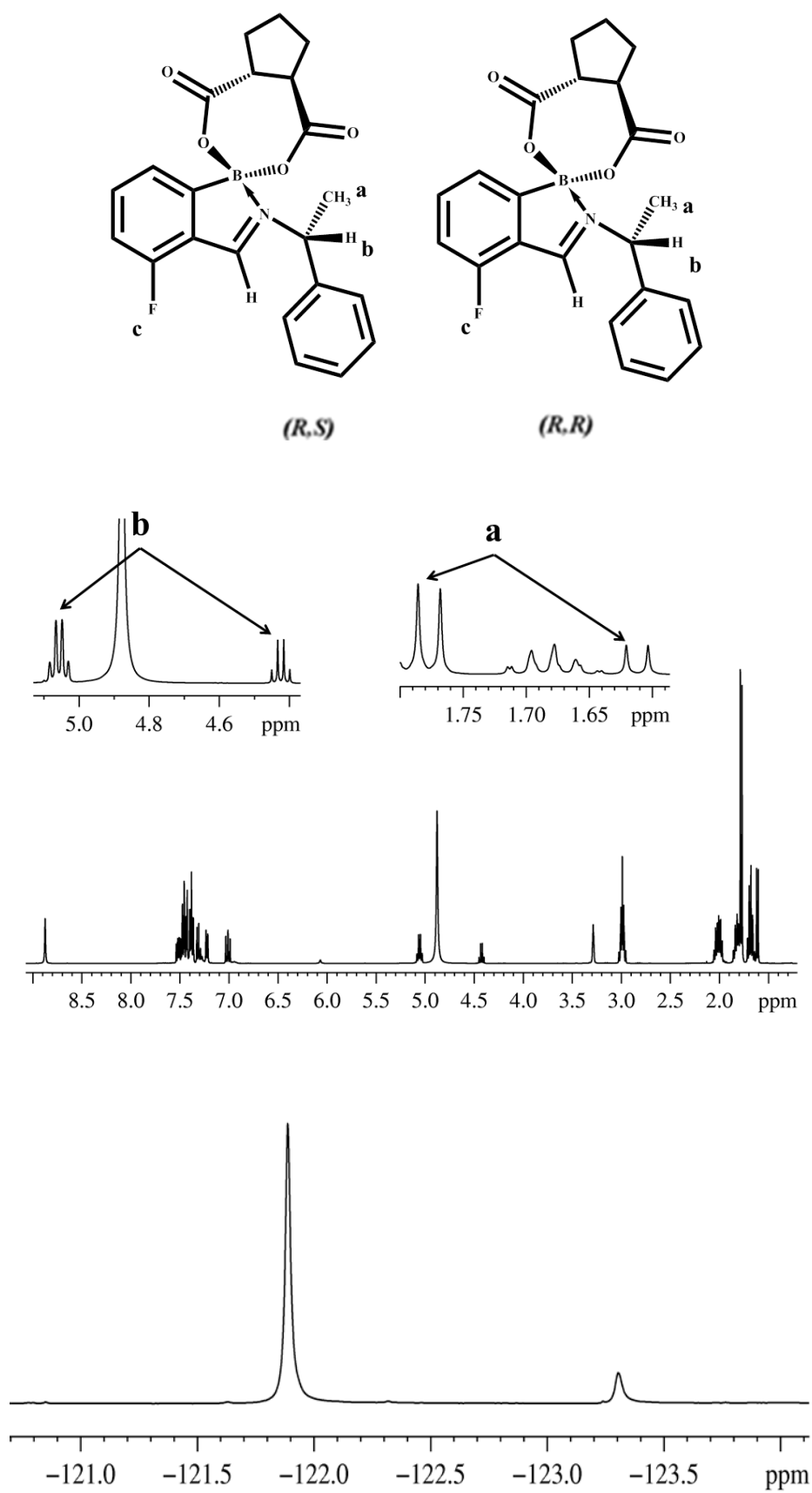
^1H -NMR spectrum of imino boronate esters of bromosuccinic acid



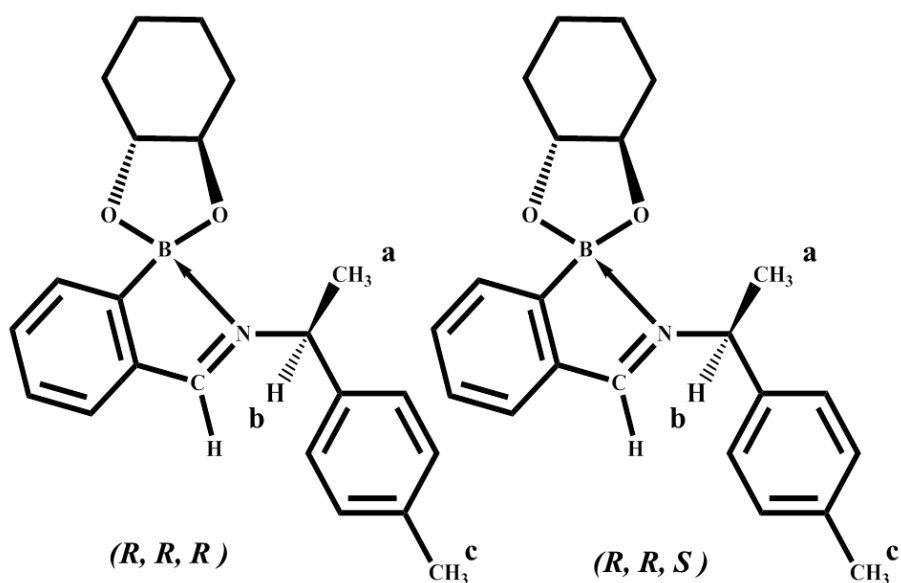
^1H -NMR spectrum of imino boronate esters of 2,3-dimethyl succinic acid



