Supplementary Material

Synthesis of new chiral bis-imidazolidin-4-ones: comparison between the classic method and green chemistry conditions

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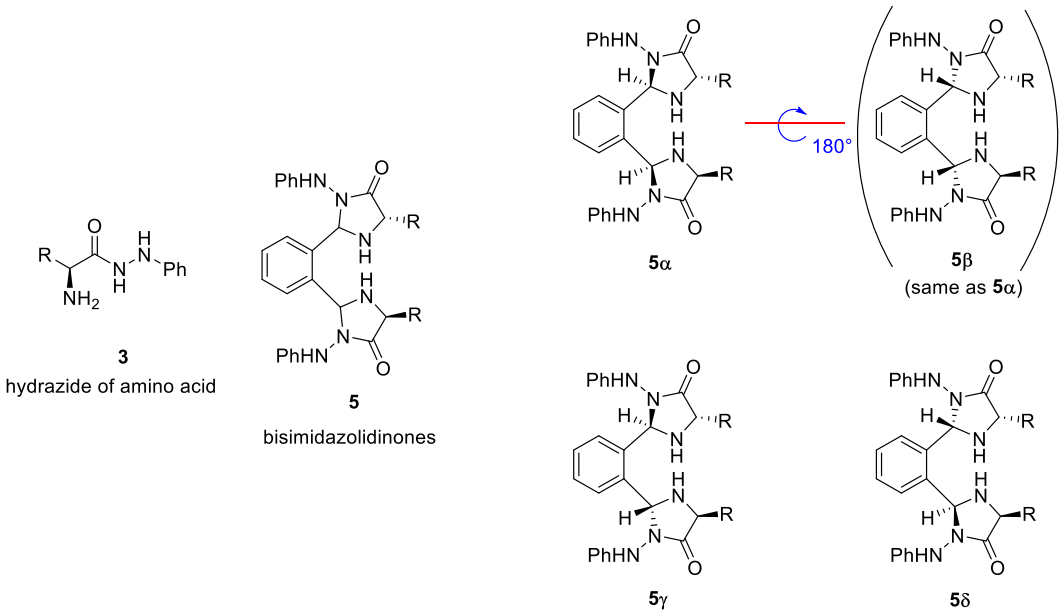
Stereochemistry analysis

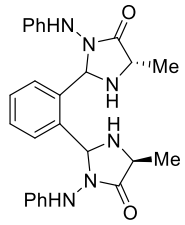


Starting from the hydrazide **3** our works lead to unprecedented bisimidazolidinones **5** and two new stereocenters are generated. Keeping the stereocenters inherited from the chiral enantiopure amino acid, the stereochemistry analysis clearly shows that only three diastereoisomers could be existed. There are no pairs of enantiomers, therefore there is no racemic mixture whatever the cases are.

