

## Supplementary Material

### Ultrasound-assisted synthesis of imidazo[1,2-*a*]pyridines and sequential one-pot preparation of 3-selanyl-imidazo[1,2-*a*]pyridine derivatives

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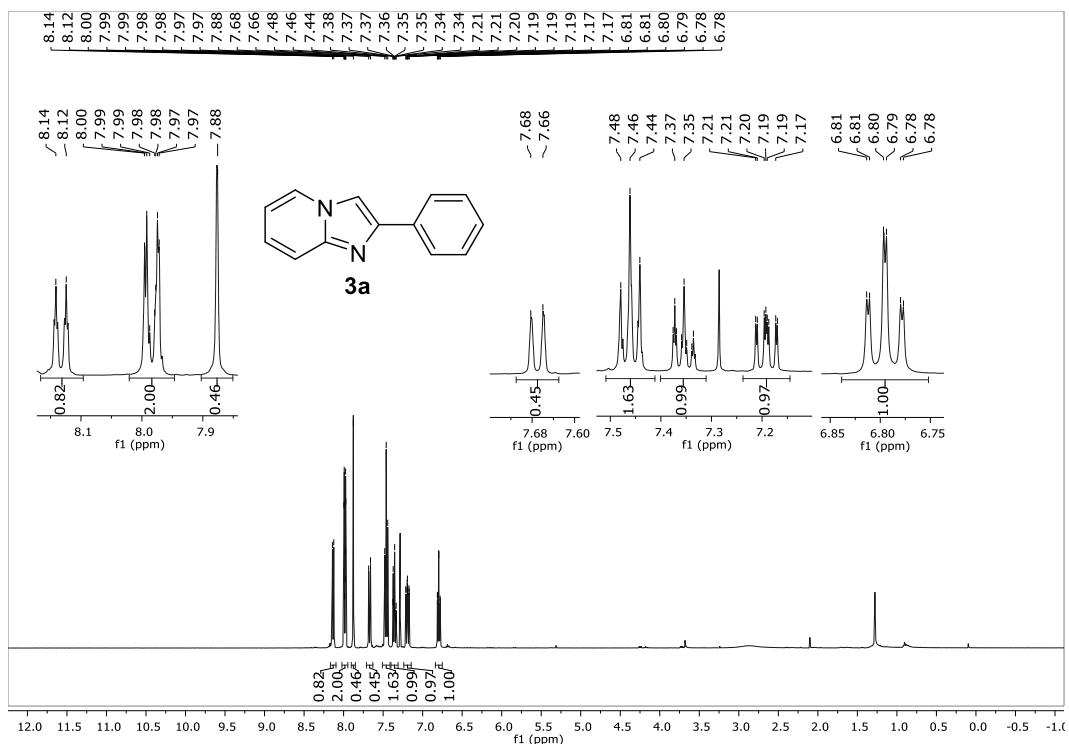
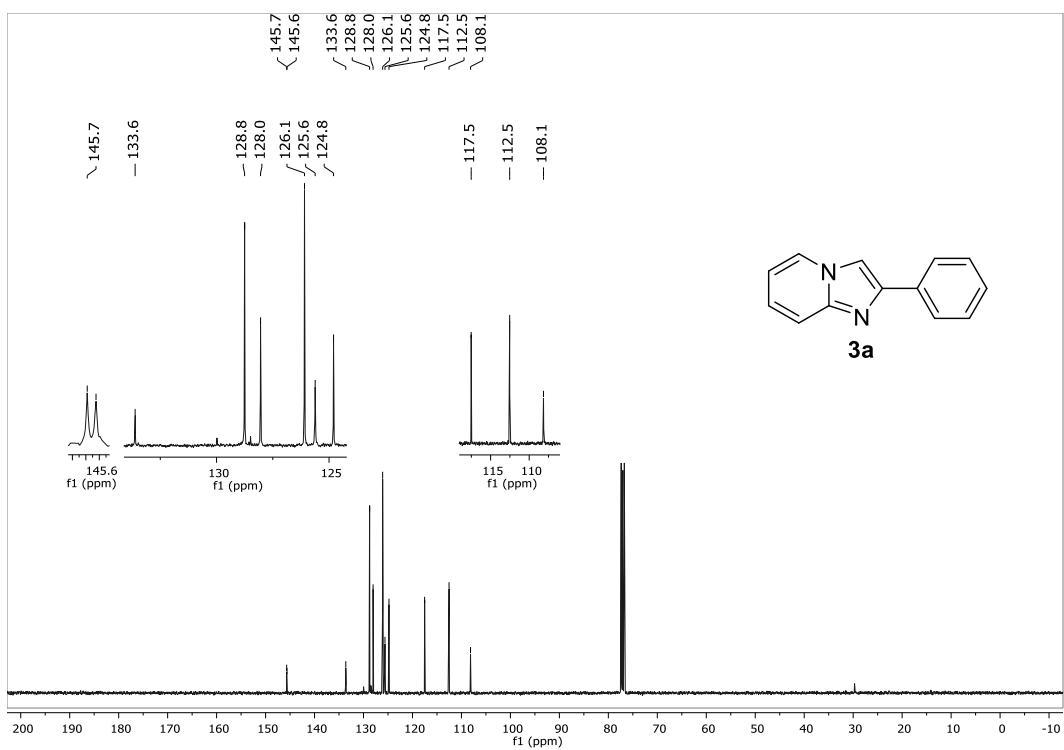
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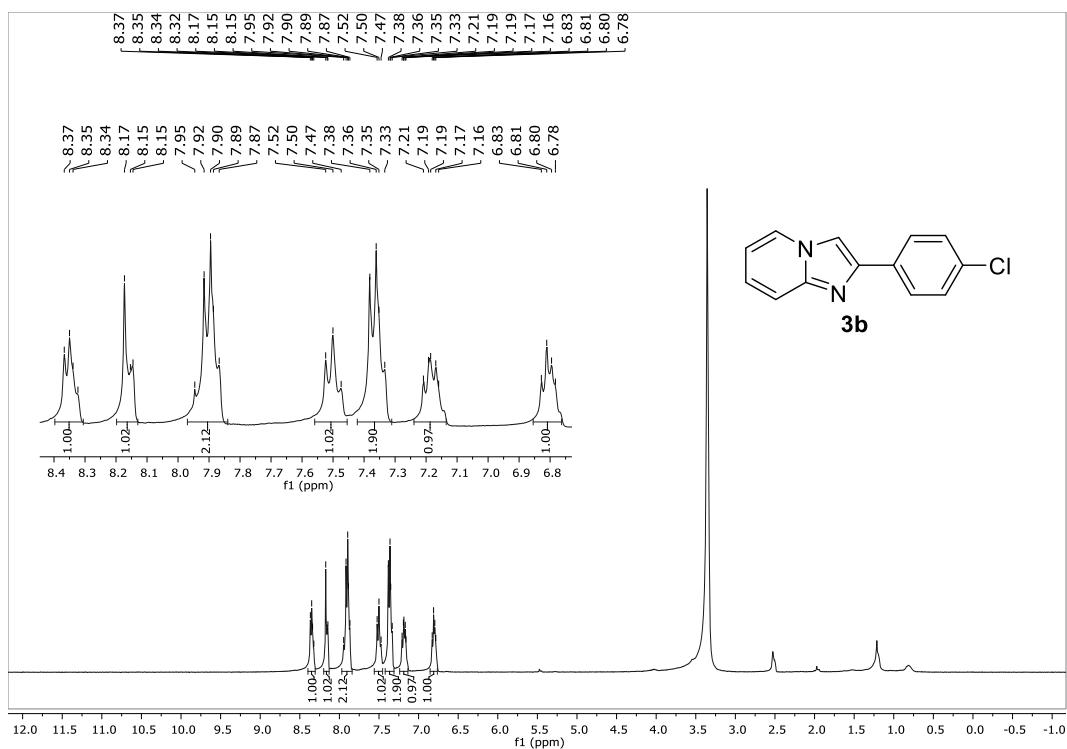
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### Table of Contents

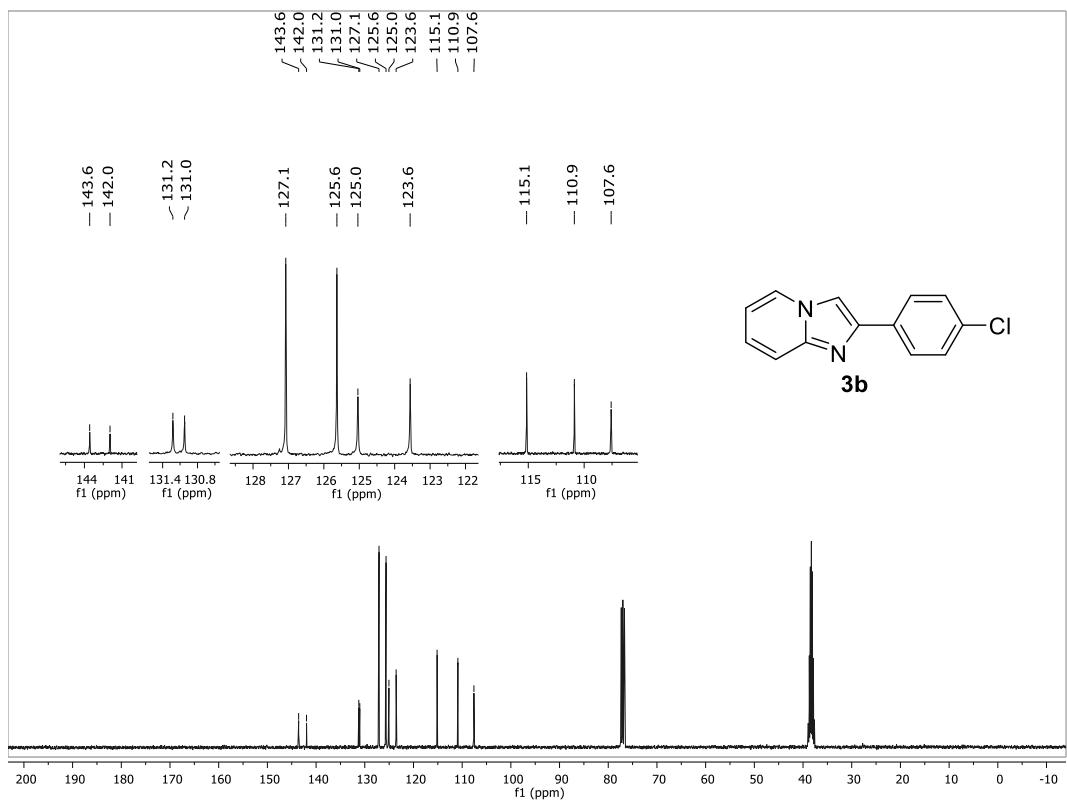
<sup>1</sup> H NMR and <sup>13</sup> C NMR spectra of compounds 3 and 5.....	S2
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## SELECTED SPECTRA

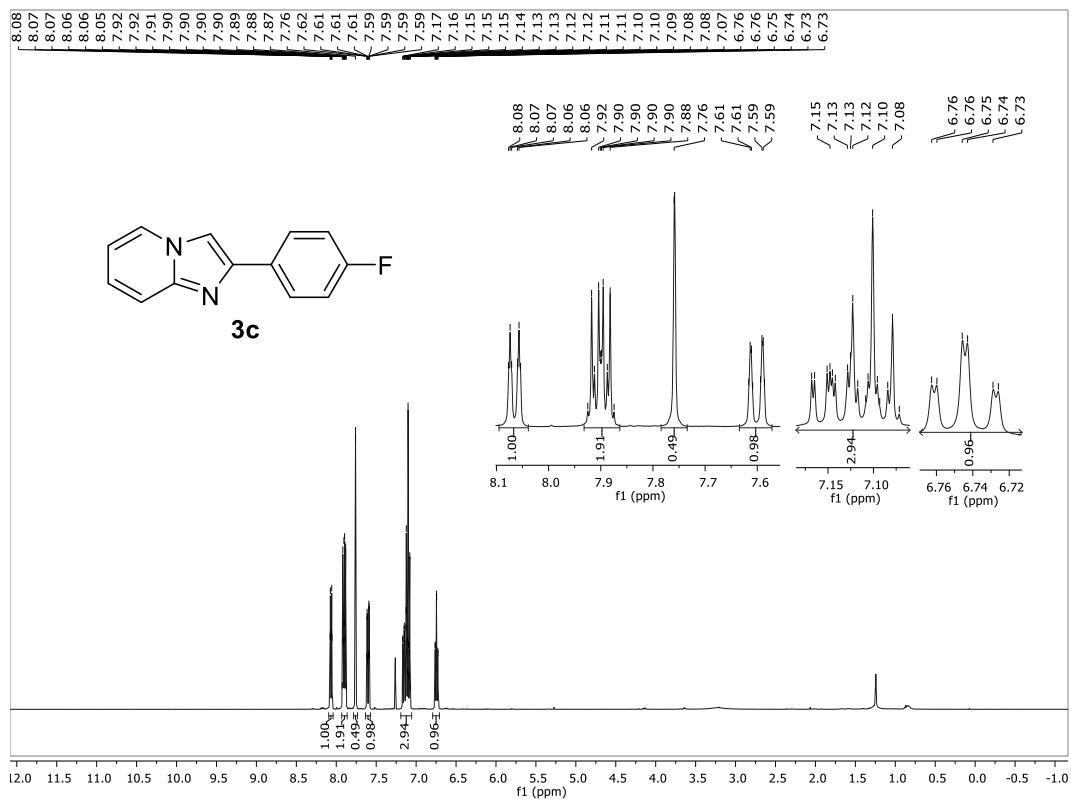
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 2-phenylimidazo[1,2-a]pyridine (3a).<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 2-phenylimidazo[1,2-a]pyridine (3a).