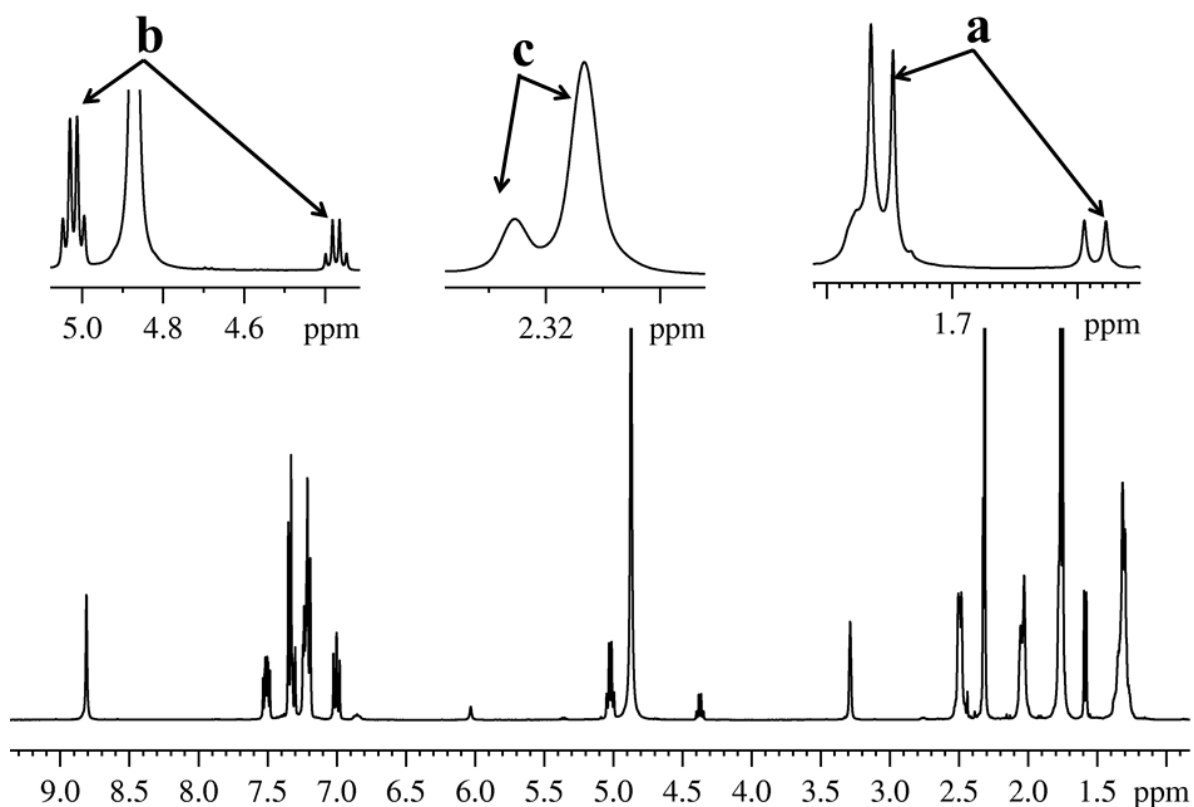
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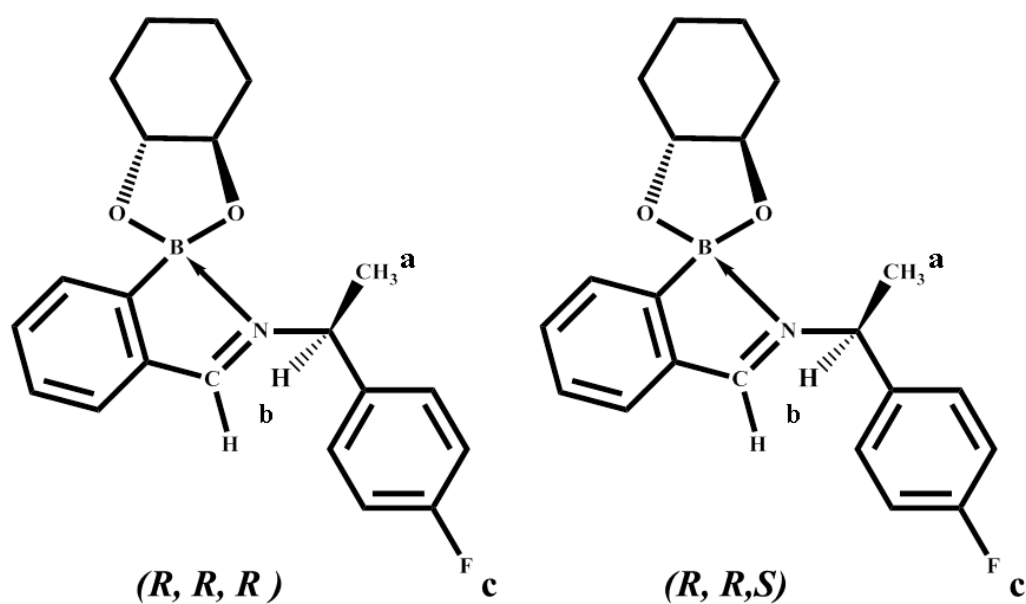


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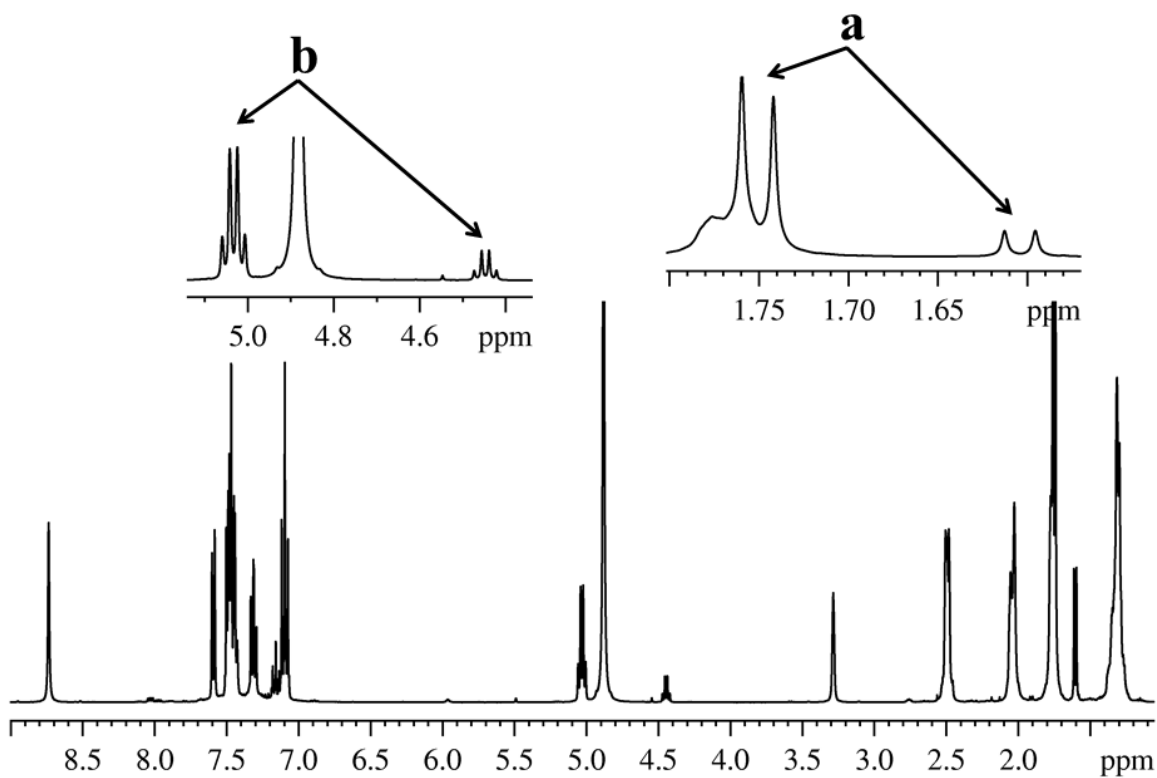


^1H -NMR spectrum of imino boronate esters of 4-methyl- α -phenylethylamine

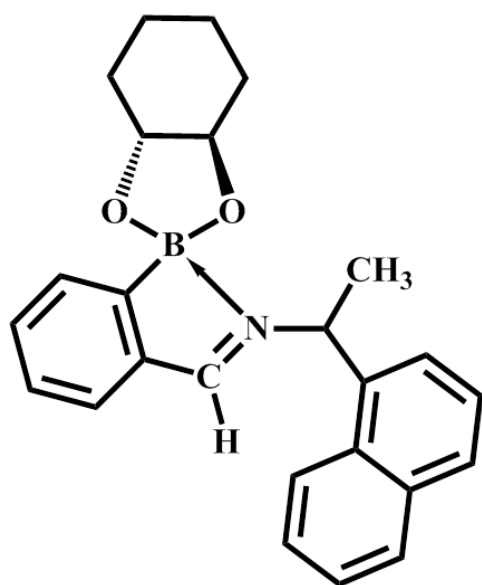




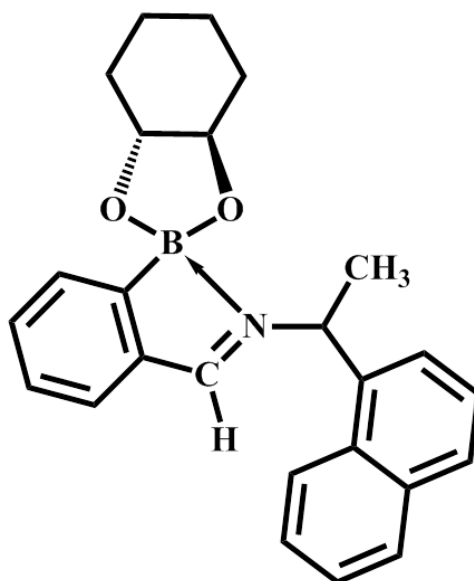
¹H-NMR spectrum of imino boronate esters of 4-Fluoro- α -phenylethylamine



