

Supplementary information

Novel Herbicide Ionic liquids based on nicosulfuron with increased efficacy

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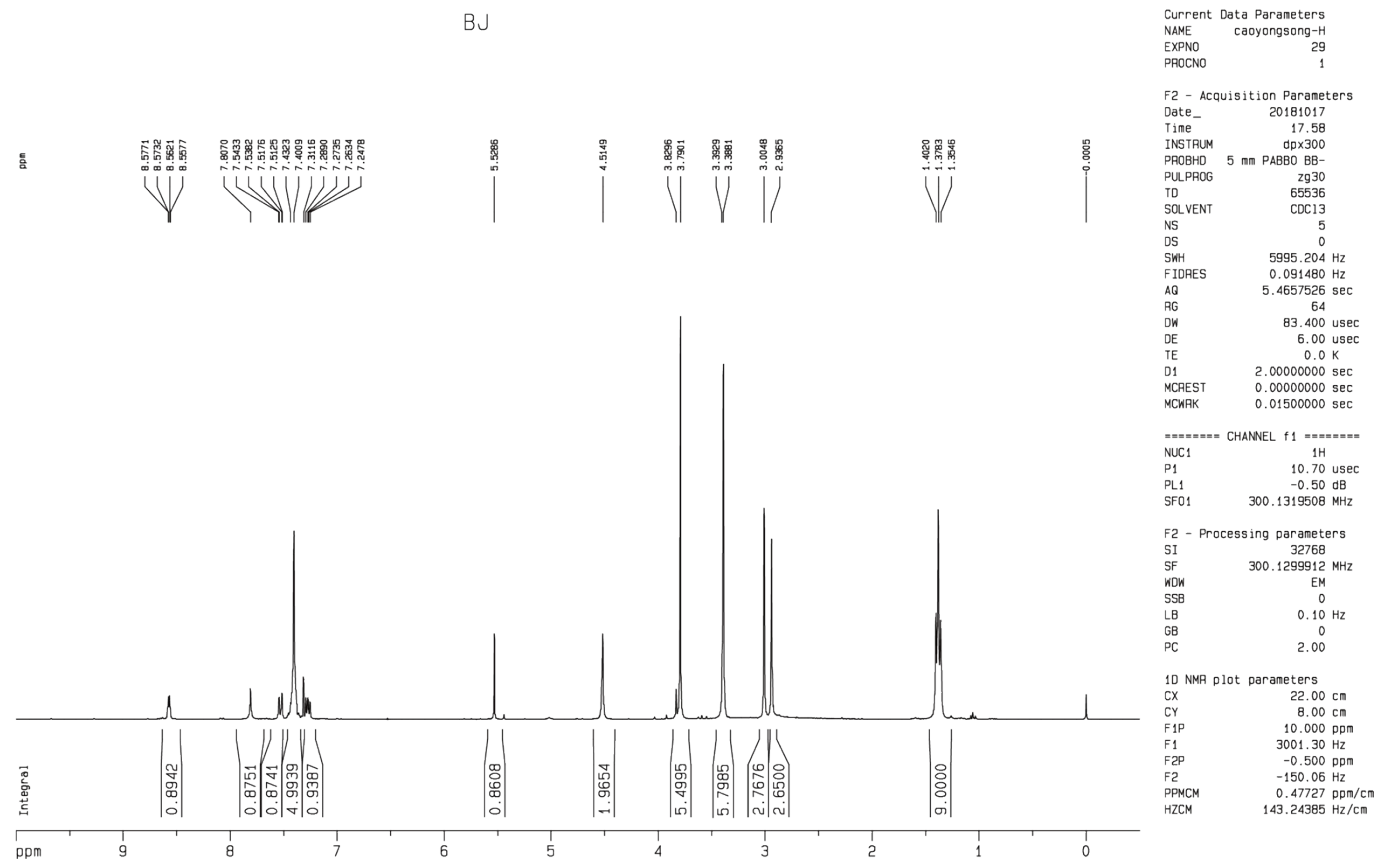
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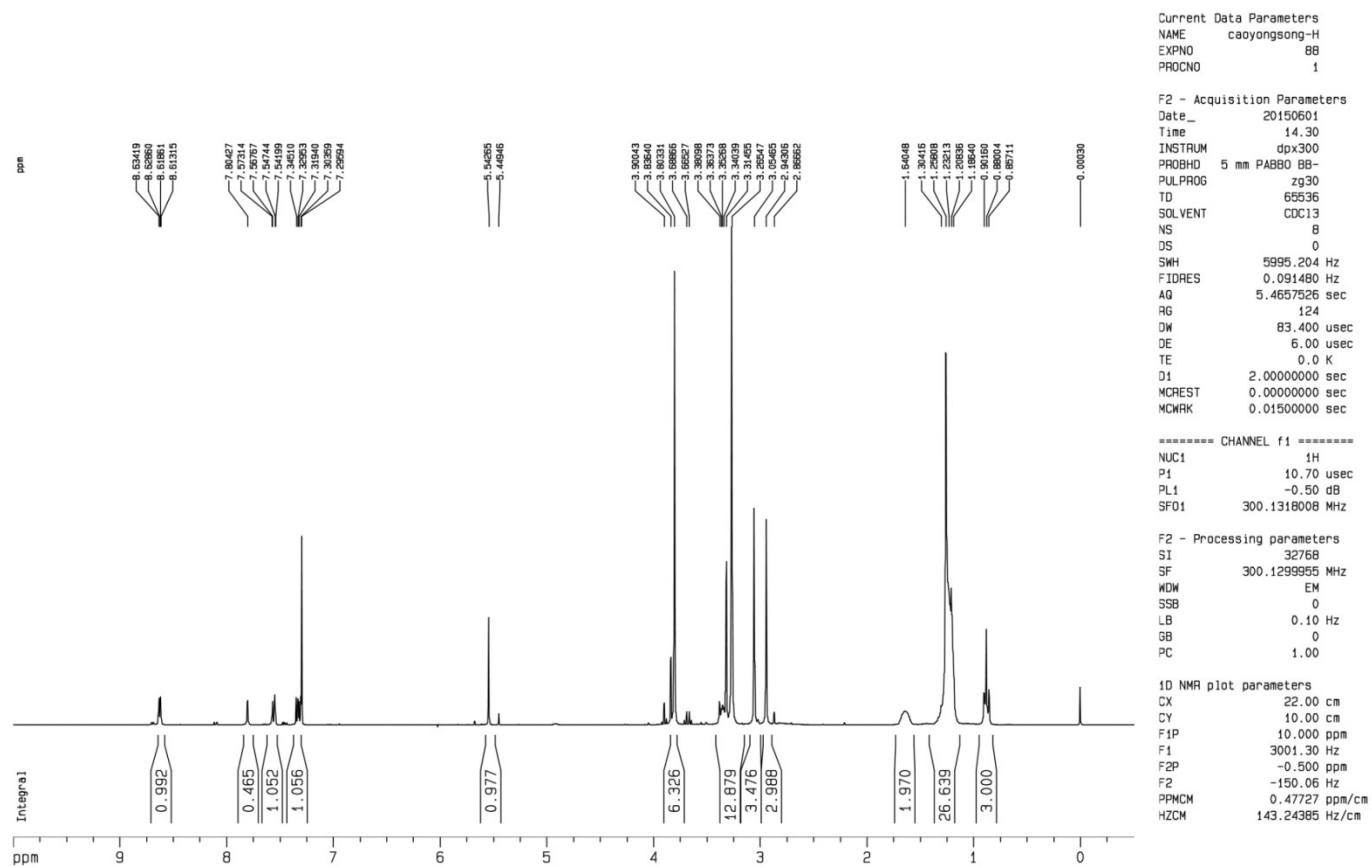
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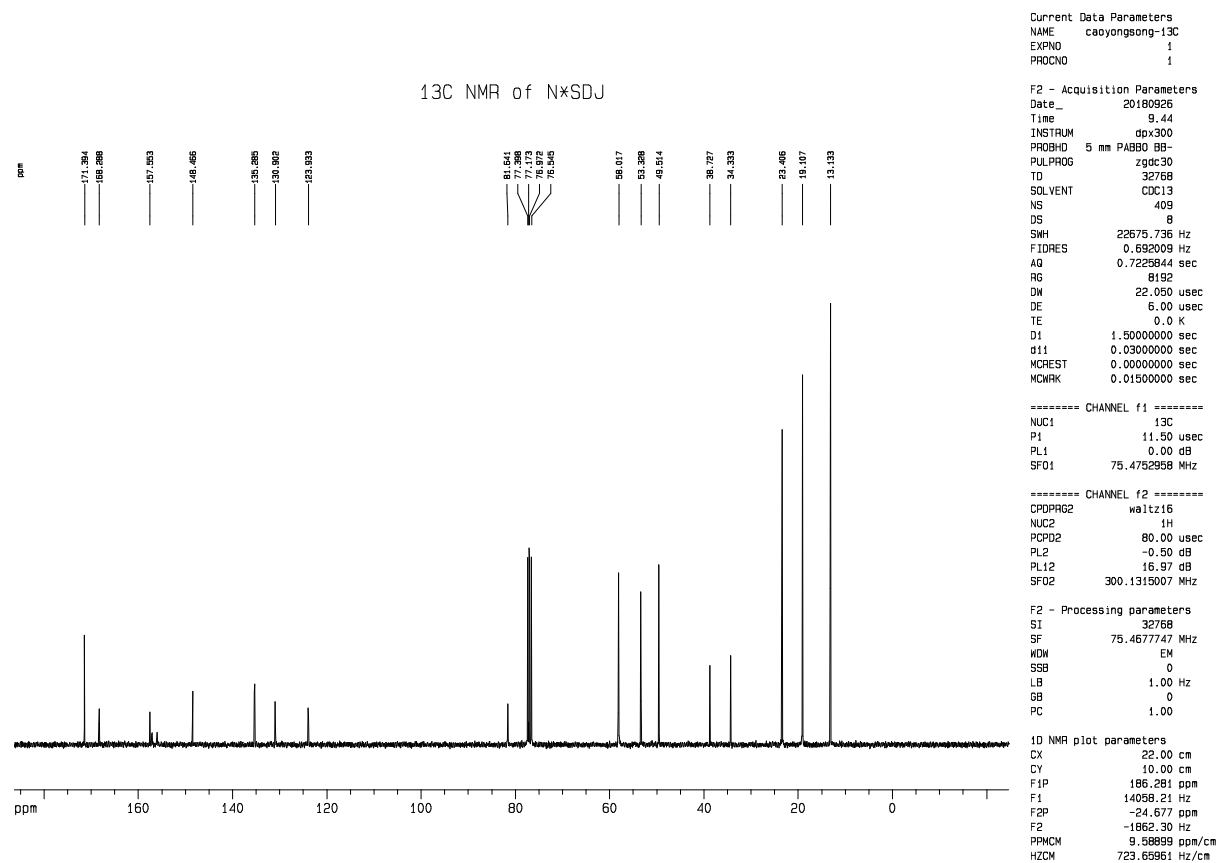