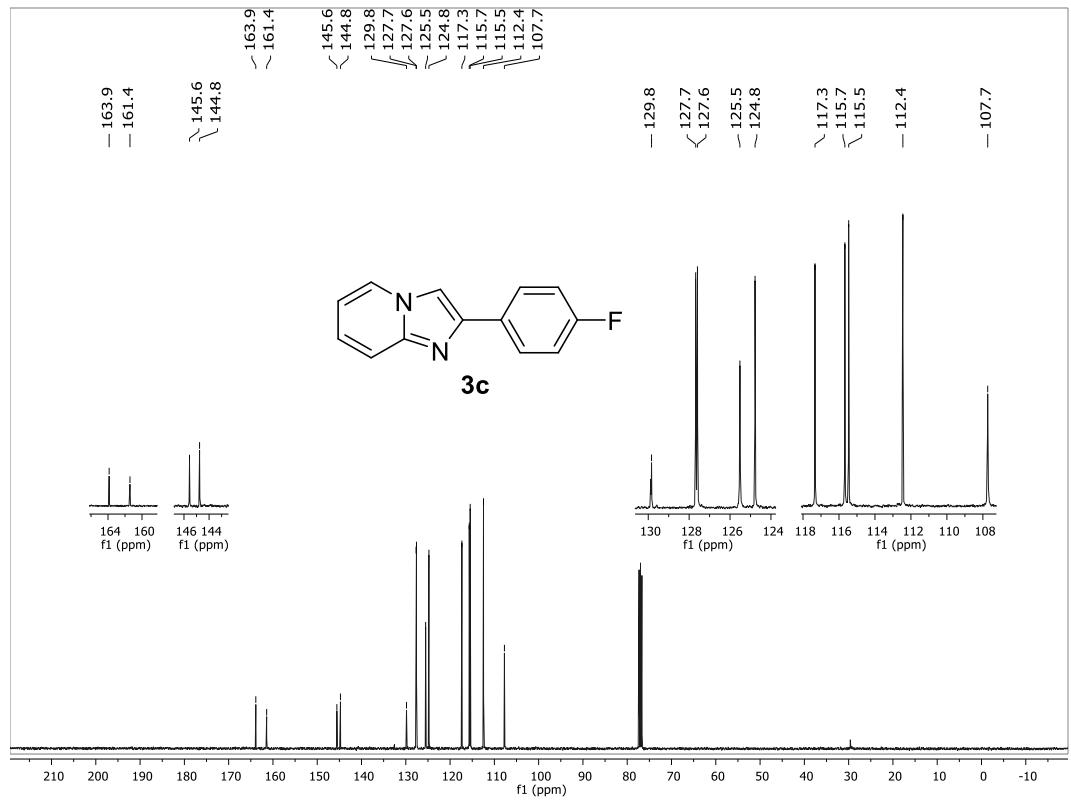
$^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3/\text{DMSO}-d_6$ ) spectrum of 2-(4-chlorophenyl)imidazo[1,2-*a*]pyridine (**3b**).



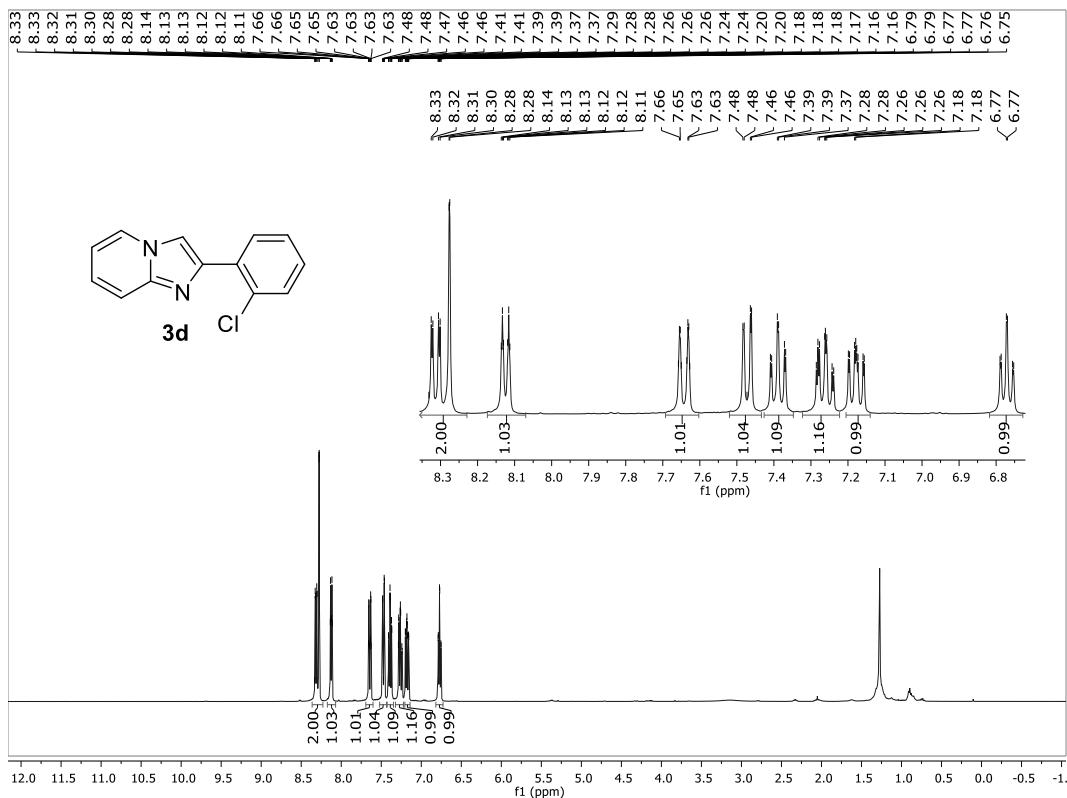
$^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3/\text{DMSO}-d_6$ ) spectrum of 2-(4-chlorophenyl)imidazo[1,2-*a*]pyridine (**3b**).



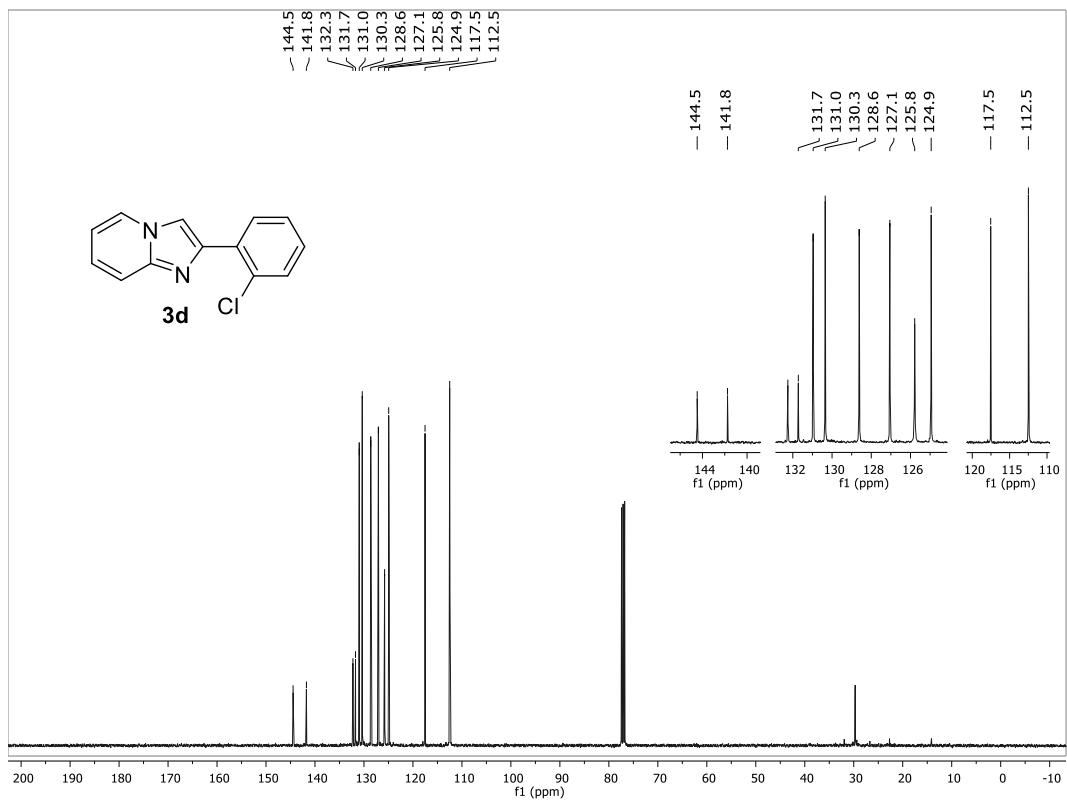
$^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of 2-(4-fluorophenyl)imidazo[1,2-*a*]pyridine (**3c**).



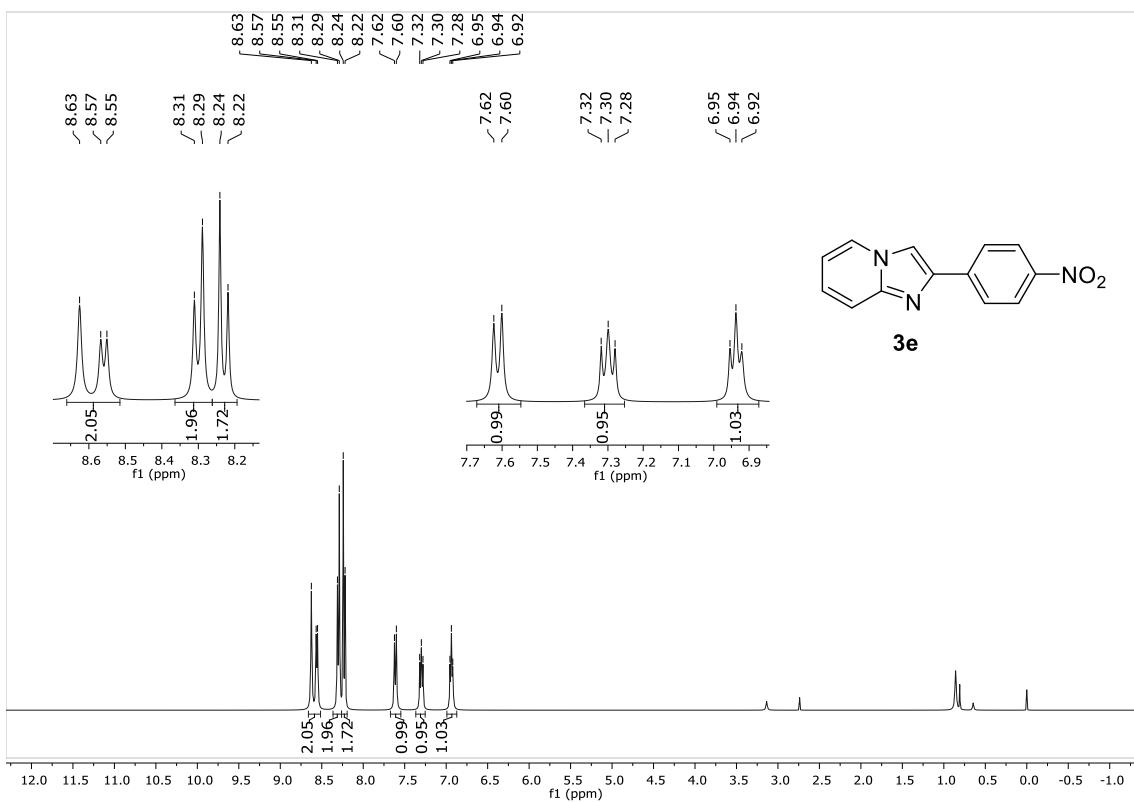
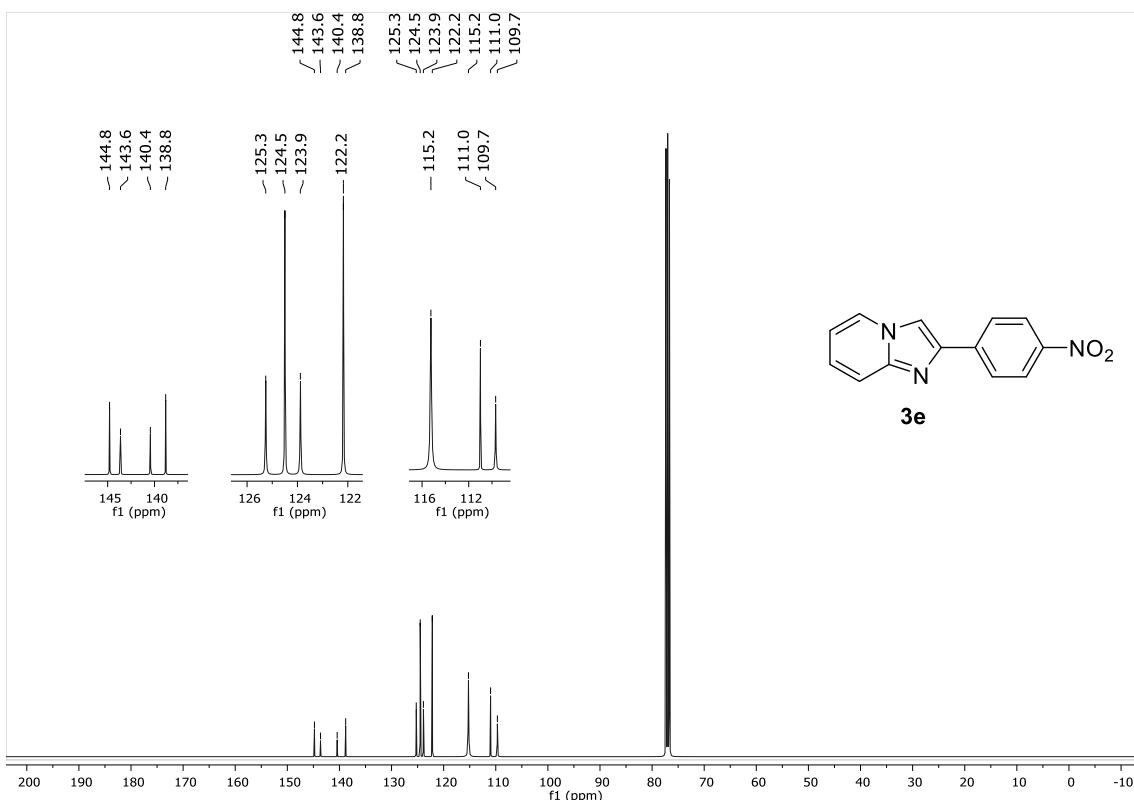
$^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of 2-(4-fluorophenyl)imidazo[1,2-*a*]pyridine (**3c**).