S11

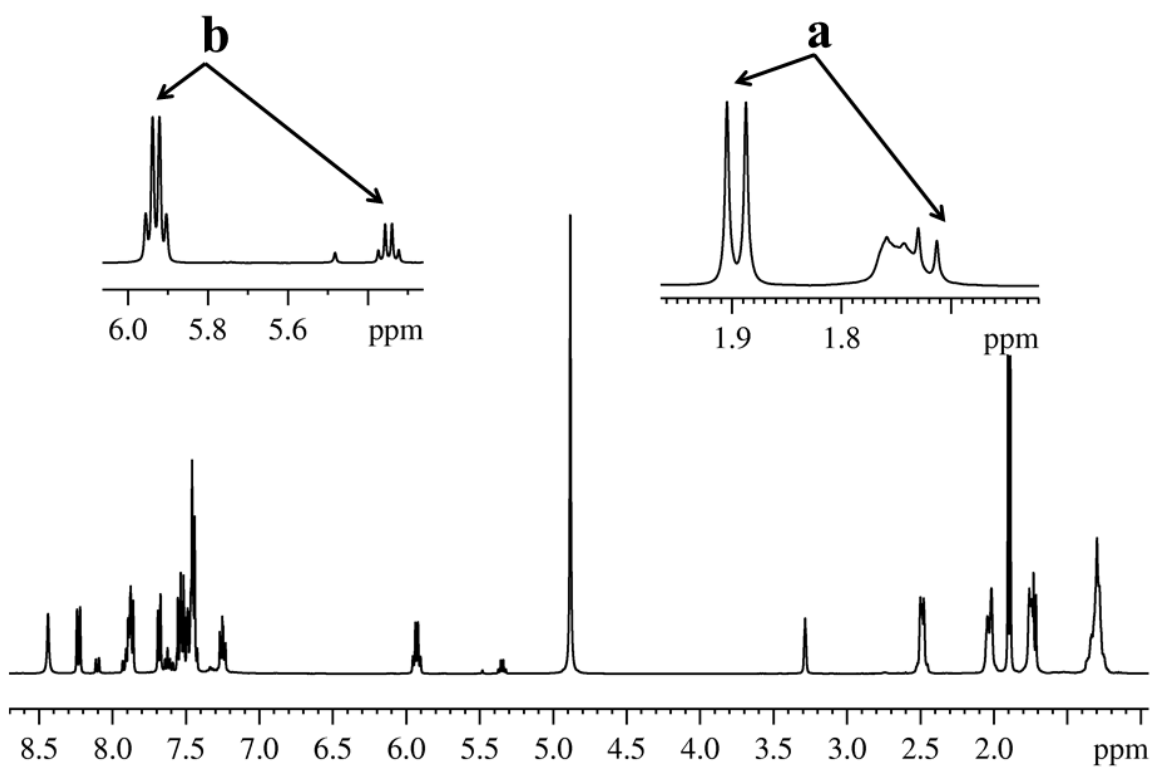


(R, R, R)

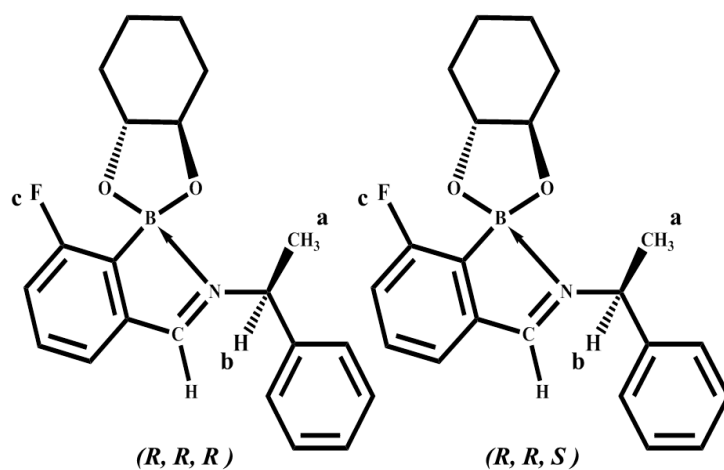


(R, R, S)

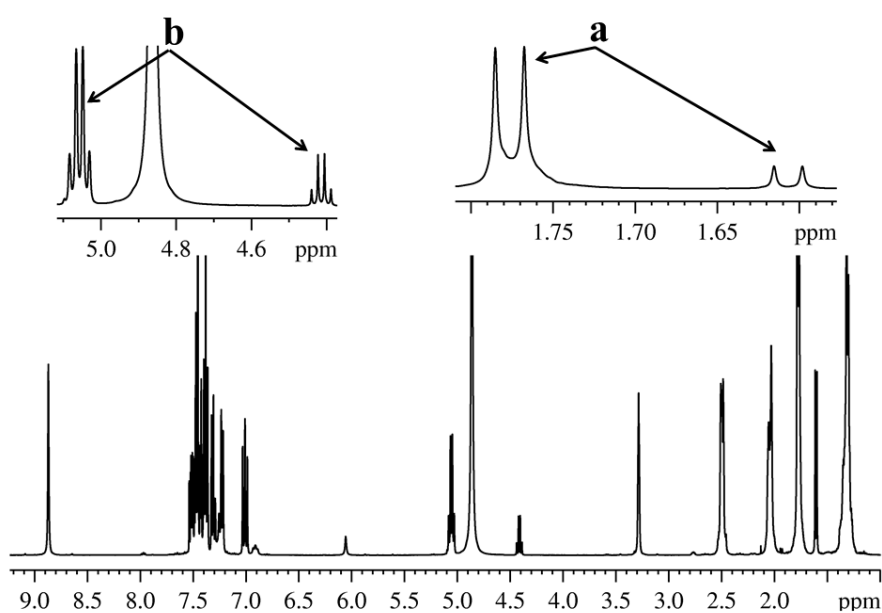
¹H-NMR spectrum of imino boronate esters of 1-(1-Naphthyl)ethylamine



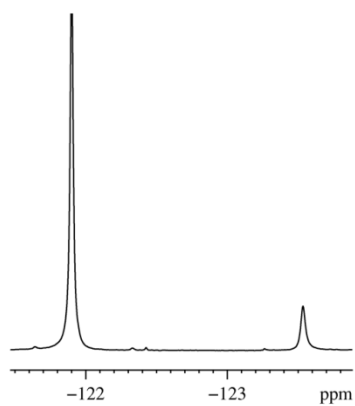
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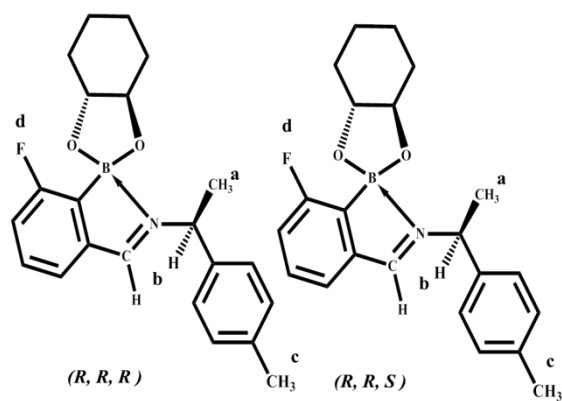
^1H -NMR spectrum of imino boronate esters of alpha-methylbenzylamine