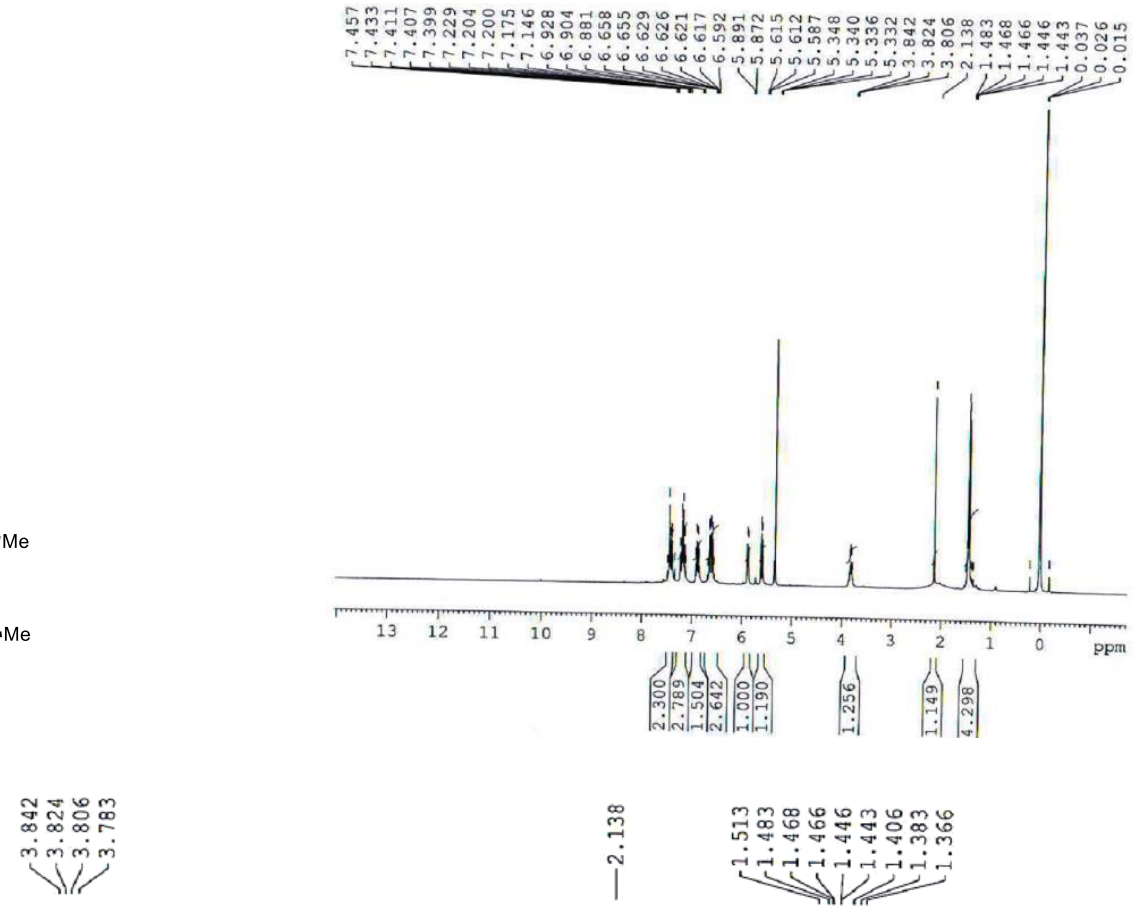
This analysis performed with the *ortho* isomer gives the same results with the *meta* and *para* isomers.