1. **Fig. S1** ^1H NMR (300.13 MHz; CDCl_3) of **HIL1** Tetrabutylammonium ((4,6-dimethoxypyrimidin-2-yl)carbamoyl)((3-(dimethylcarbamoyl)pyridin-2-yl)sulfonyl)amide
2. **Fig. S2** ^1H NMR (300.13 MHz; CDCl_3) of **HIL2** N-benzyl-N,N-diethylethanaminium ((4,6-dimethoxypyrimidin-2-yl)carbamoyl)((3-(dimethylcarbamoyl)pyridin-2-yl)sulfonyl)amide
3. **Fig. S3** ^1H NMR (300.13 MHz; CDCl_3) of **HIL3** 2-hydroxy-N,N,N-trimethylethanaminium ((4,6-dimethoxypyrimidin-2-yl)carbamoyl)((3-(dimethylcarbamoyl)pyridin-2-yl)sulfonyl)amide
4. **Fig. S4** ^1H NMR (300.13 MHz; CDCl_3) of **HIL4** N,N,N-trimethylhexadecan-1-aminium ((4,6-dimethoxypyrimidin-2-yl)carbamoyl)((3-(dimethylcarbamoyl)pyridin-2-yl)sulfonyl)amide
5. **Fig. S5** ^1H NMR (300.13 MHz; CDCl_3) of **HIL5** 1-hexadecylpyridin-1-ium ((4,6-dimethoxypyrimidin-2-yl)carbamoyl)((3-(dimethylcarbamoyl)pyridin-2-yl)sulfonyl)amide