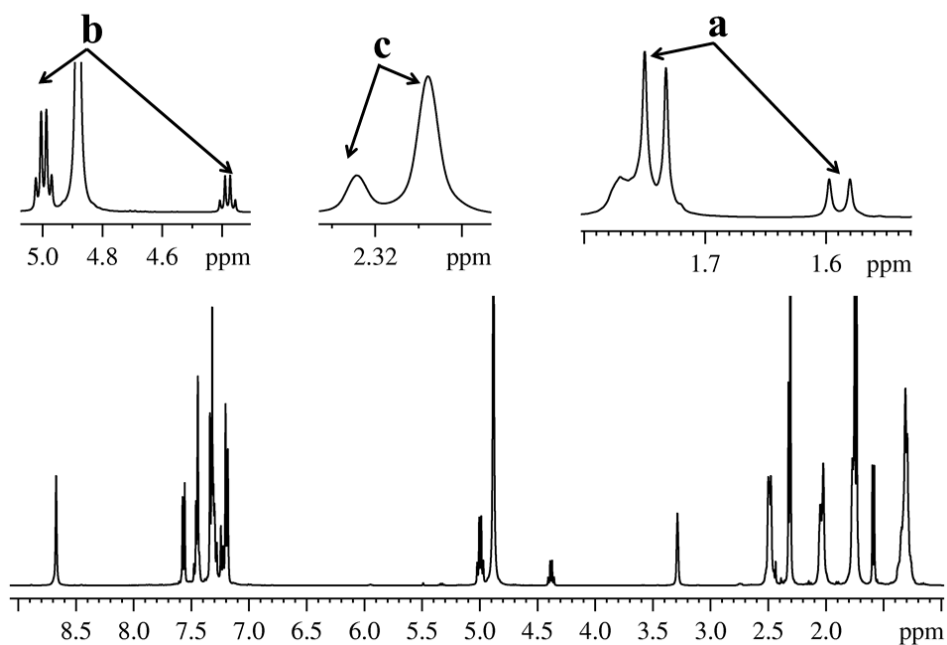
^{19}F -NMR spectrum of imino boronate esters of alpha methylbenzylamine



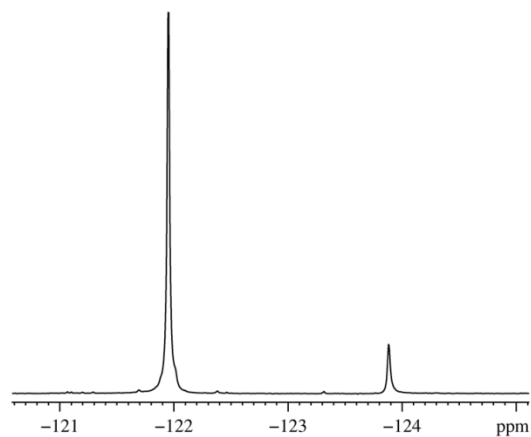
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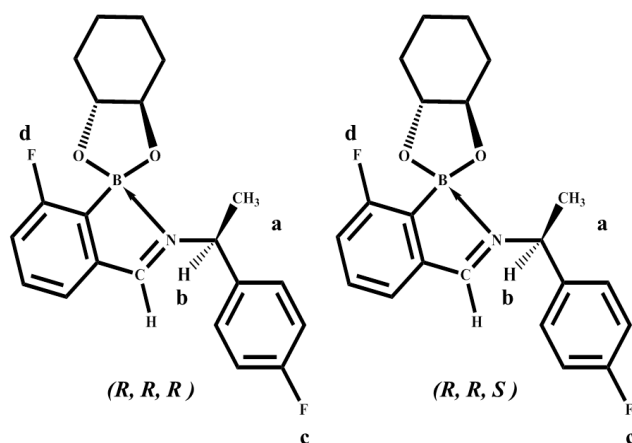
^1H -NMR spectrum of imino boronate esters of 4-methyl- α -phenylethylamine



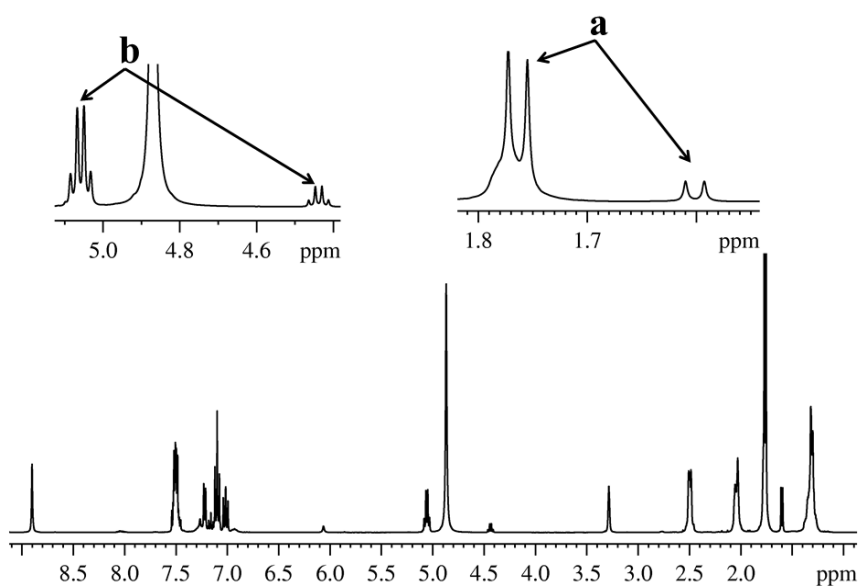
^{19}F -NMR spectrum of imino boronate esters of 4-methyl- α -phenylethylamine



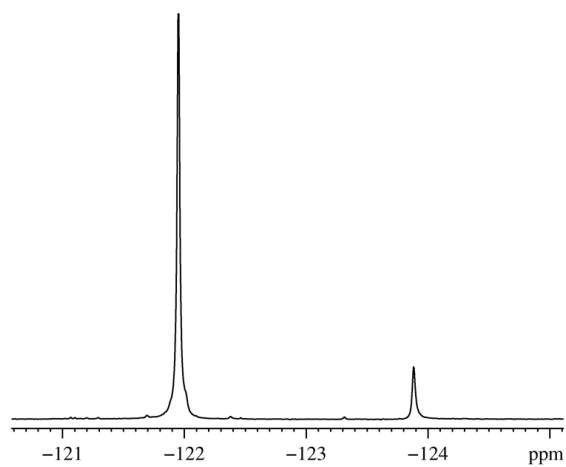
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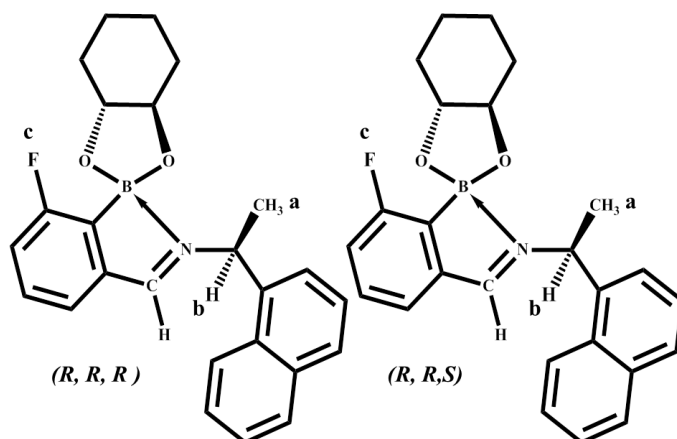
^1H -NMR spectrum of imino boronate esters of 4-Fluoro- α -phenylethylamine