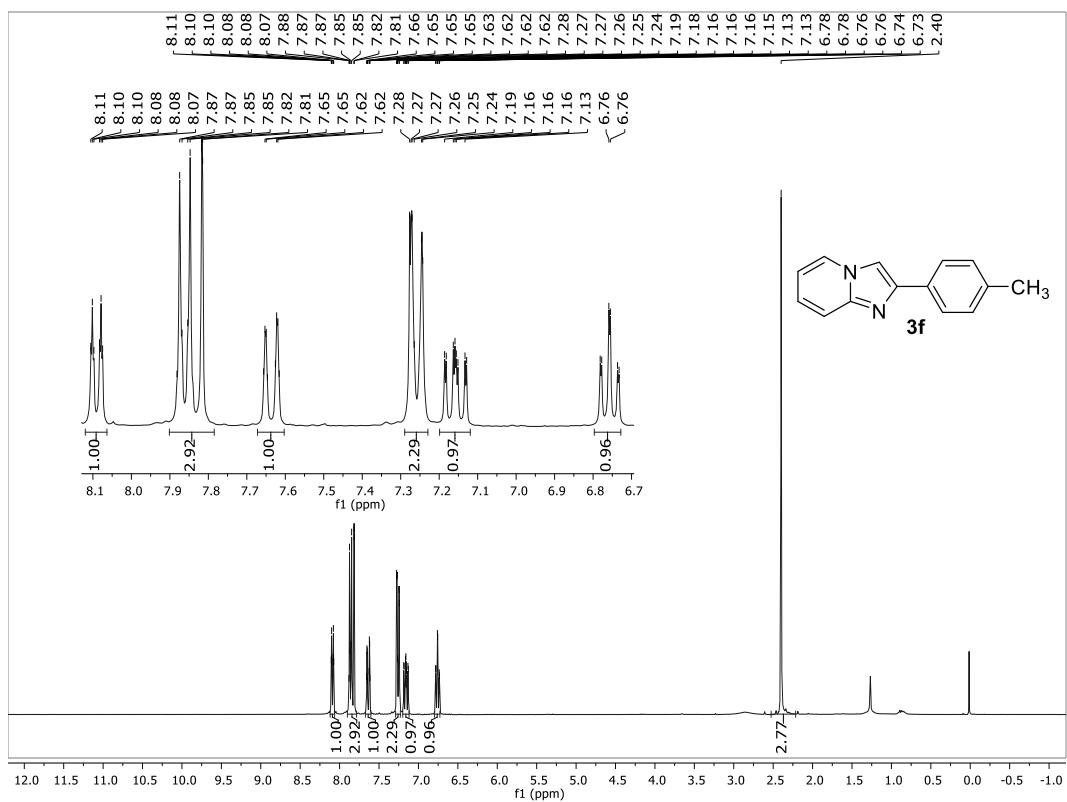


<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 2-(2-chlorophenyl)imidazo[1,2-*a*]pyridine (**3d**).

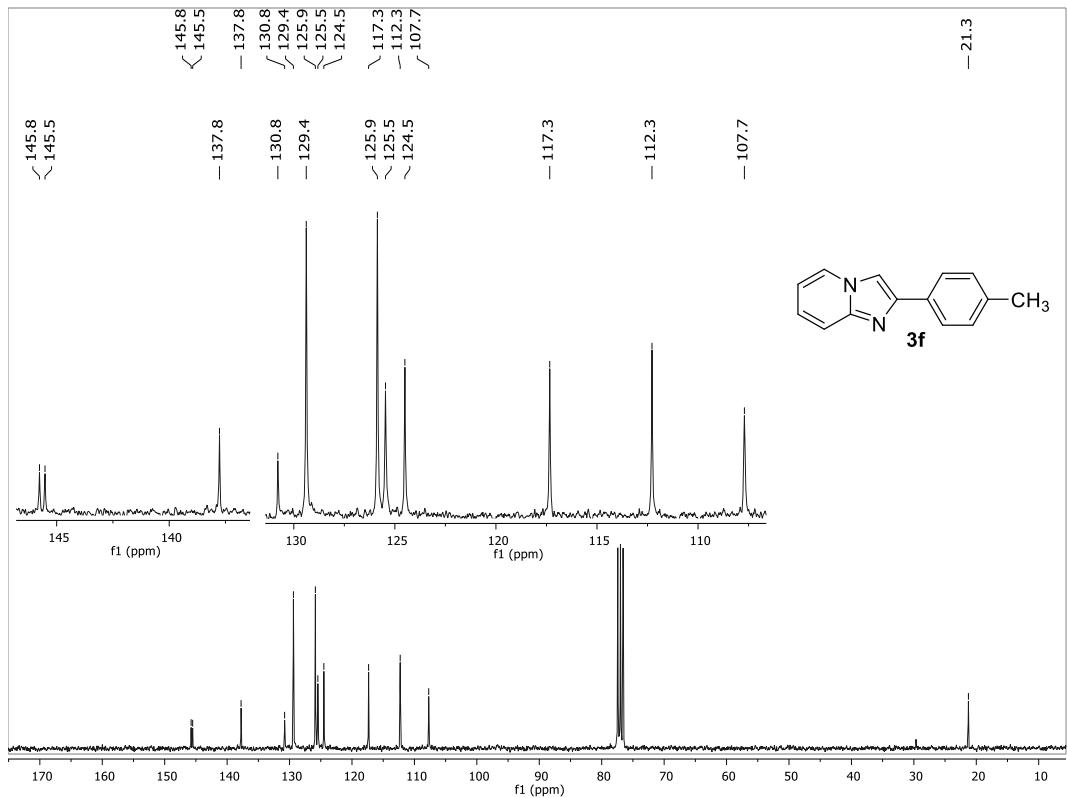


<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 2-(2-chlorophenyl)imidazo[1,2-*a*]pyridine (**3d**).

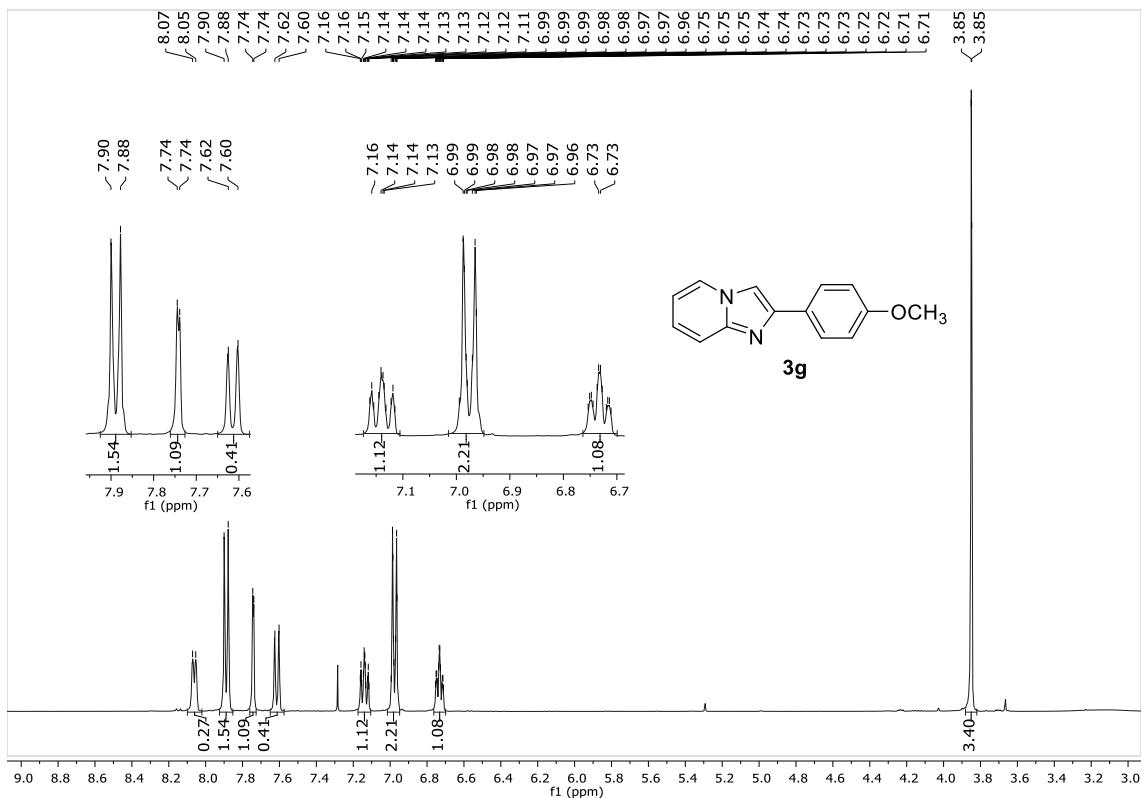
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>/DMSO-d<sub>6</sub>) spectrum of 2-(4-nitrophenyl)imidazo[1,2-a]pyridine (**3e**).<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>/DMSO-d<sub>6</sub>) spectrum of 2-(4-nitrophenyl)imidazo[1,2-a]pyridine (**3e**).



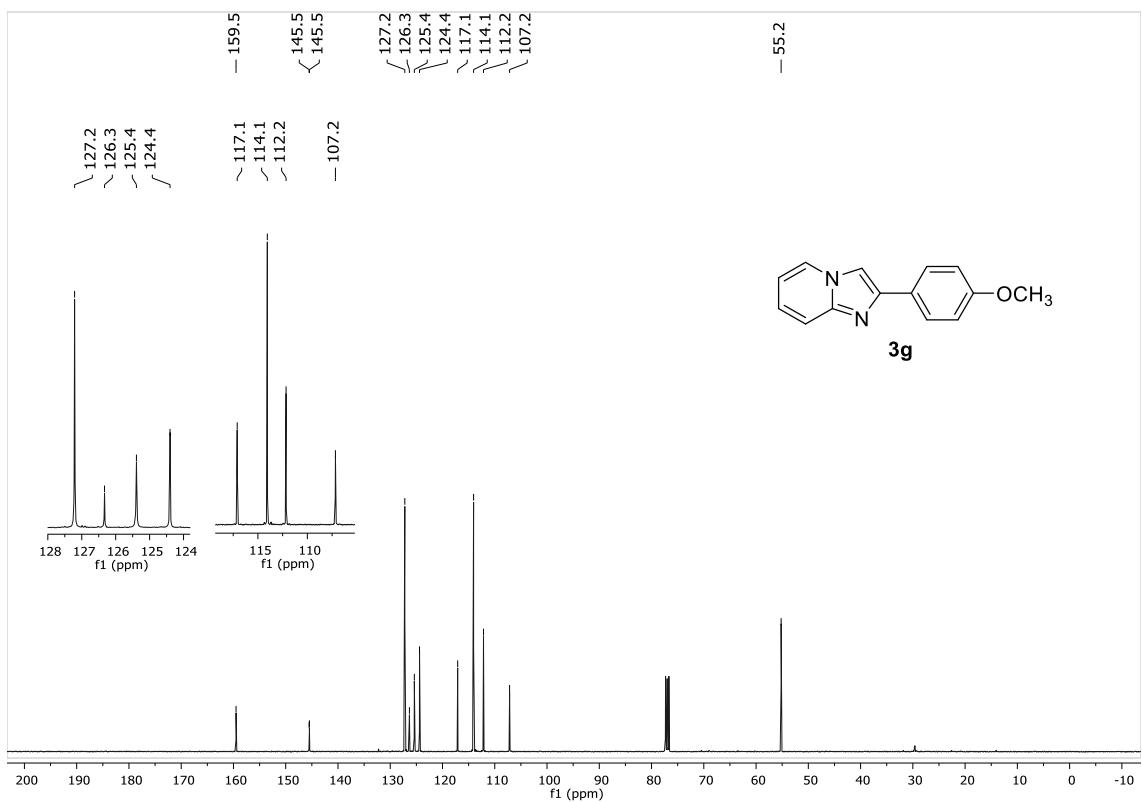
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 2-(*p*-tolyl)imidazo[1,2-*a*]pyridine (**3f**).



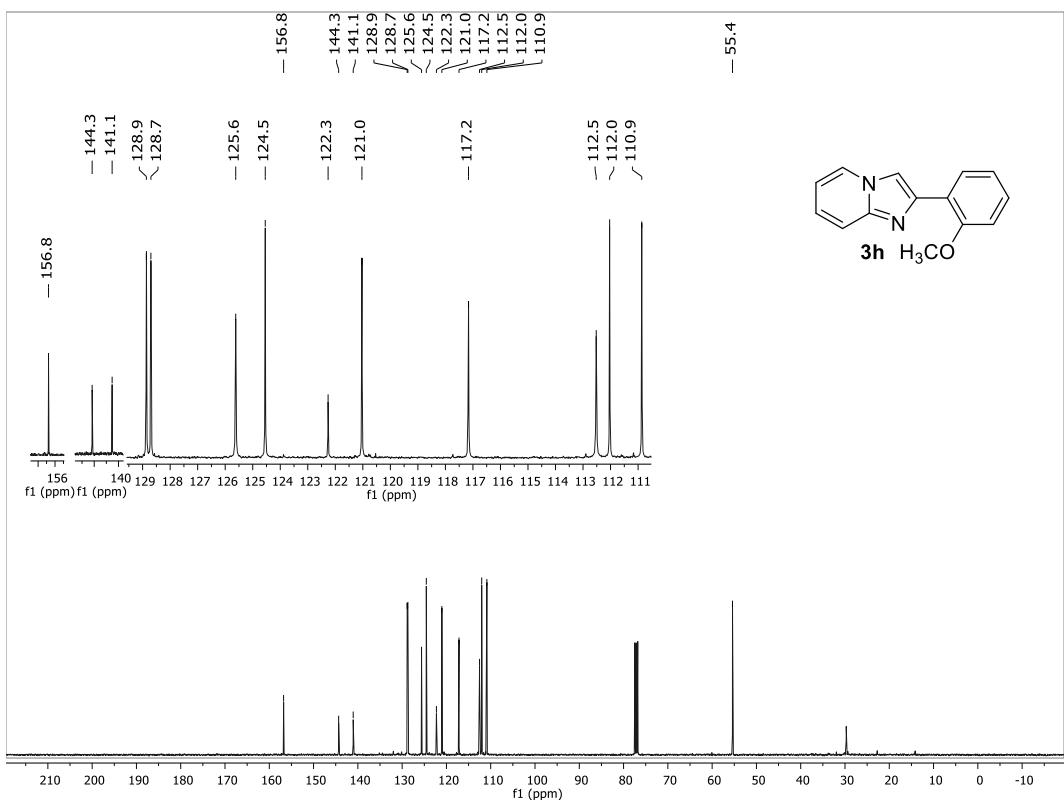
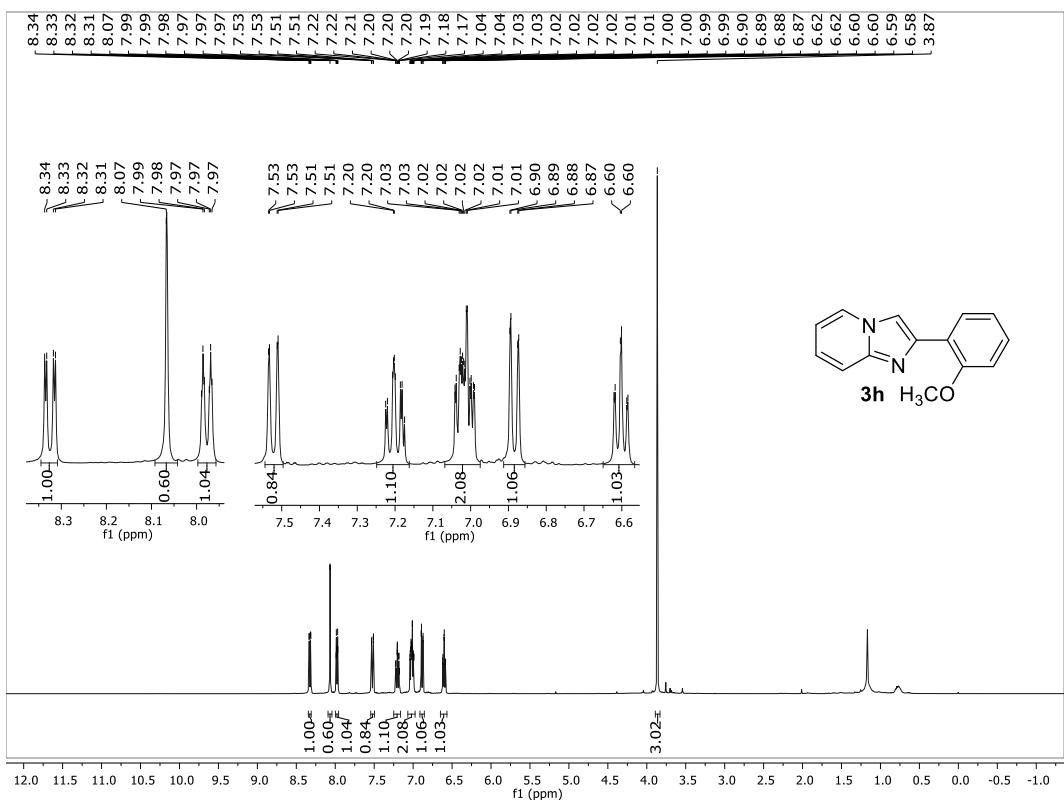
<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 2-(*p*-tolyl)imidazo[1,2-*a*]pyridine (**3f**).