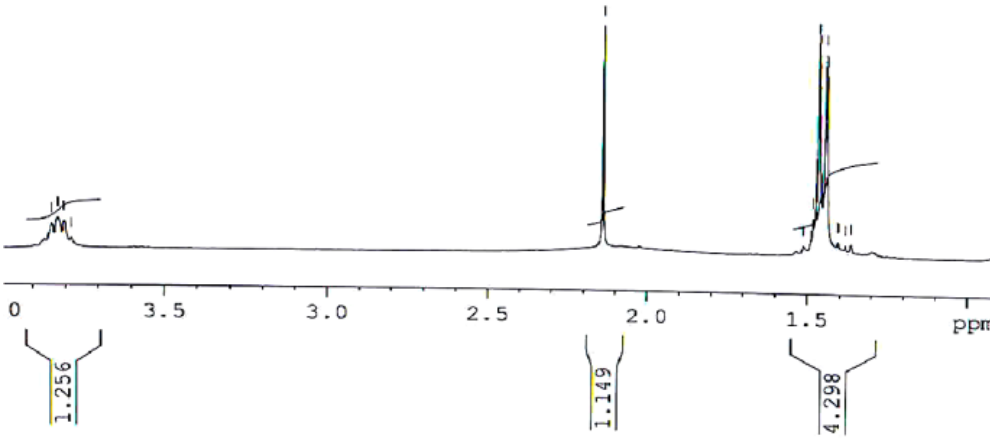
Examples of NMR spectra

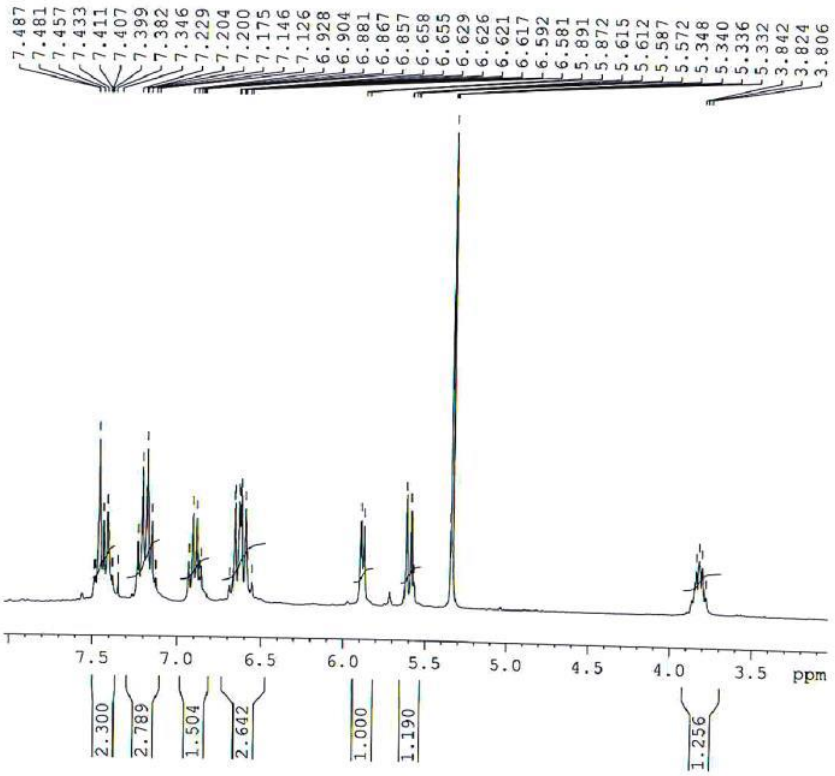
^{1}H NMR spectrum of the **5a** compound



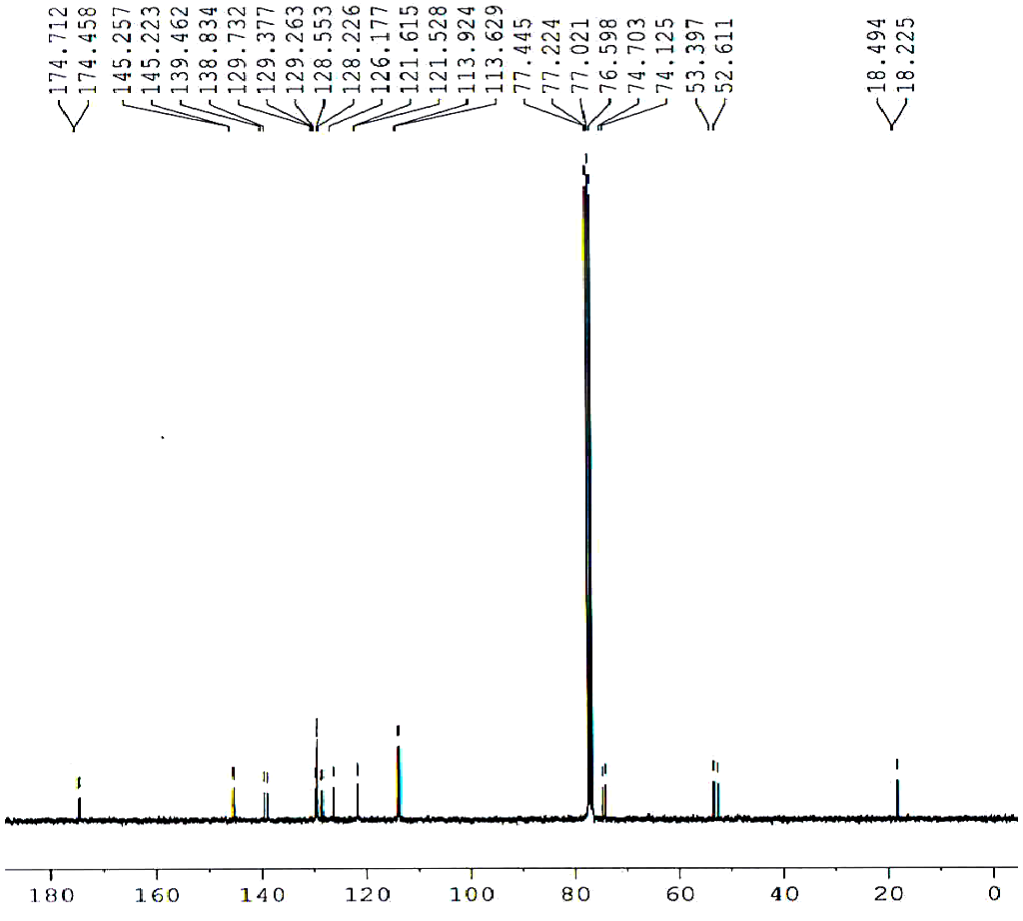
5a

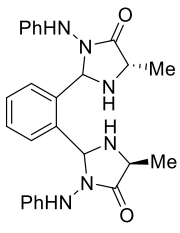






^{13}C NMR spectrum of the **5a** compound





5a