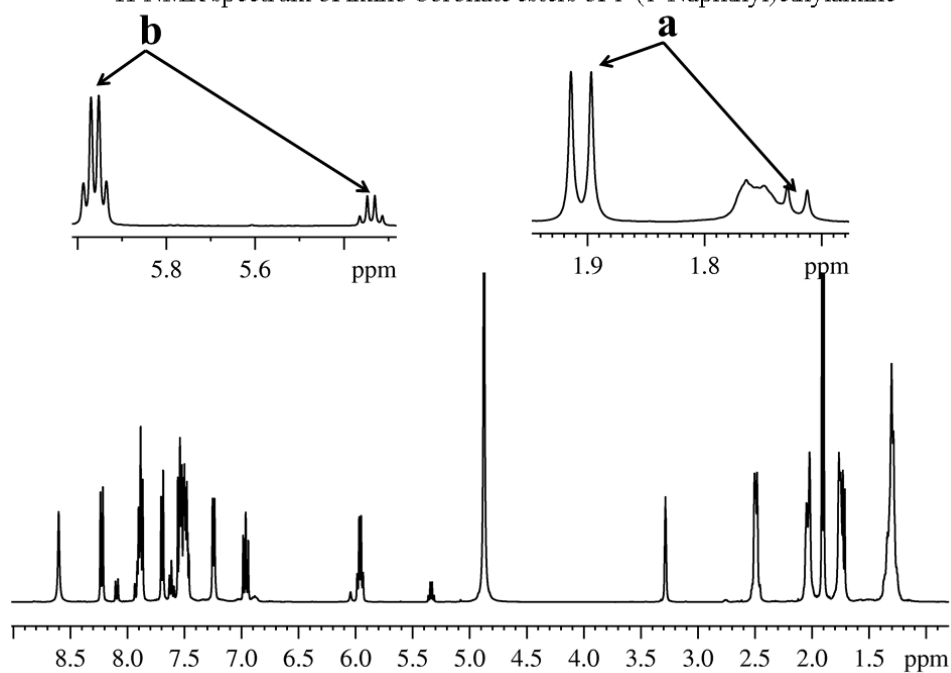
^{19}F -NMR spectrum of imino boronate esters of 4-methyl- α -phenylethylamine



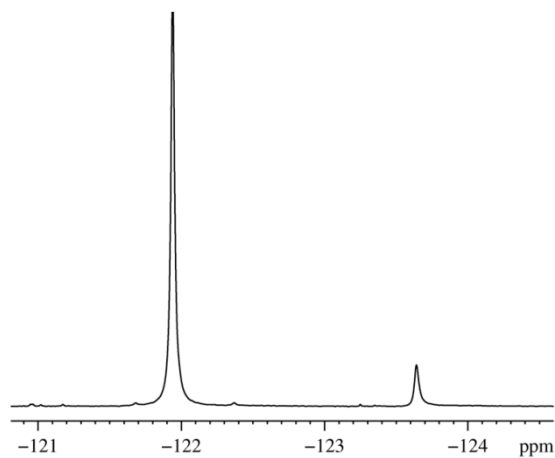
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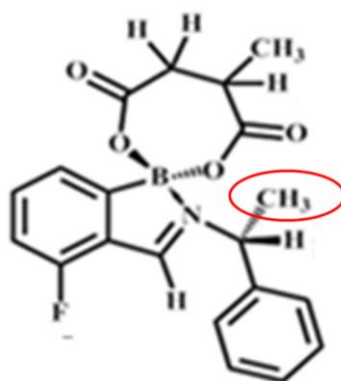
^1H -NMR spectrum of imino boronate esters of 1-(1-Naphthyl)ethylamine



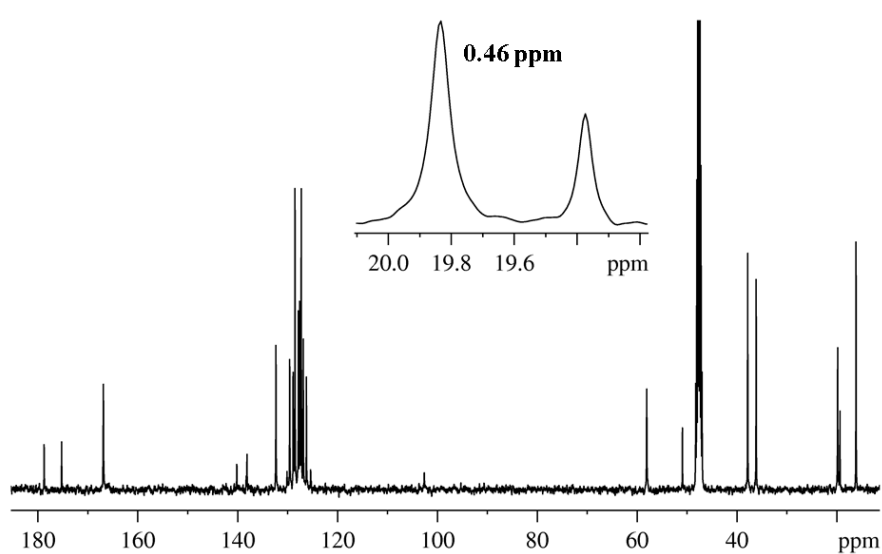
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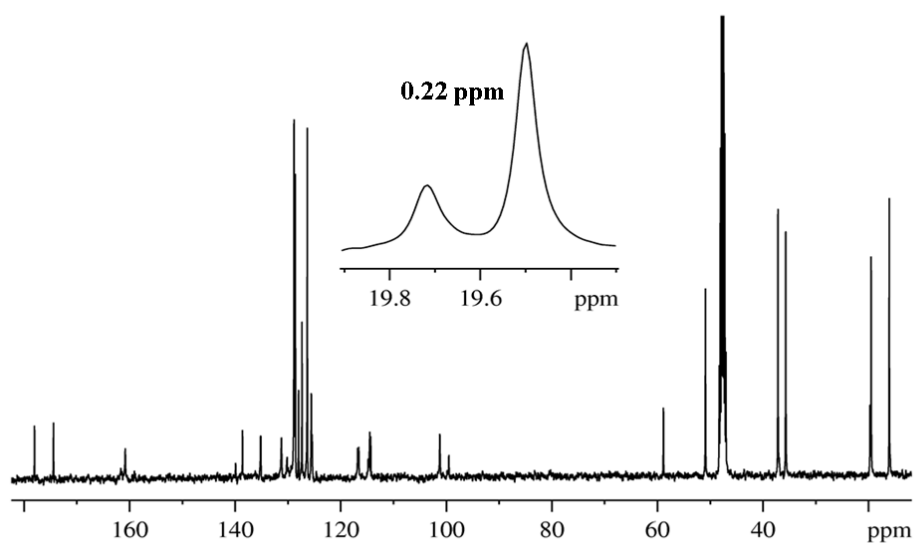
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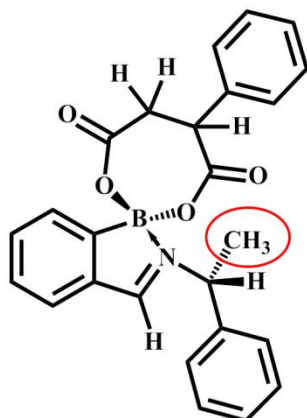