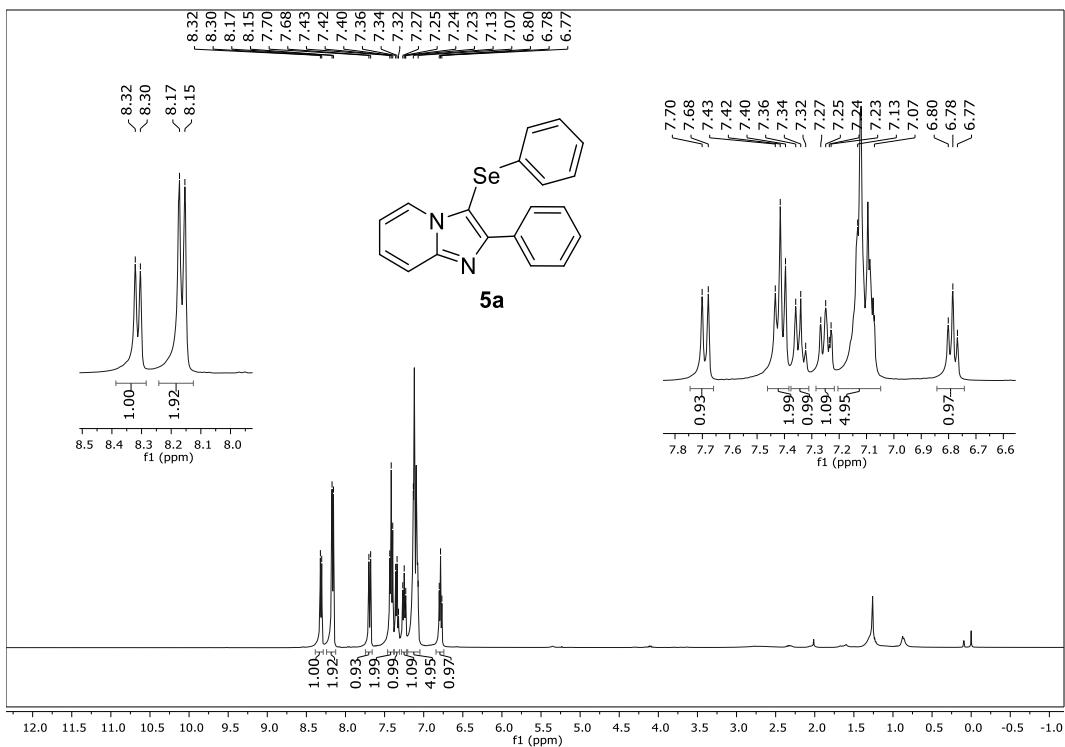
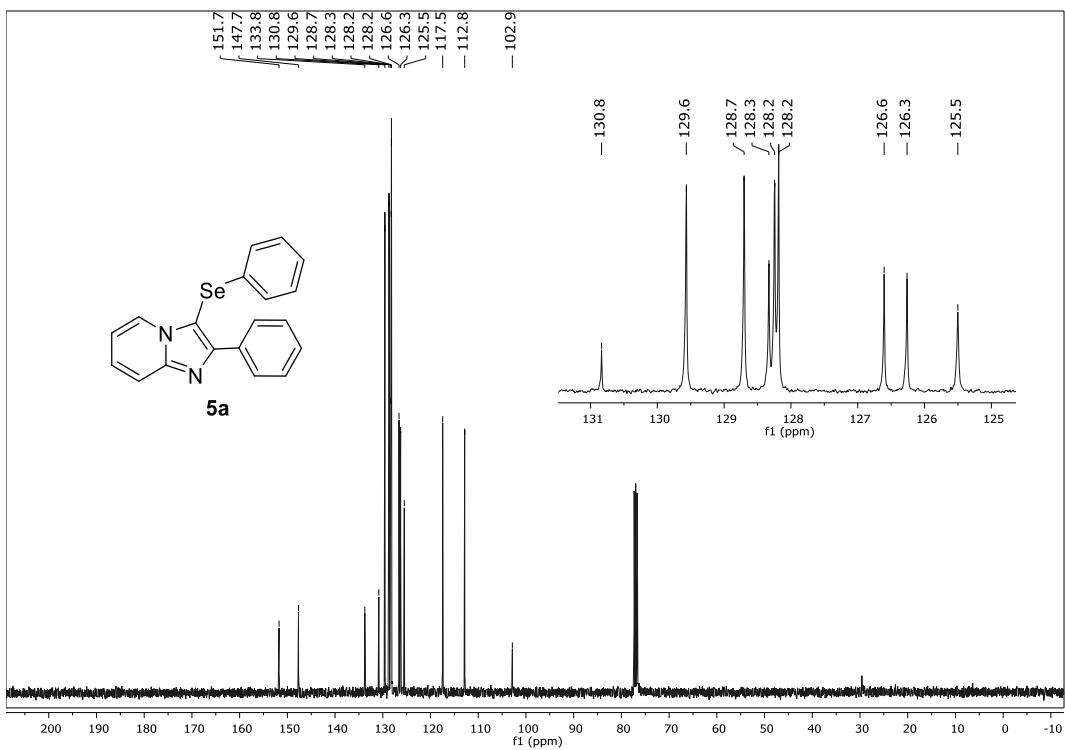


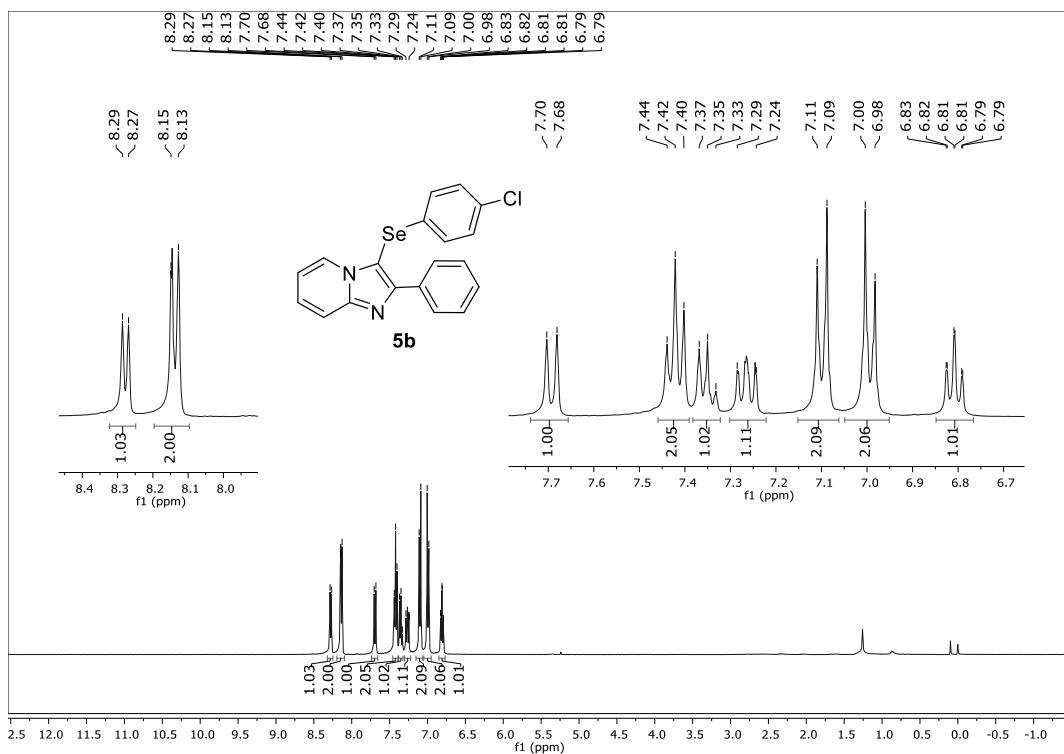
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 2-(4-methoxyphenyl)imidazo[1,2-*a*]pyridine (**3g**).



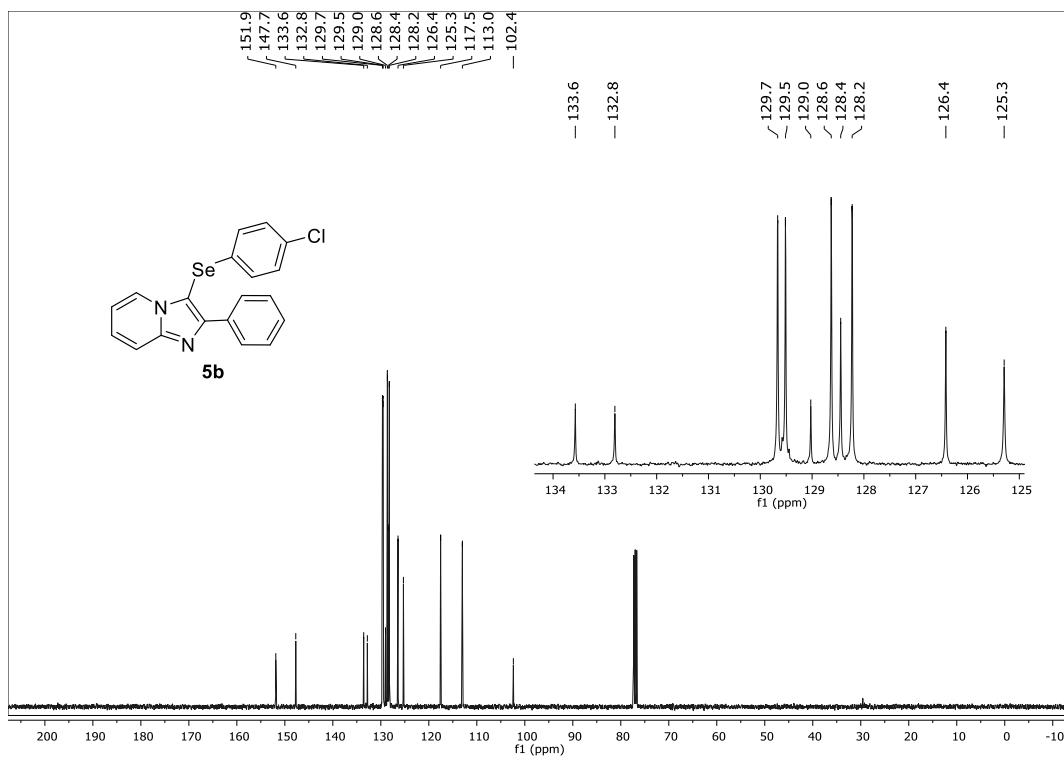
<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 2-(4-methoxyphenyl)imidazo[1,2-*a*]pyridine (**3g**).



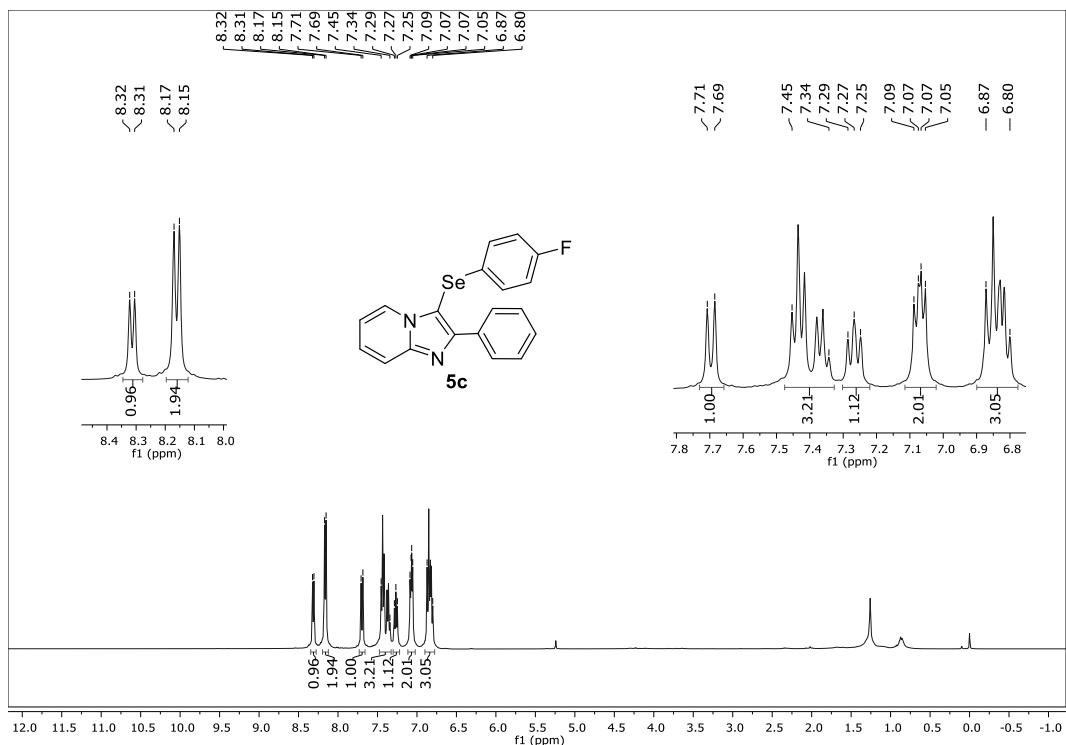
 $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of 2-phenyl-3-(phenylselanyl)imidazo[1,2-*a*]pyridine (5a). $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of 2-phenyl-3-(phenylselanyl)imidazo[1,2-*a*]pyridine (5a).