6. **Fig. S6** ^{13}C NMR (75.47 MHz; CDCl_3) of **HIL1** Tetrabutylammonium ((4,6-dimethoxypyrimidin-2-yl)carbamoyl)((3-(dimethylcarbamoyl)pyridin-2-yl)sulfonyl)amide
7. **Fig. S7** ^{13}C NMR (75.47 MHz; CDCl_3) of **HIL2** N-benzyl-N,N-diethylethanaminium ((4,6-dimethoxypyrimidin-2-yl)carbamoyl)((3-(dimethylcarbamoyl)pyridin-2-yl)sulfonyl)amide
8. **Fig. S8** ^{13}C NMR (75.47 MHz; CDCl_3) of **HIL3** 2-hydroxy-N,N,N-trimethylethanaminium ((4,6-dimethoxypyrimidin-2-yl)carbamoyl)((3-(dimethylcarbamoyl)pyridin-2-yl)sulfonyl)amide
9. **Fig. S9** ^{13}C NMR (75.47 MHz; CDCl_3) of **HIL4** N,N,N-trimethylhexadecan-1-aminium ((4,6-dimethoxypyrimidin-2-yl)carbamoyl)((3-(dimethylcarbamoyl)pyridin-2-yl)sulfonyl)amide
10. **Fig. S10** ^{13}C NMR (75.47 MHz; CDCl_3) of **HIL5** 1-hexadecylpyridin-1-ium ((4,6-dimethoxypyrimidin-2-yl)carbamoyl)((3-(dimethylcarbamoyl)pyridin-2-yl)sulfonyl)amide



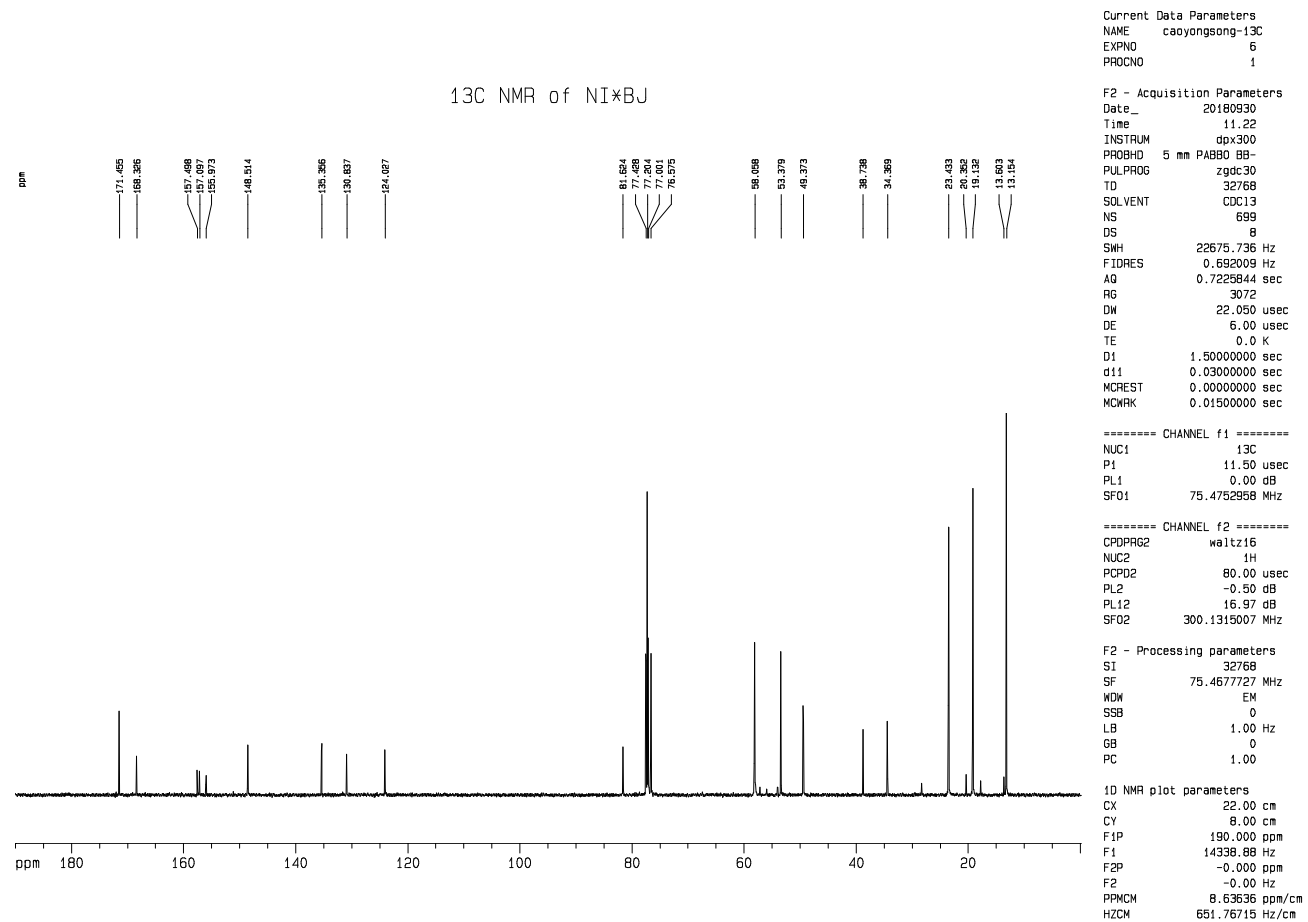
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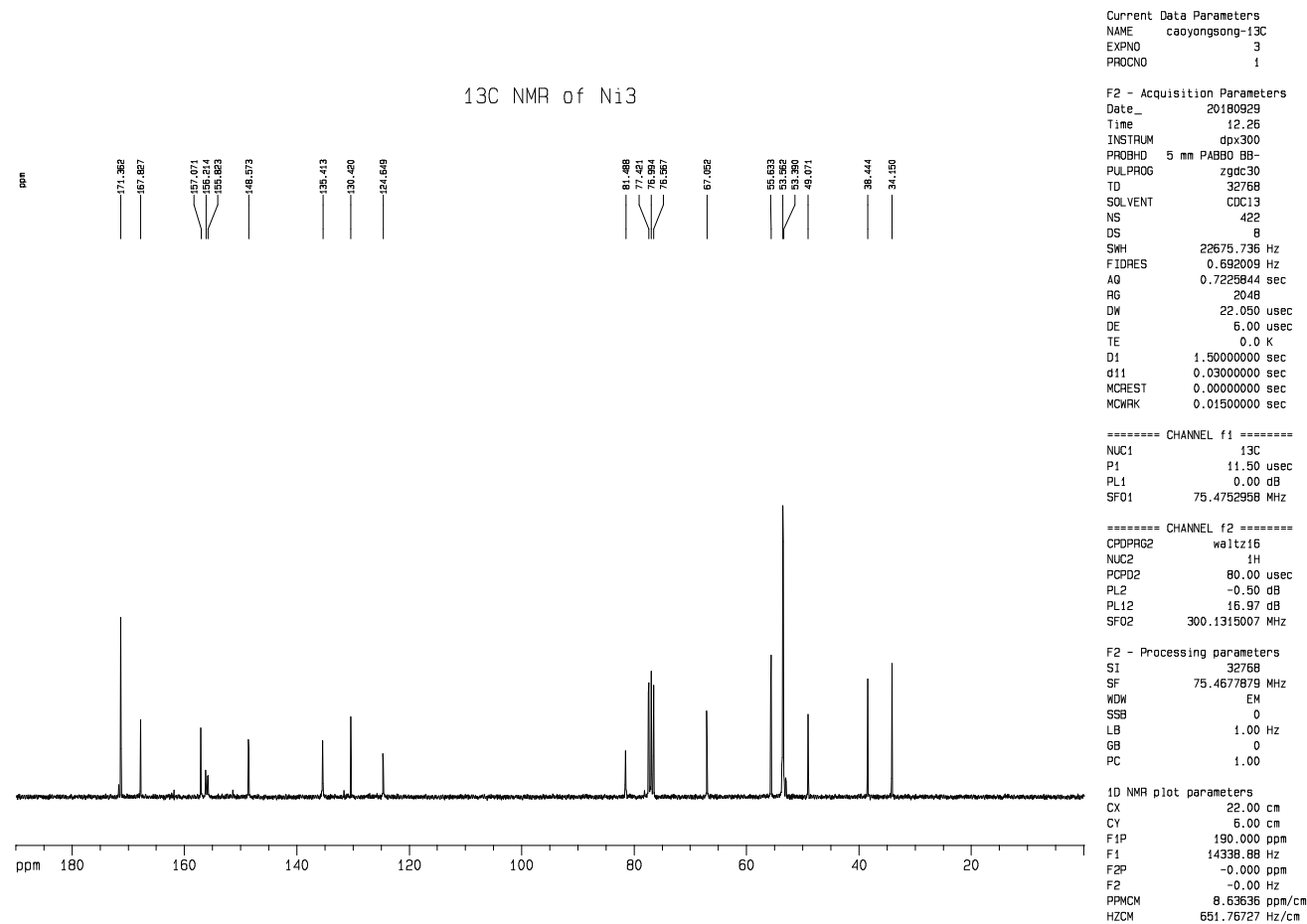
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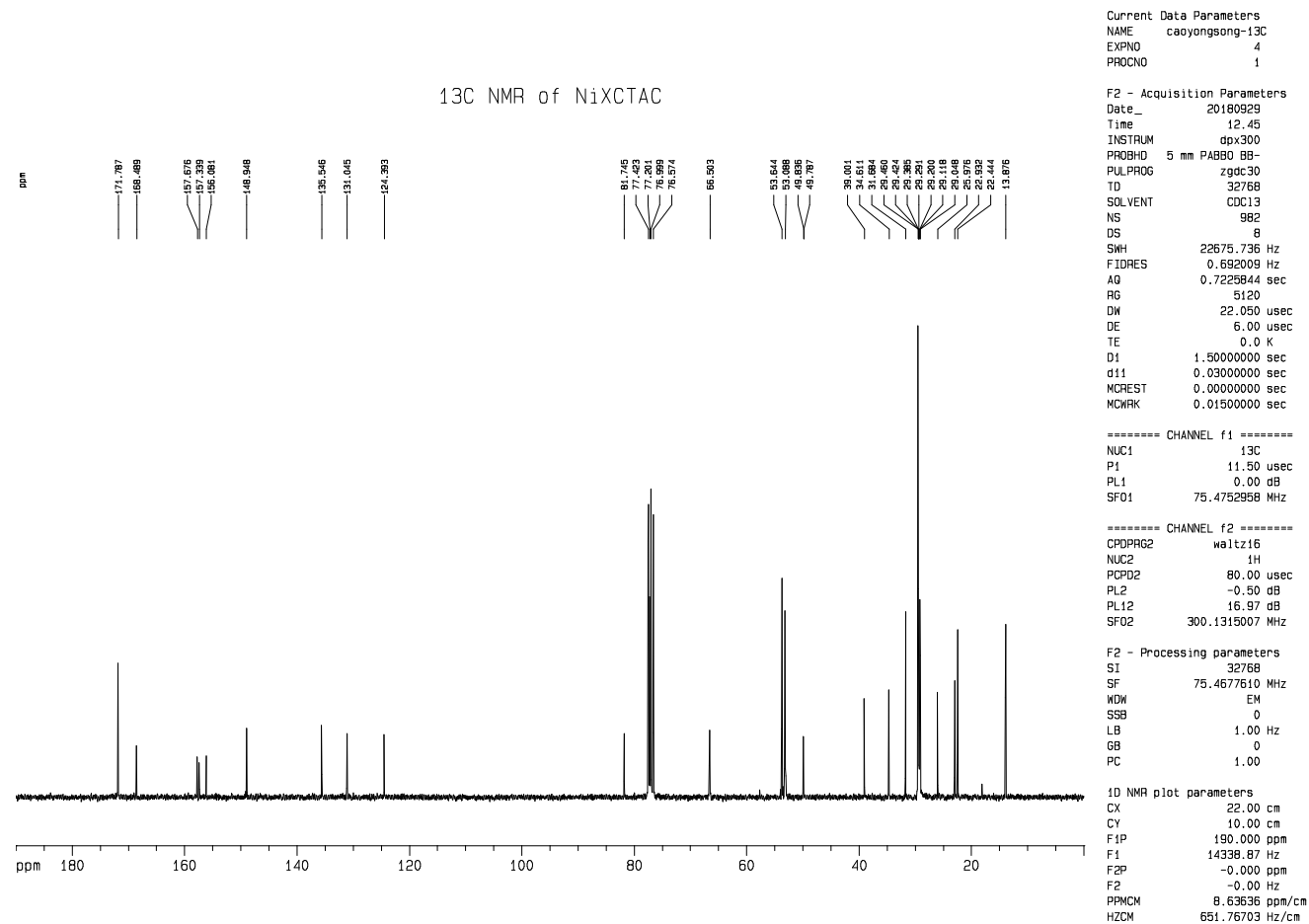
6. **Fig. S6** ^{13}C NMR (75.47 MHz; CDCl_3) of **HIL1** Tetrabutylammonium ((4,6-dimethoxypyrimidin-2-yl)carbamoyl)((3-(dimethylcarbamoyl)pyridin-2-yl)sulfonyl)amide



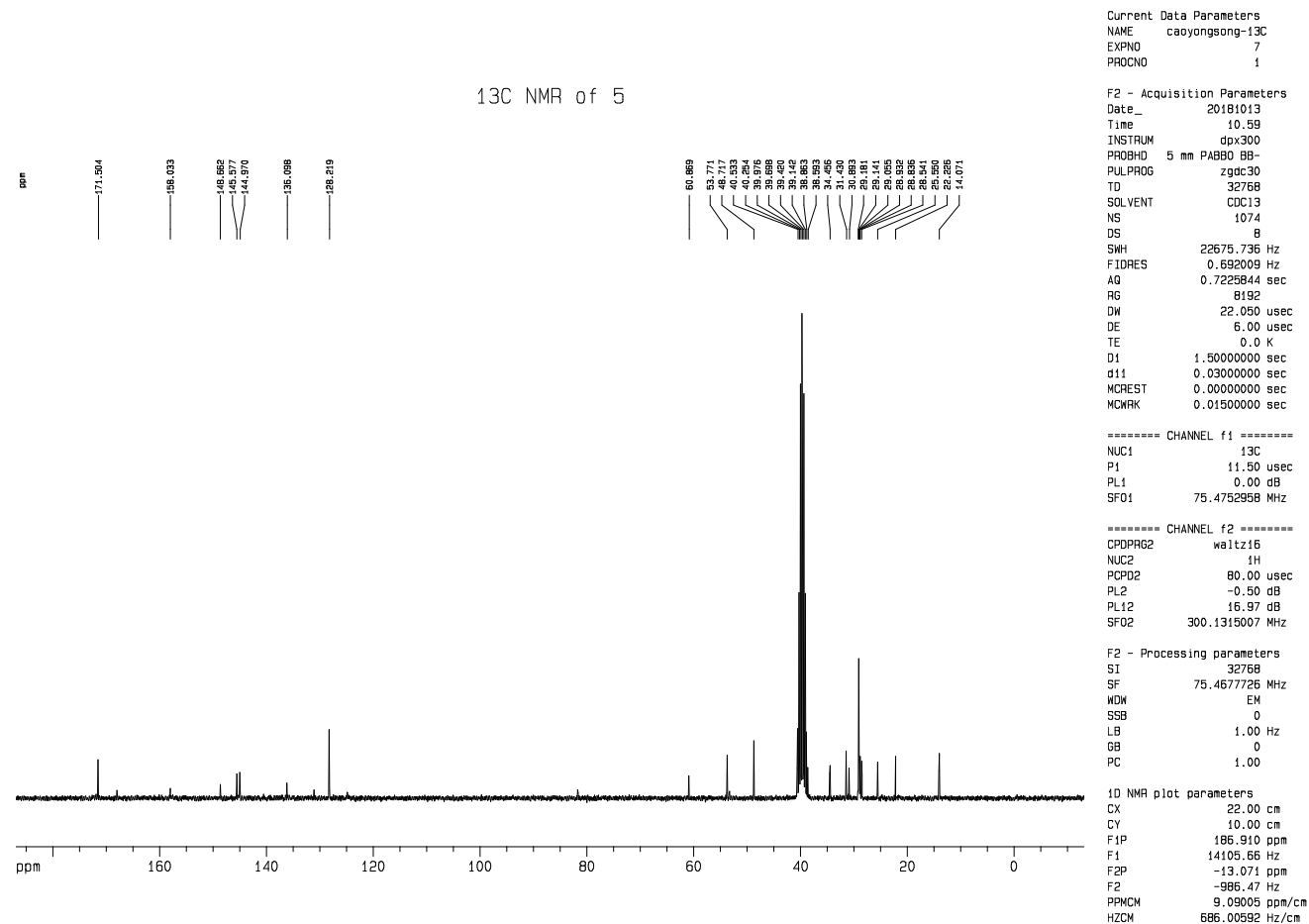
7. **Fig. S7** ¹³C NMR (75.47 MHz; CDCl₃) of **HIL2** N-benzyl-N,N-diethylethanaminium ((4,6-dimethoxypyrimidin-2-yl)carbamoyl)((3-(dimethylcarbamoyl)pyridin-2-yl)sulfonyl)amide



8. **Fig. S8** ¹³C NMR (75.47 MHz; CDCl₃) of **HIL3** 2-hydroxy-N,N,N-trimethylethanaminium ((4,6-dimethoxypyrimidin-2-yl)carbamoyl)((3-(dimethylcarbamoyl)pyridin-2-yl)sulfonyl)amide



9. **Fig. S9** ¹³C NMR (75.47 MHz; CDCl₃) of **HIL4** N,N,N-trimethylhexadecan-1-aminium ((4,6-dimethoxypyrimidin-2-yl)carbamoyl)((3-(dimethylcarbamoyl)pyridin-2-yl)sulfonyl)amide



10. **Fig. S10** ^{13}C NMR (75.47 MHz; CDCl_3) of **HIL5** 1-hexadecylpyridin-1-ium ((4,6-dimethoxypyrimidin-2-yl)carbamoyl)((3-(dimethylcarbamoyl)pyridin-2-yl)sulfonyl)amide