^{13}C -NMR spectrum of imino boronate esters of Methyl succinic acid

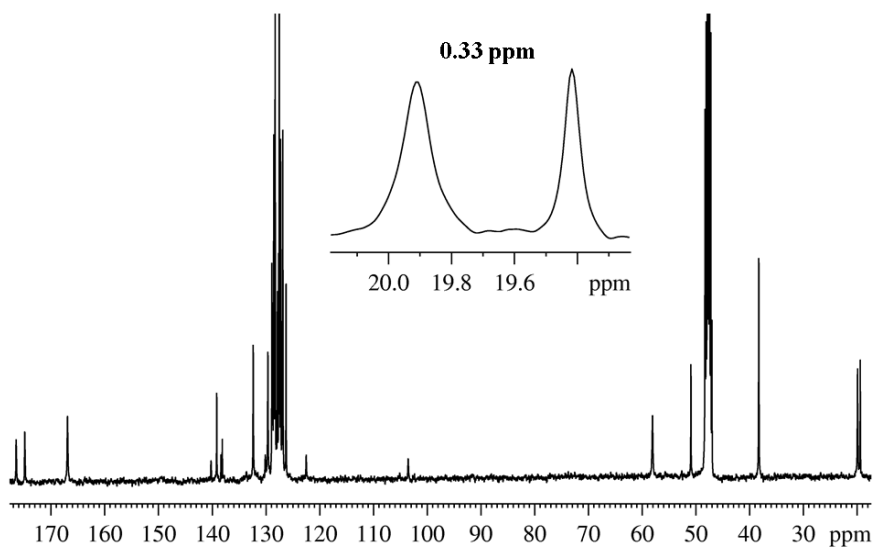


^{13}C -NMR spectrum of imino boronate esters of Methyl succinic acid

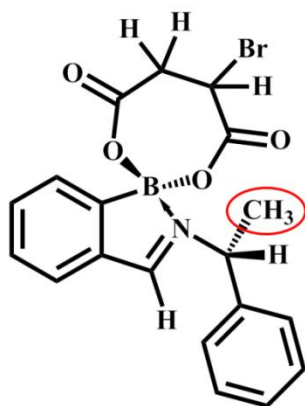




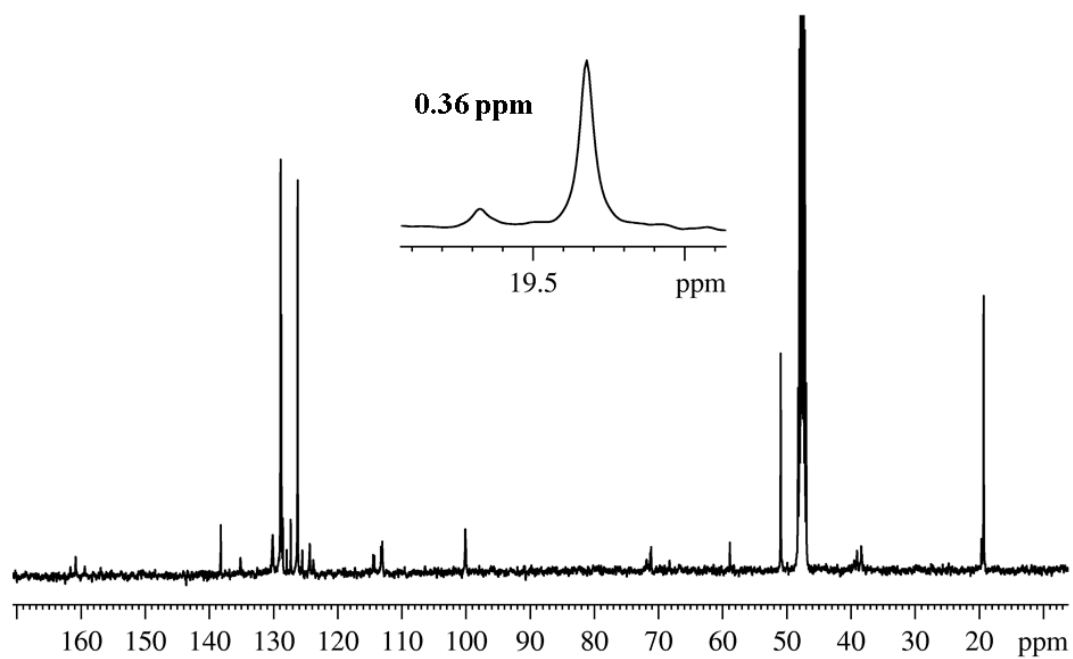
^{13}C -NMR spectrum of imino boronate esters of Phenyl succinic acid



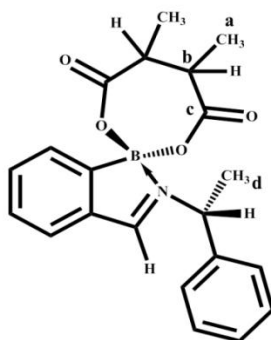
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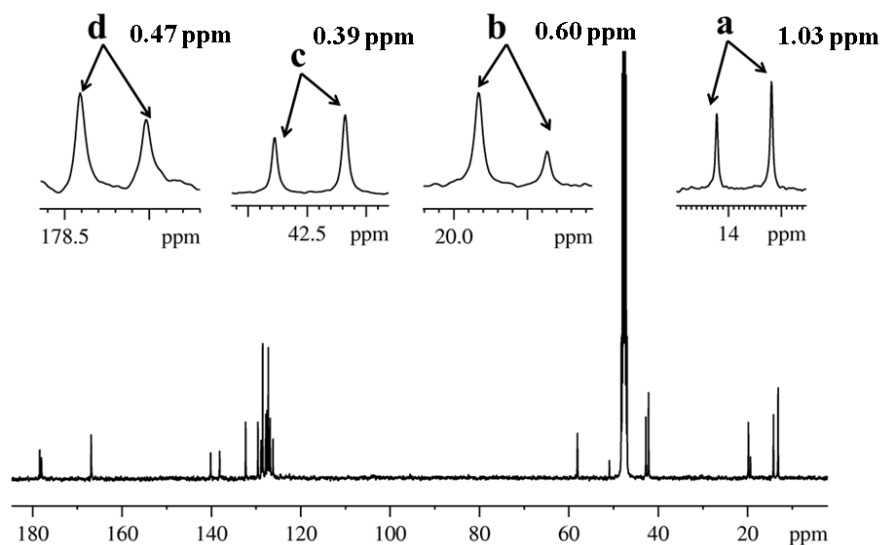
^{13}C -NMR spectrum of imino boronate esters of bromo succinic acid



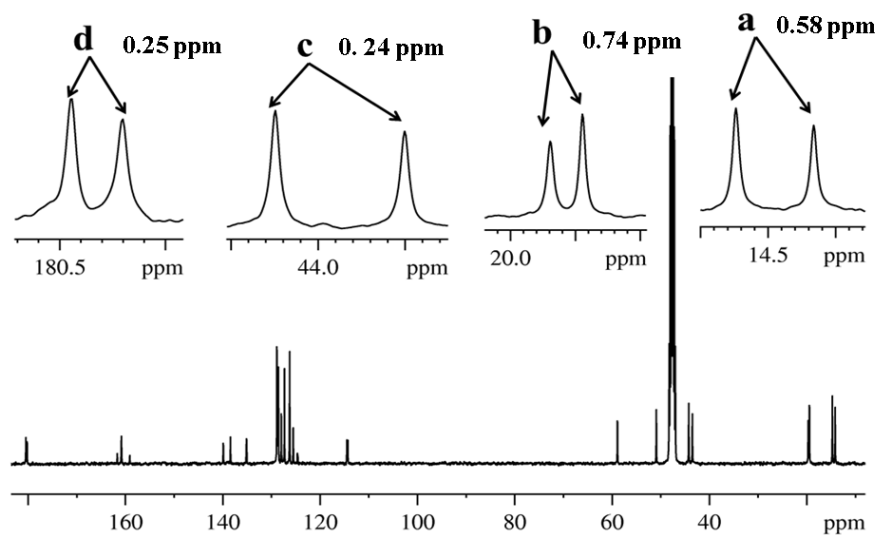
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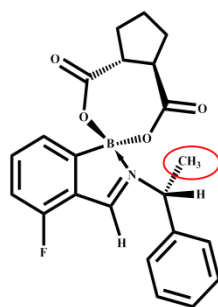
^{13}C -NMR spectrum of imino boronate esters of 2,3-dimethylsuccinic acid