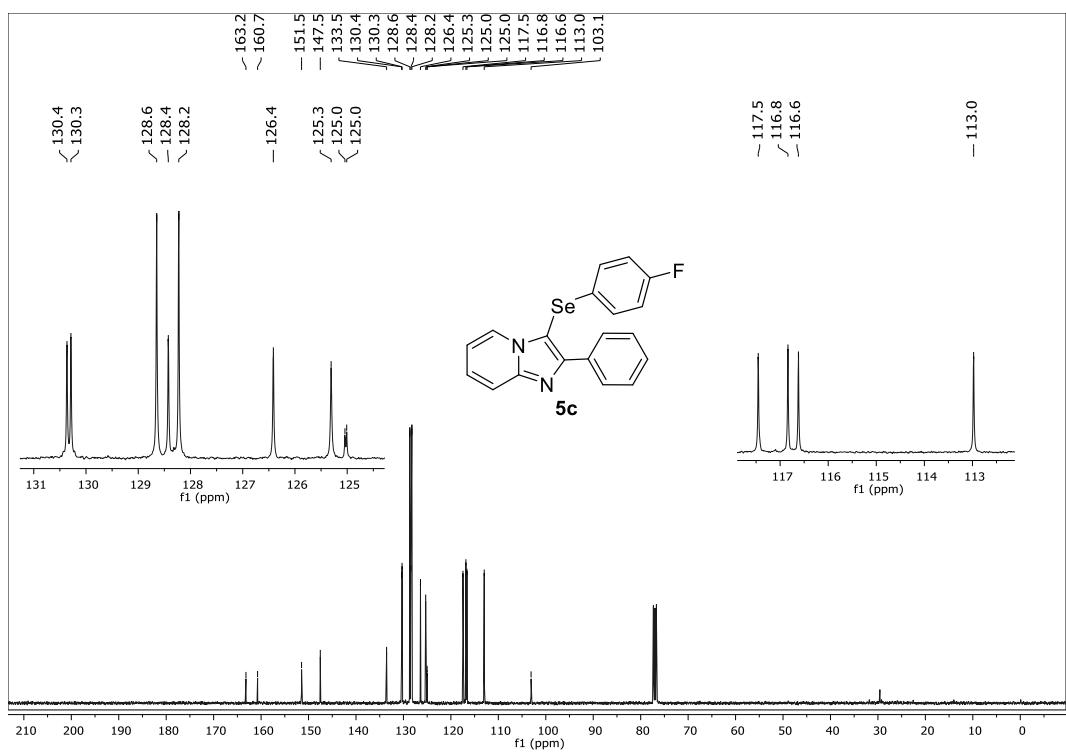
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 3-[(4-chlorophenyl)selanyl]-2-phenylimidazo[1,2-*a*]pyridine (**5b**).



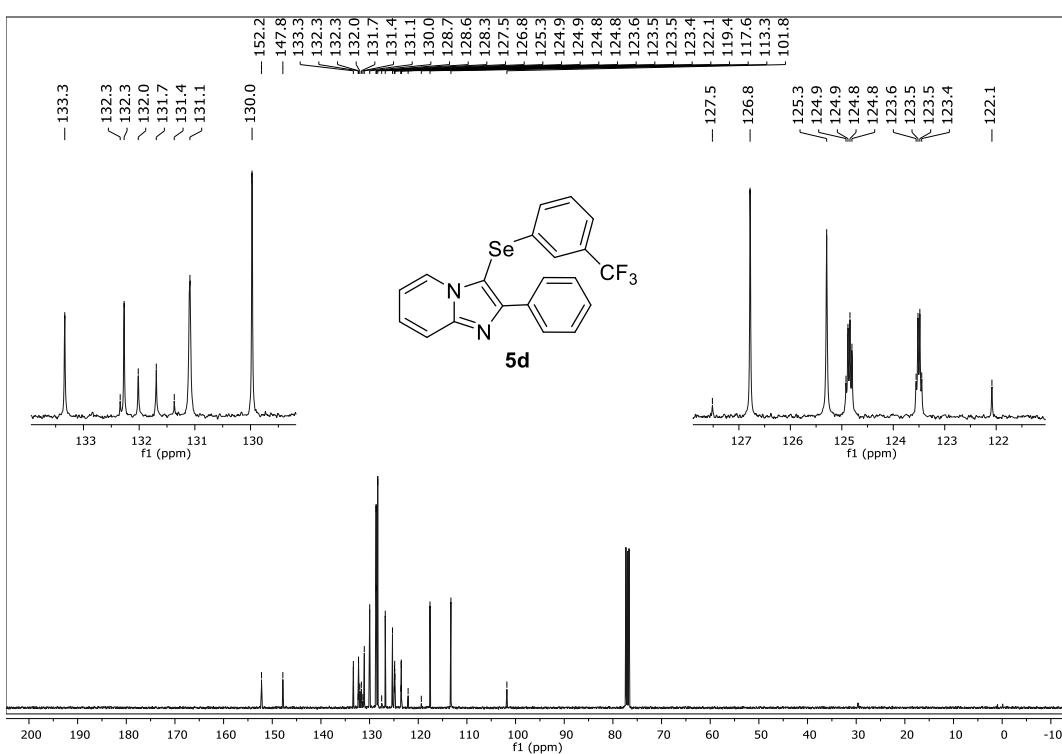
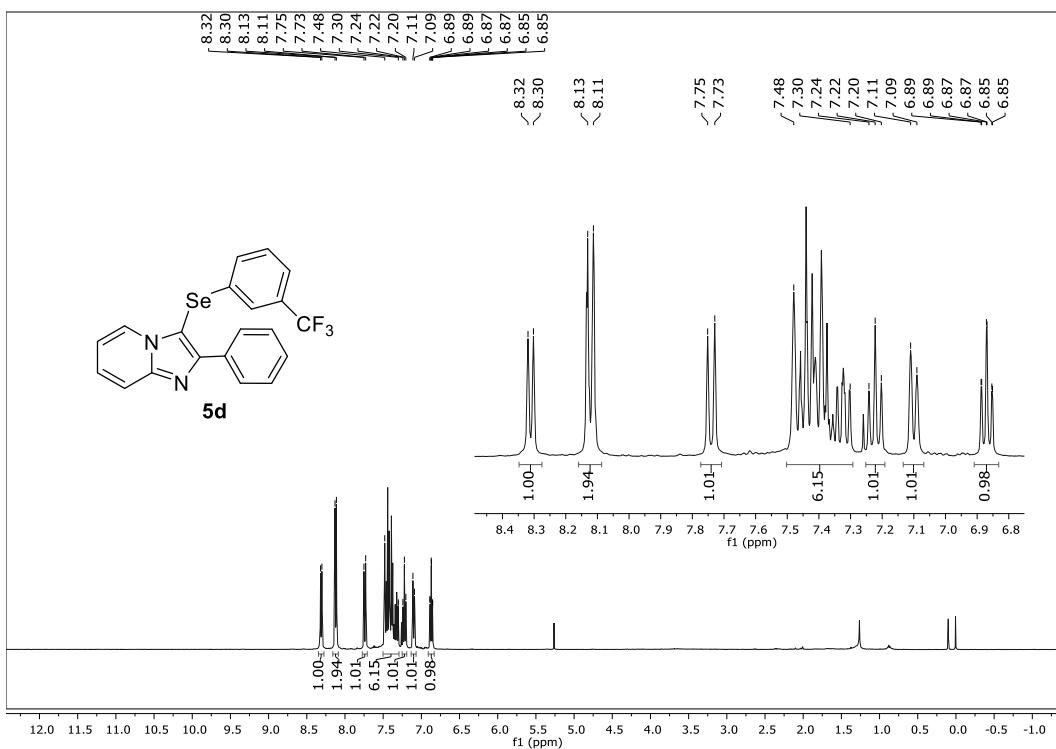
<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 3-[(4-chlorophenyl)selanyl]-2-phenylimidazo[1,2-*a*]pyridine (**5b**).



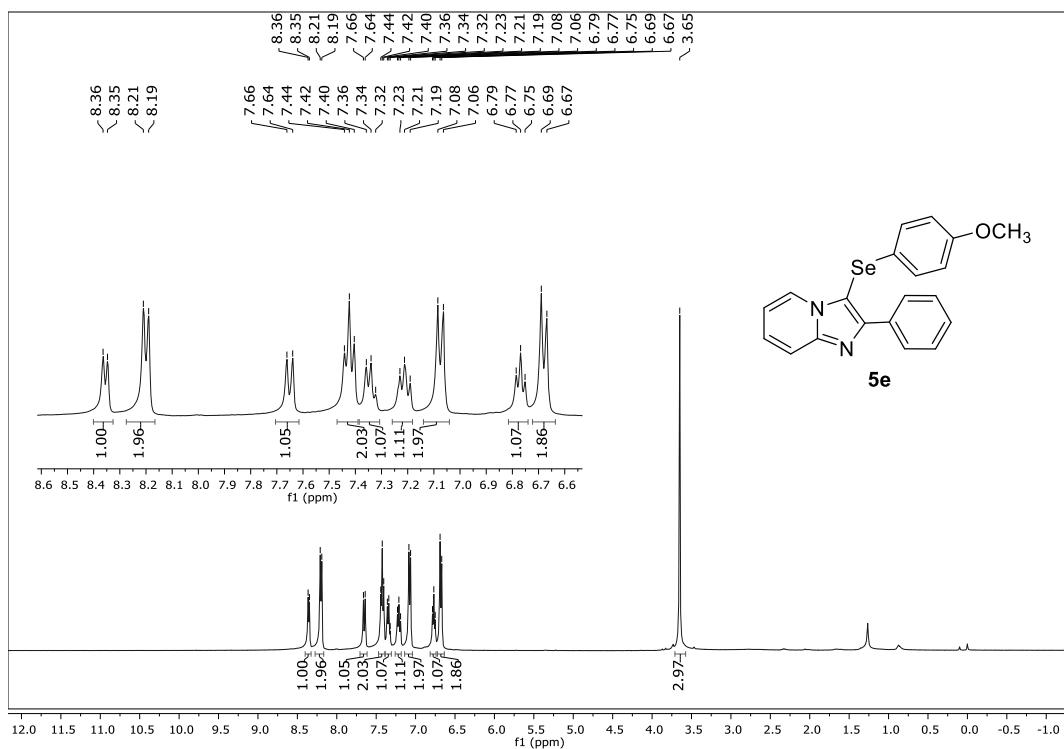
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 3-[(4-fluorophenyl)selanyl]-2-phenylimidazo[1,2-*a*]pyridine (**5c**).



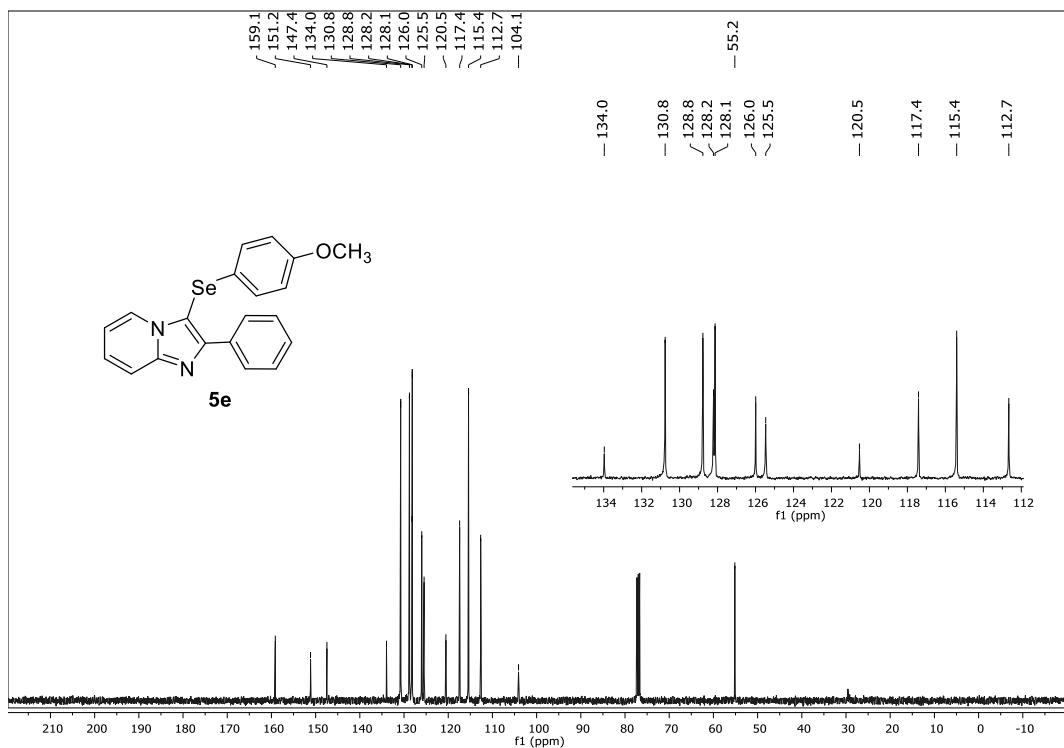
<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 3-[(4-fluorophenyl)selanyl]-2-phenylimidazo[1,2-*a*]pyridine (**5c**).