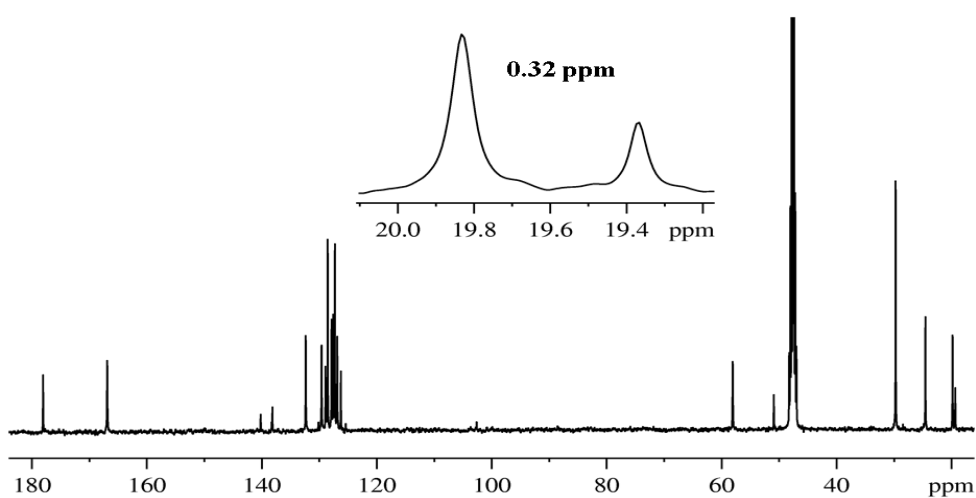
^{13}C -NMR spectrum of imino boronate esters of 2,3-dimethylsuccinic acid



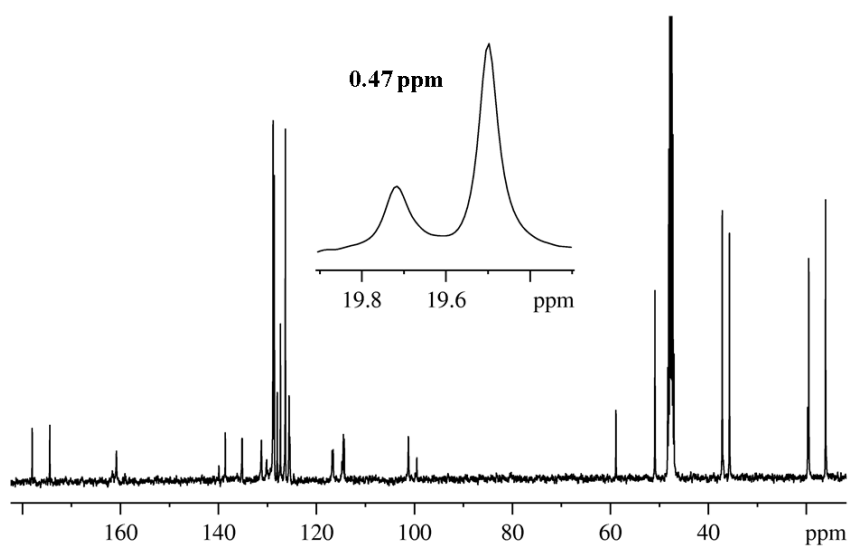
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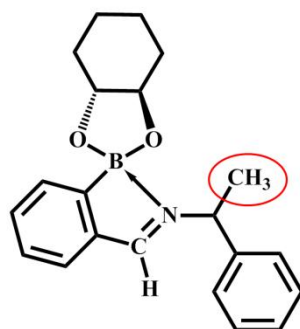
^{13}C -NMR spectrum of imino boronate esters of trans-1,2-Cyclopentanedicarboxylic acid



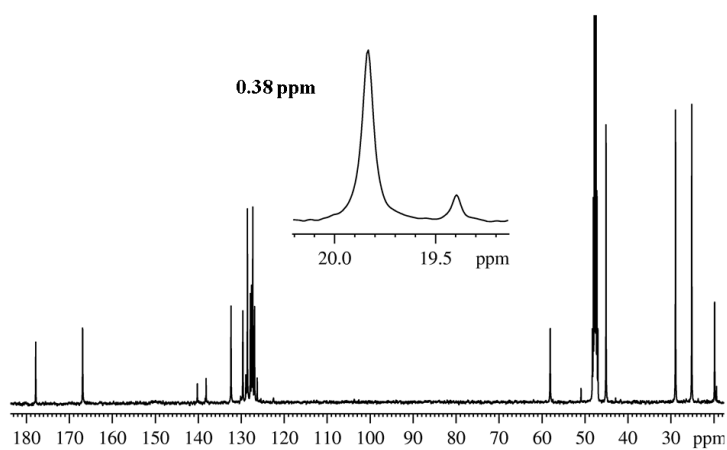
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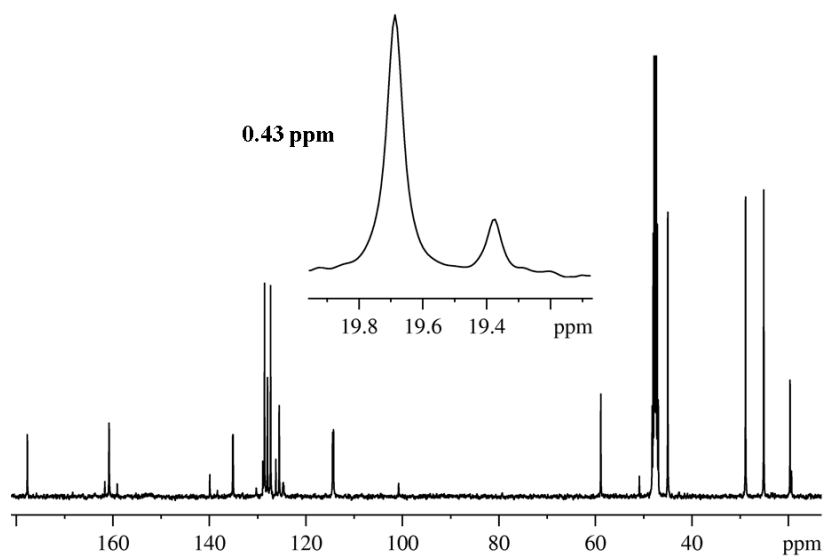
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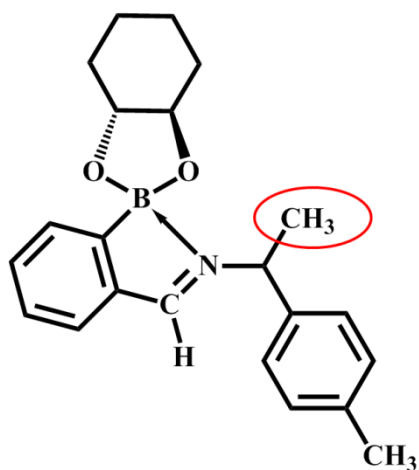