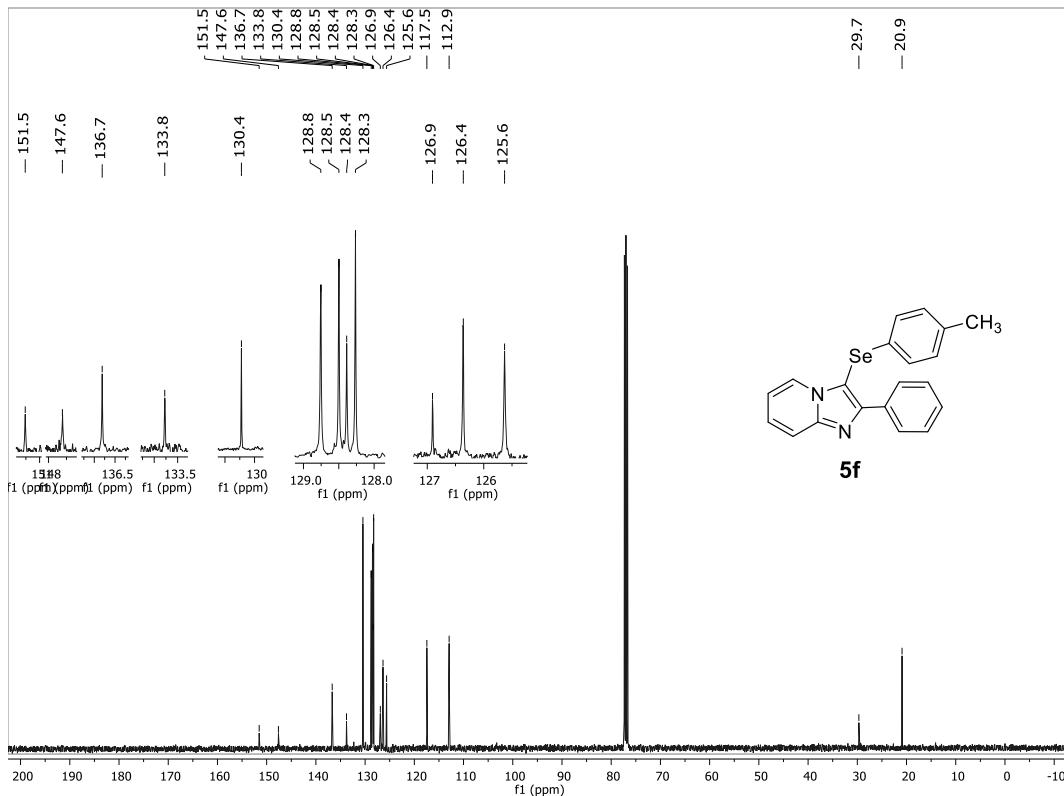
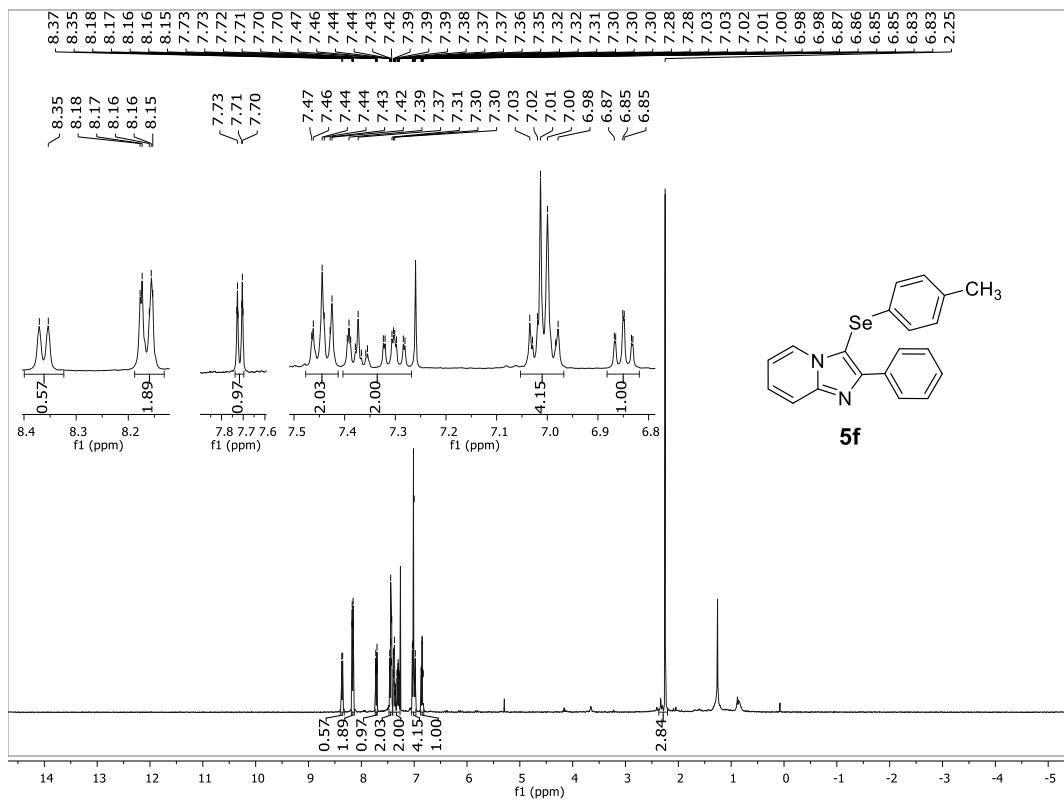
<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 2-phenyl-3-[{3-(trifluoromethyl)phenyl]selanyl}imidazo[1,2-*a*]pyridine (**5d**).



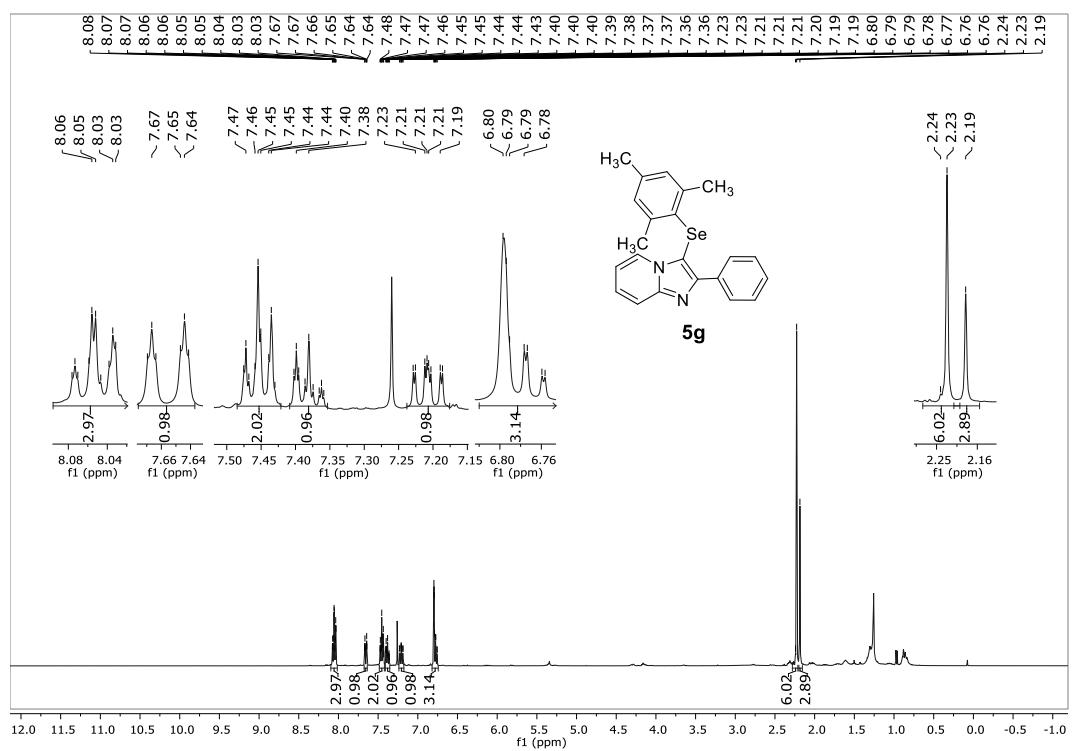
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 3-[(4-methoxyphenyl)selanyl]-2-phenylimidazo[1,2-*a*]pyridine (**5e**).



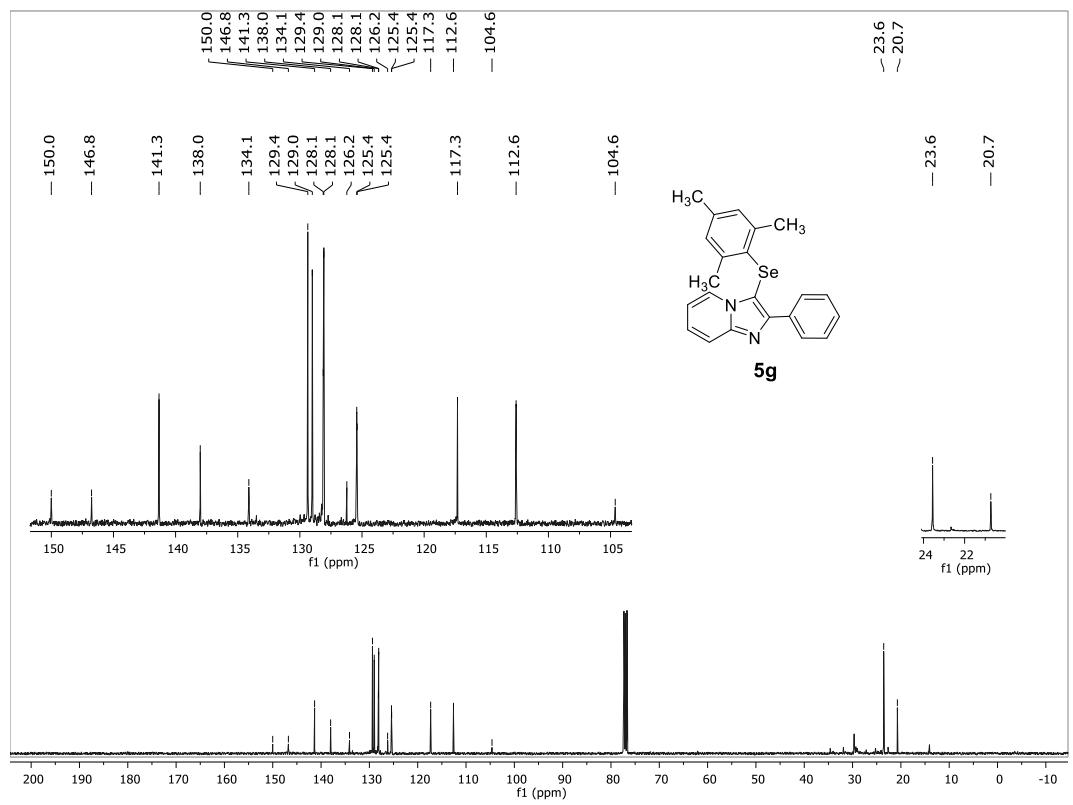
<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 3-[(4-methoxyphenyl)selanyl]-2-phenylimidazo[1,2-*a*]pyridine (**5e**).



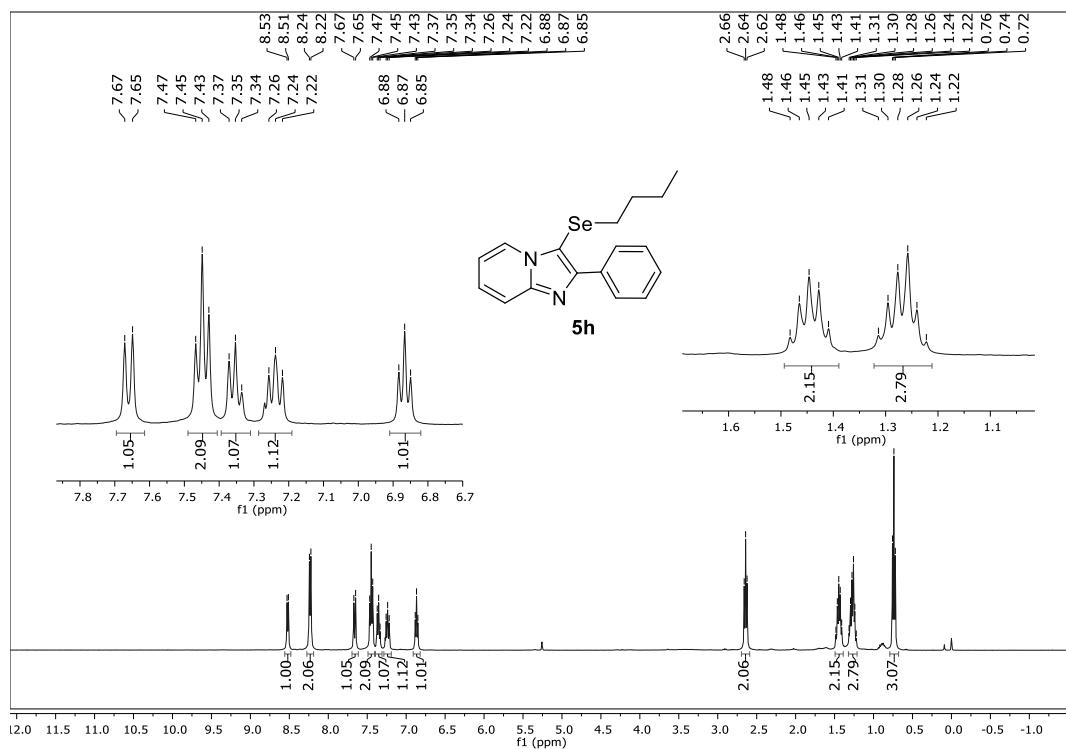
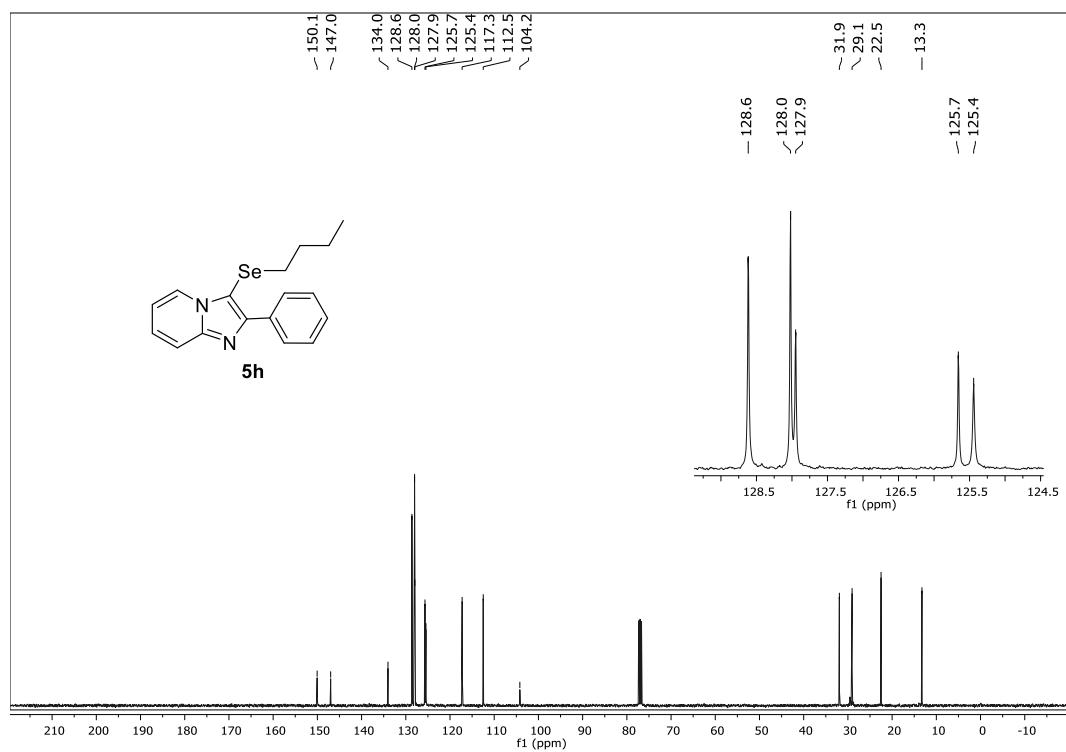
<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 2-phenyl-3-(p-tolylselanyl)imidazo[1,2-a]pyridine (**5f**).

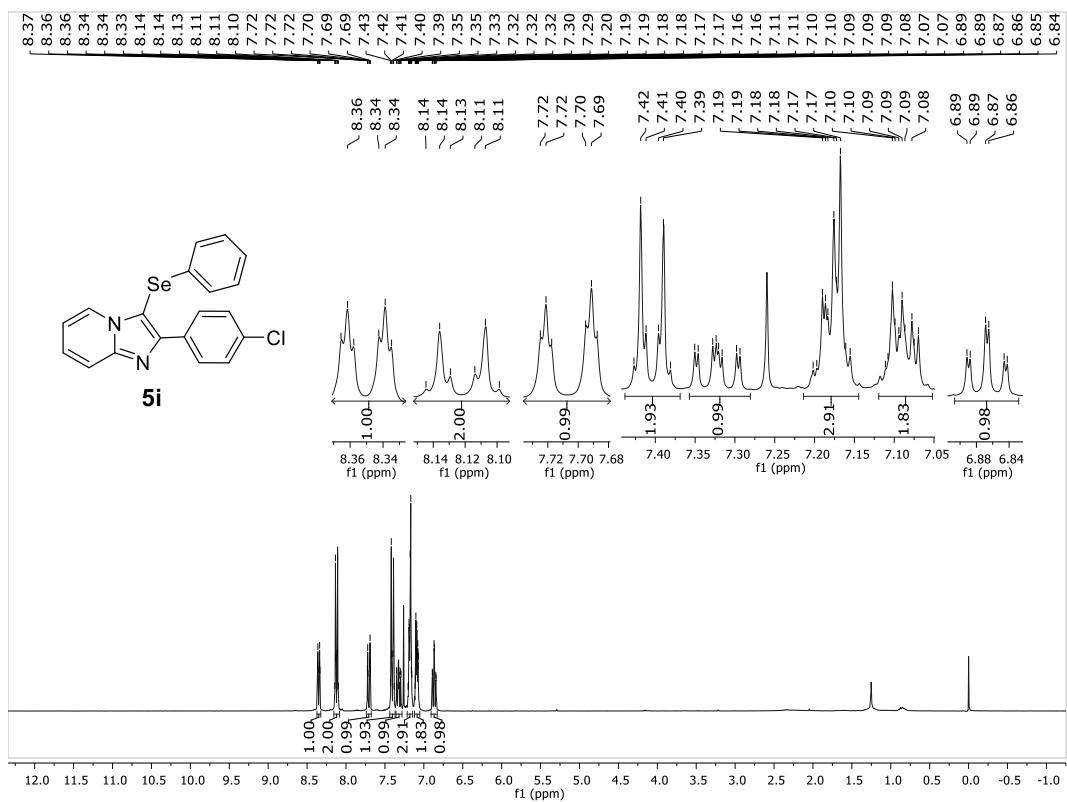


$^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of 3-(mesitylselanyl)-2-phenylimidazo[1,2-*a*]pyridine (**5g**).

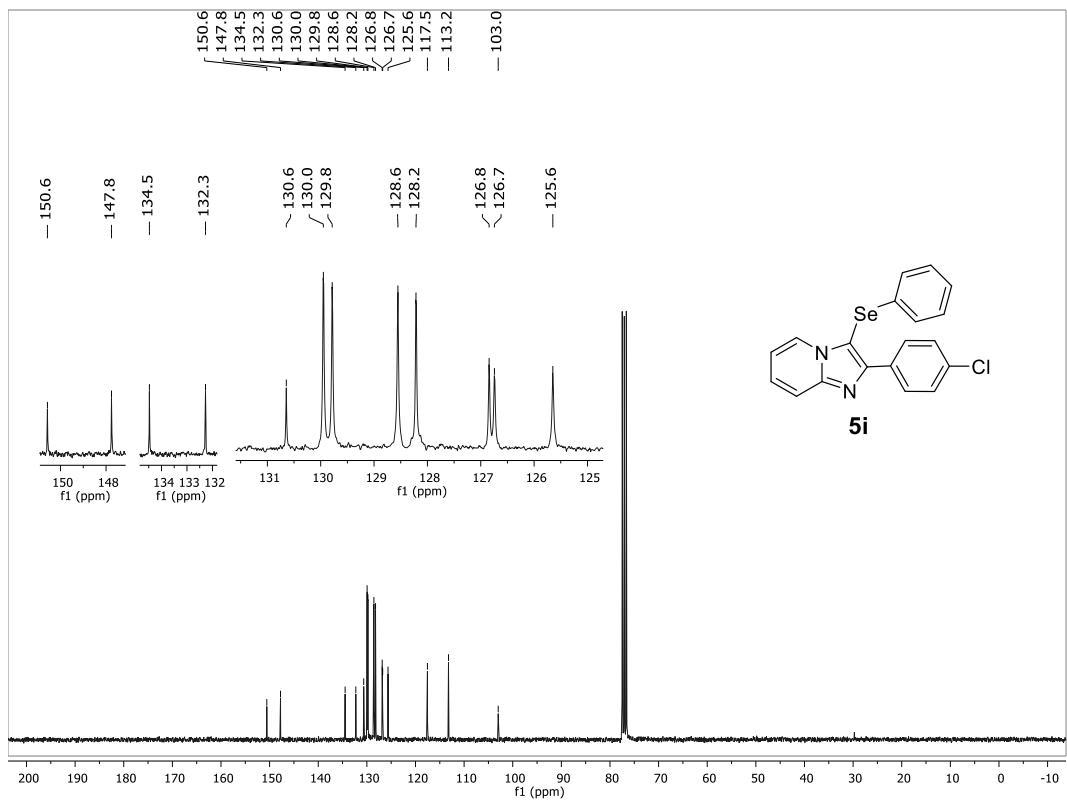


$^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of 3-(mesitylselanyl)-2-phenylimidazo[1,2-*a*]pyridine (**5g**).

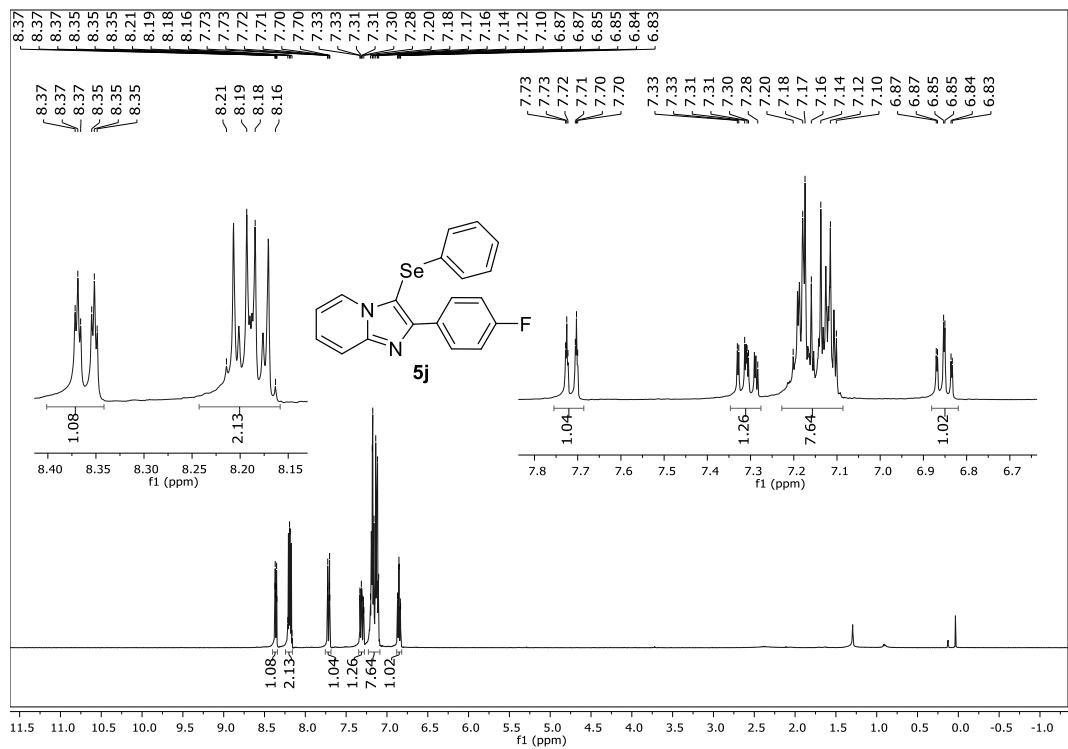
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 3-(butylselanyl)-2-phenylimidazo[1,2-*a*]pyridine (**5h**).<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 3-(butylselanyl)-2-phenylimidazo[1,2-*a*]pyridine (**5h**).



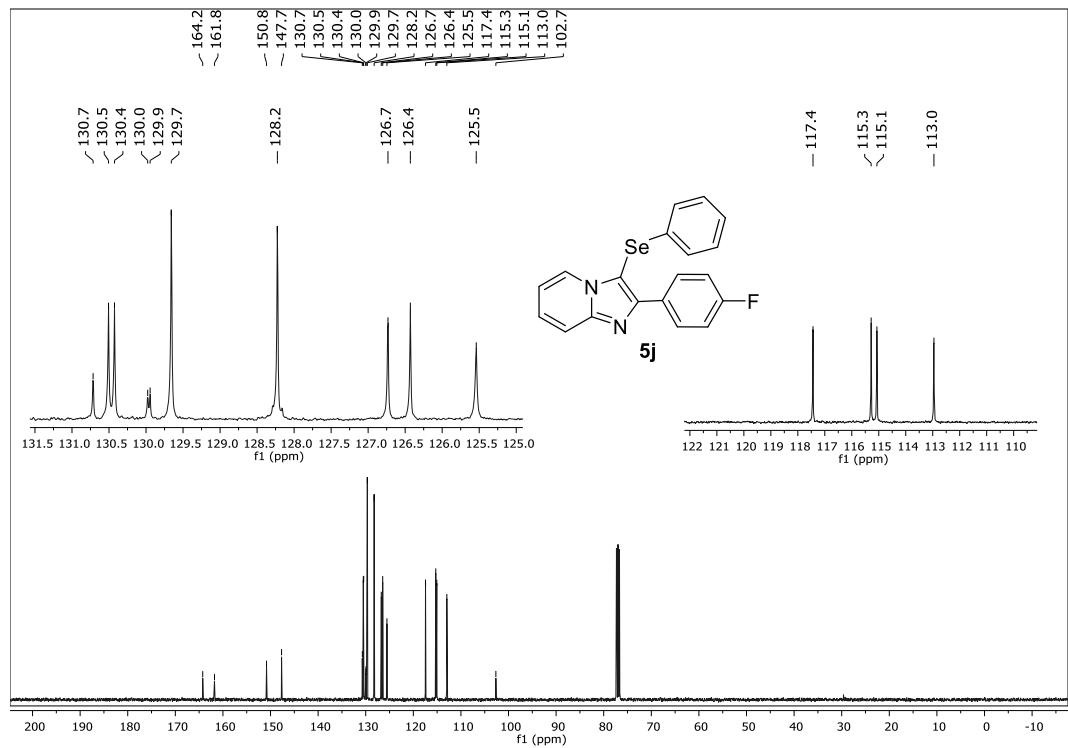
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 2-(4-chlorophenyl)-3-(phenylselanyl)imidazo[1,2-*a*]pyridine (**5i**).



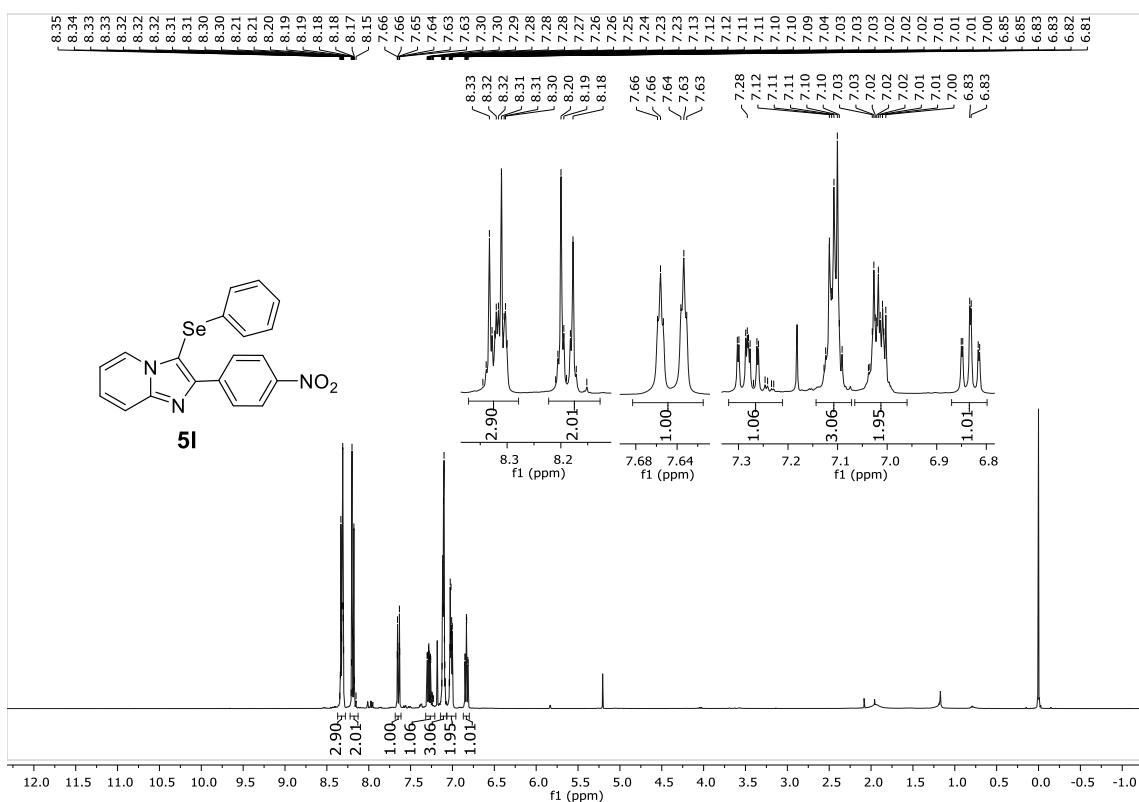
<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 2-(4-chlorophenyl)-3-(phenylselanyl)imidazo[1,2-*a*]pyridine (**5i**).