^{13}C -NMR spectrum of imino boronate esters of alpha-methylbenzylamine

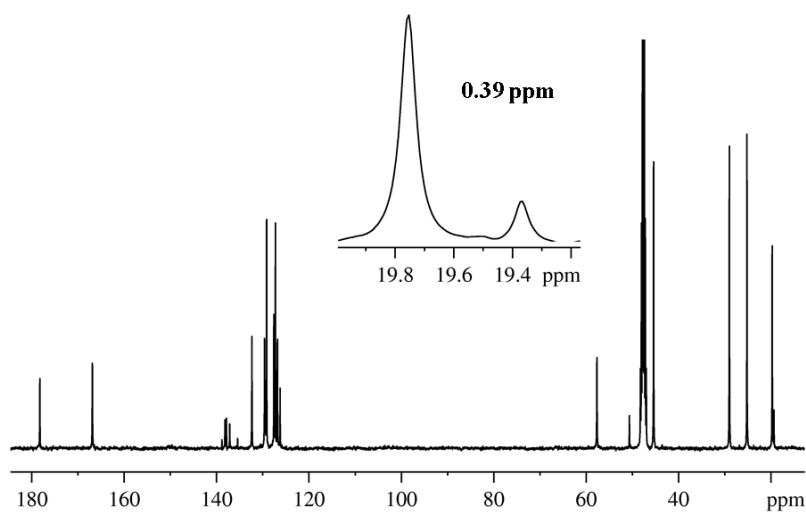


^{13}C -NMR spectrum of imino boronate esters of alpha-methylbenzylamine

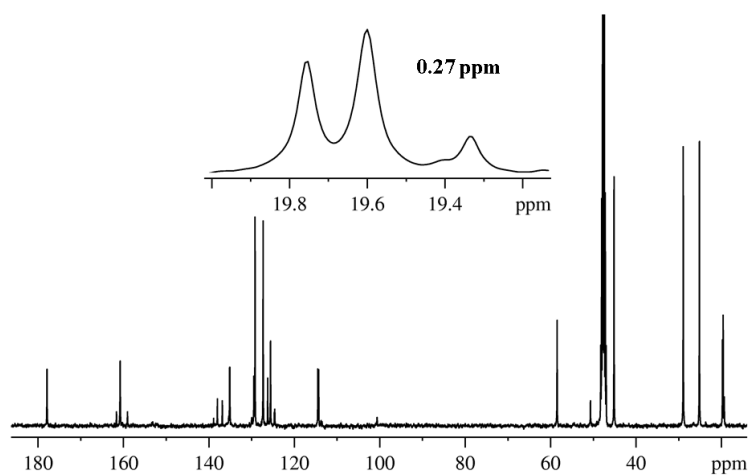




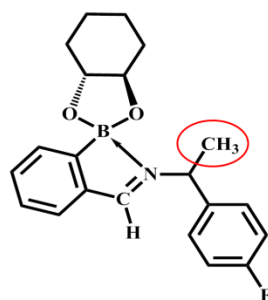
^{13}C -NMR spectrum of imino boronate esters of 4-methyl- α -phenylethylamine



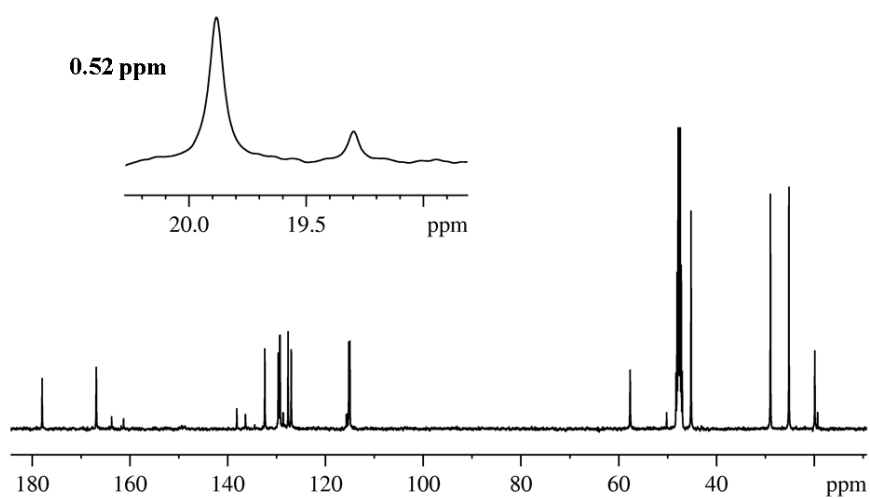
^{13}C -NMR spectrum of imino boronate esters of 4-methyl- α -phenylethylamine



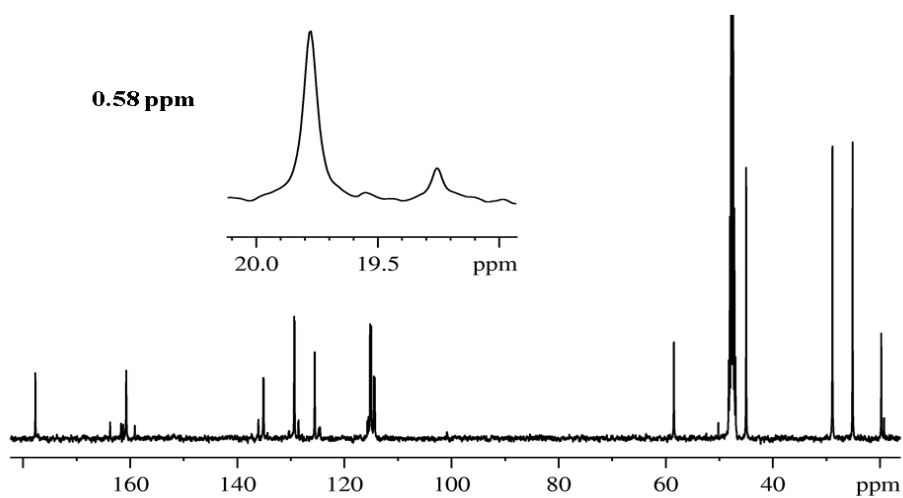
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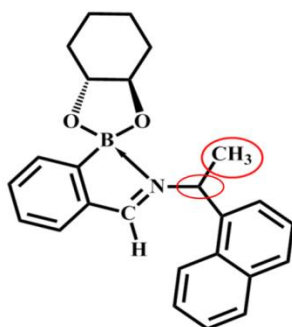
^{13}C -NMR spectrum of imino boronate esters of 4-Fluoro- α -phenylethylamine



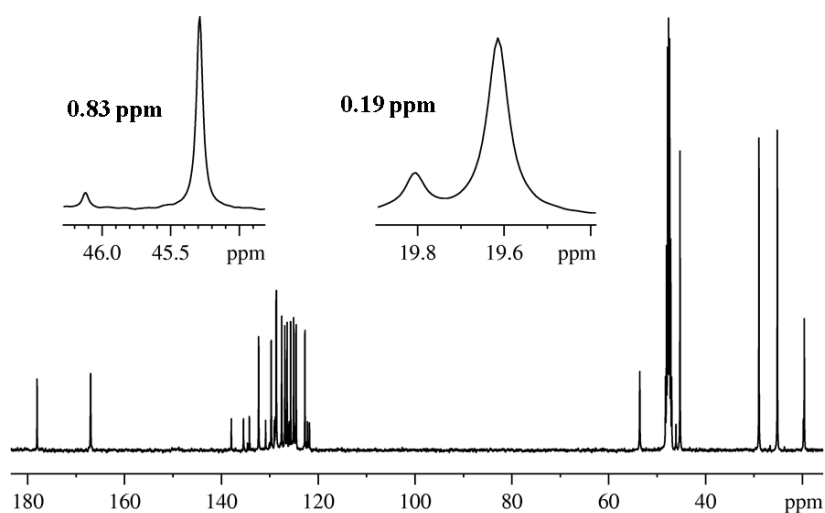
^{13}C -NMR spectrum of imino boronate esters of 4-Fluoro- α -phenylethylamine



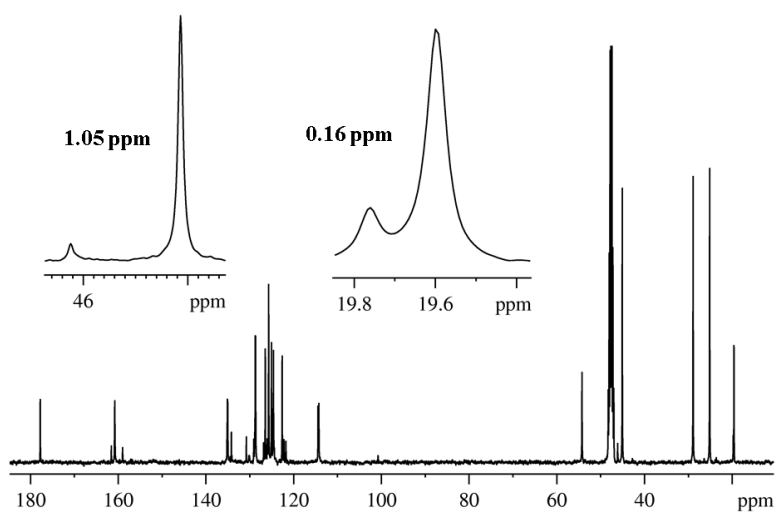
S24



^{13}C -NMR spectrum of imino boronate esters of 1-(1-Naphthyl)ethylamine



^{13}C -NMR spectrum of imino boronate esters of 1-(1-Naphthyl)ethylamine



S25