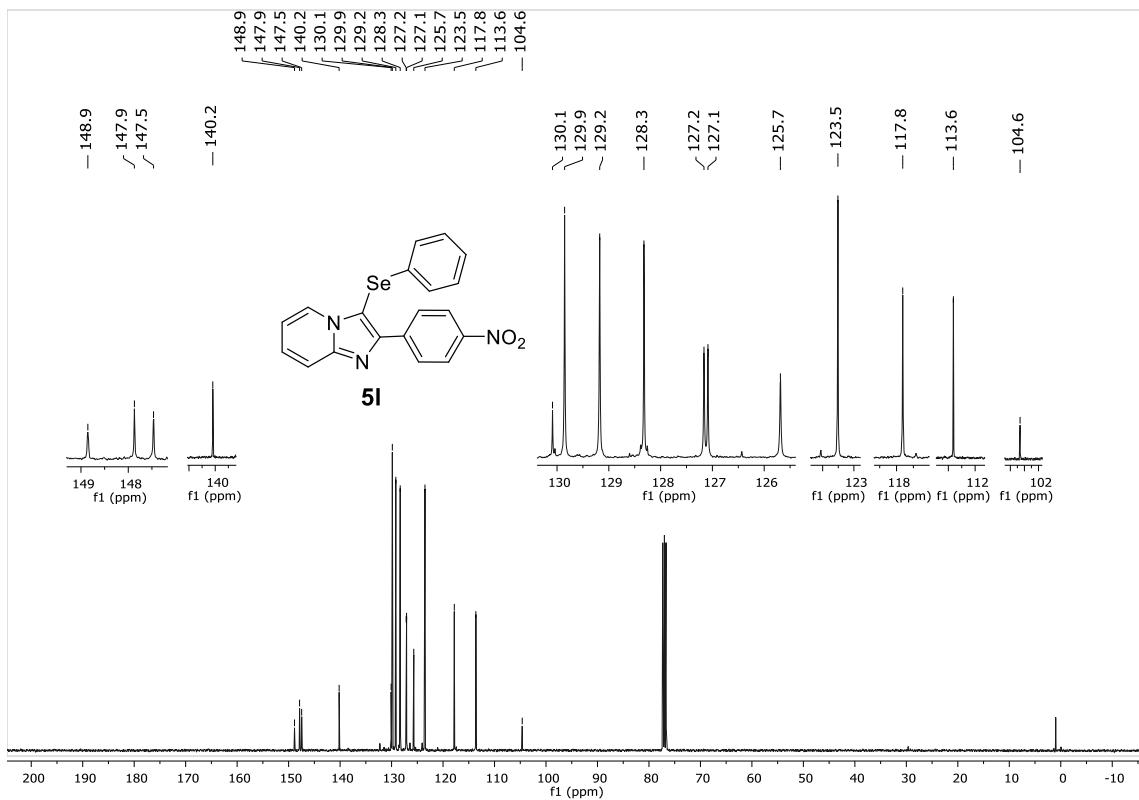
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 2-(4-fluorophenyl)-3-(phenylselanyl)imidazo[1,2-*a*]pyridine (**5j**).



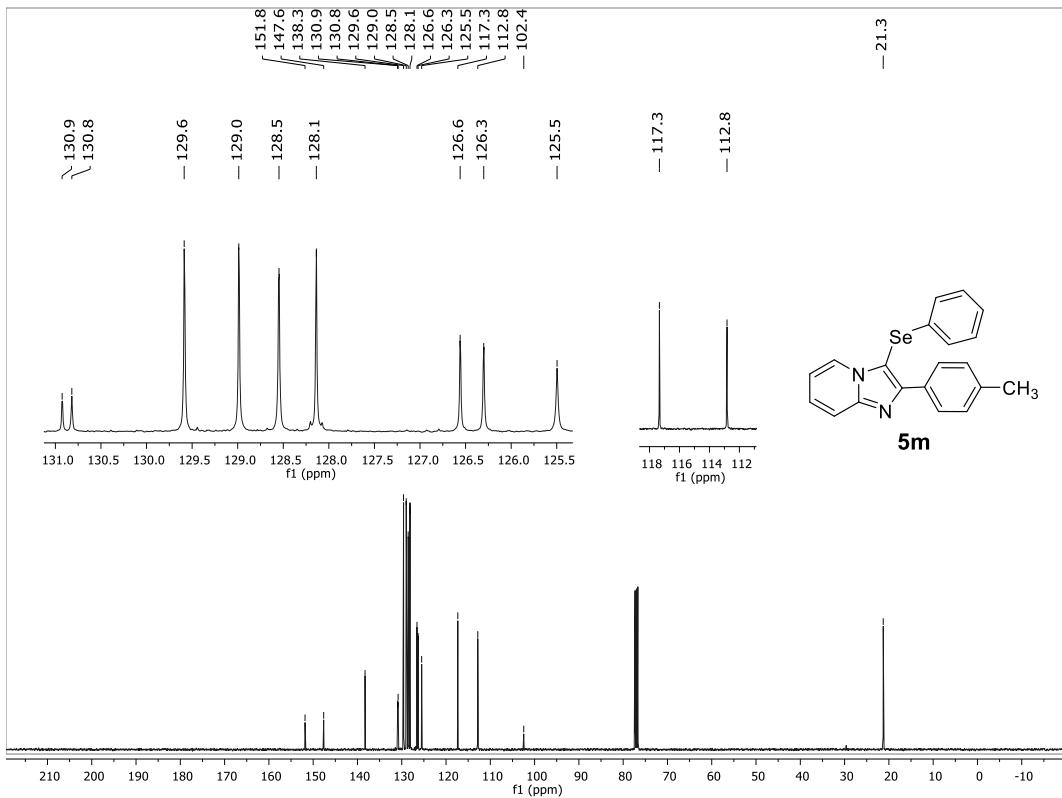
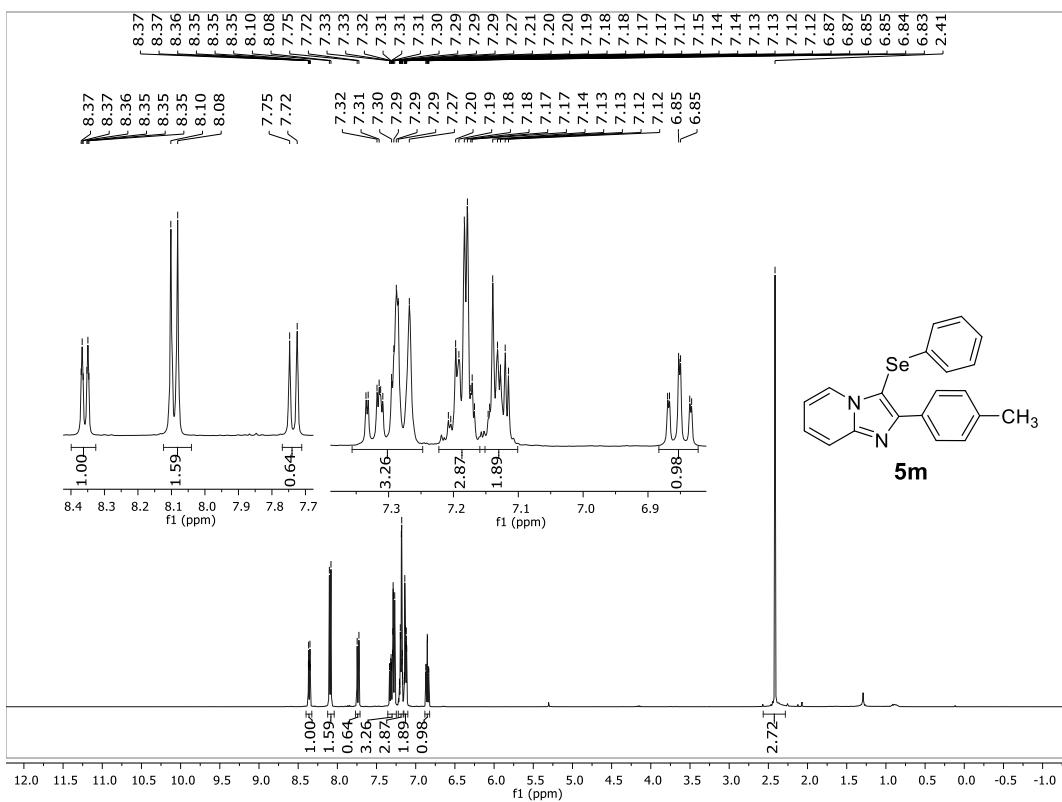
<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 2-(4-fluorophenyl)-3-(phenylselanyl)imidazo[1,2-*a*]pyridine (**5j**).



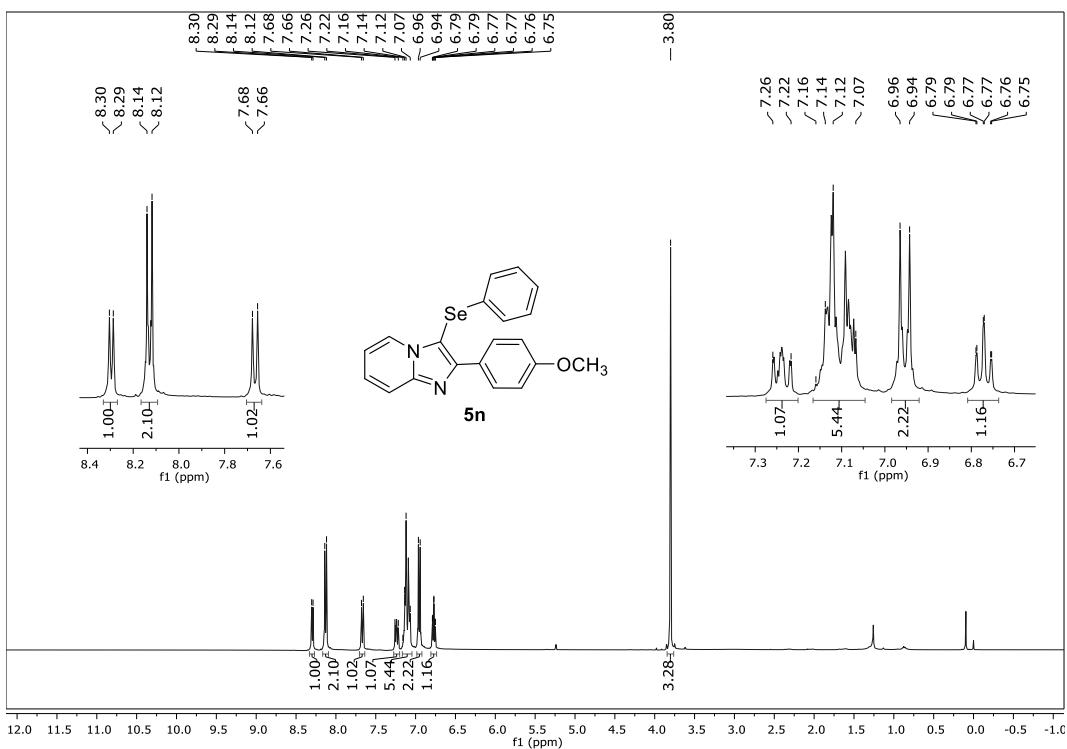
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 2-(4-nitrophenyl)-3-(phenylselanyl)imidazo[1,2-*a*]pyridine (**5l**).



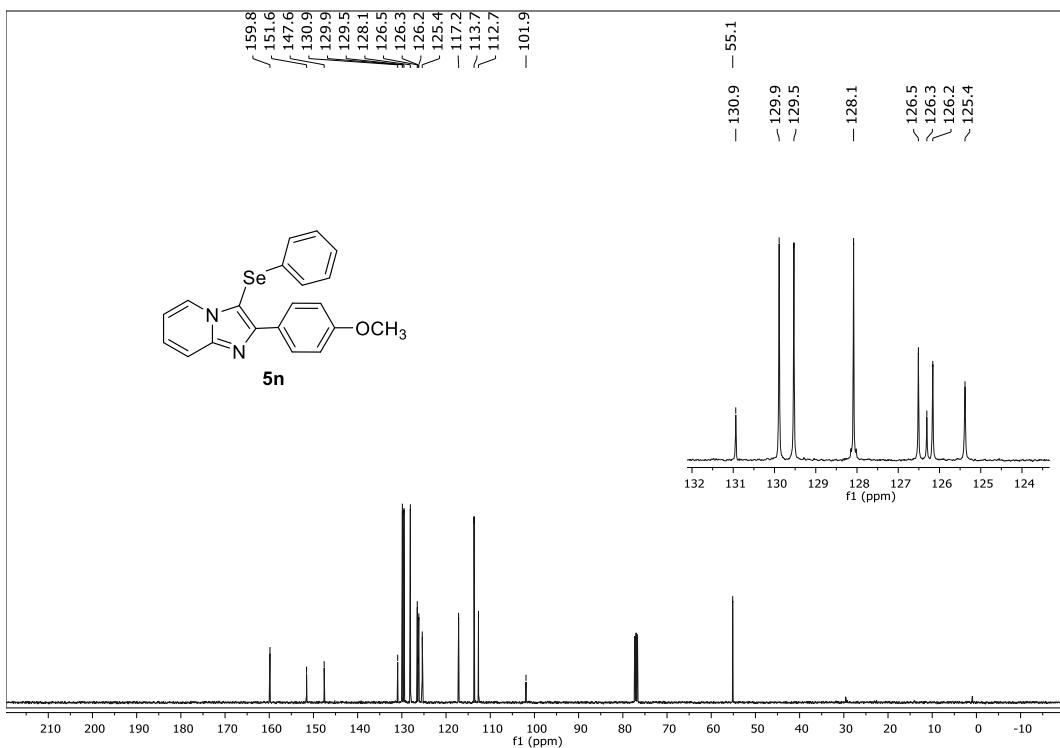
<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 2-(4-nitrophenyl)-3-(phenylselanyl)imidazo[1,2-*a*]pyridine (**5l**).



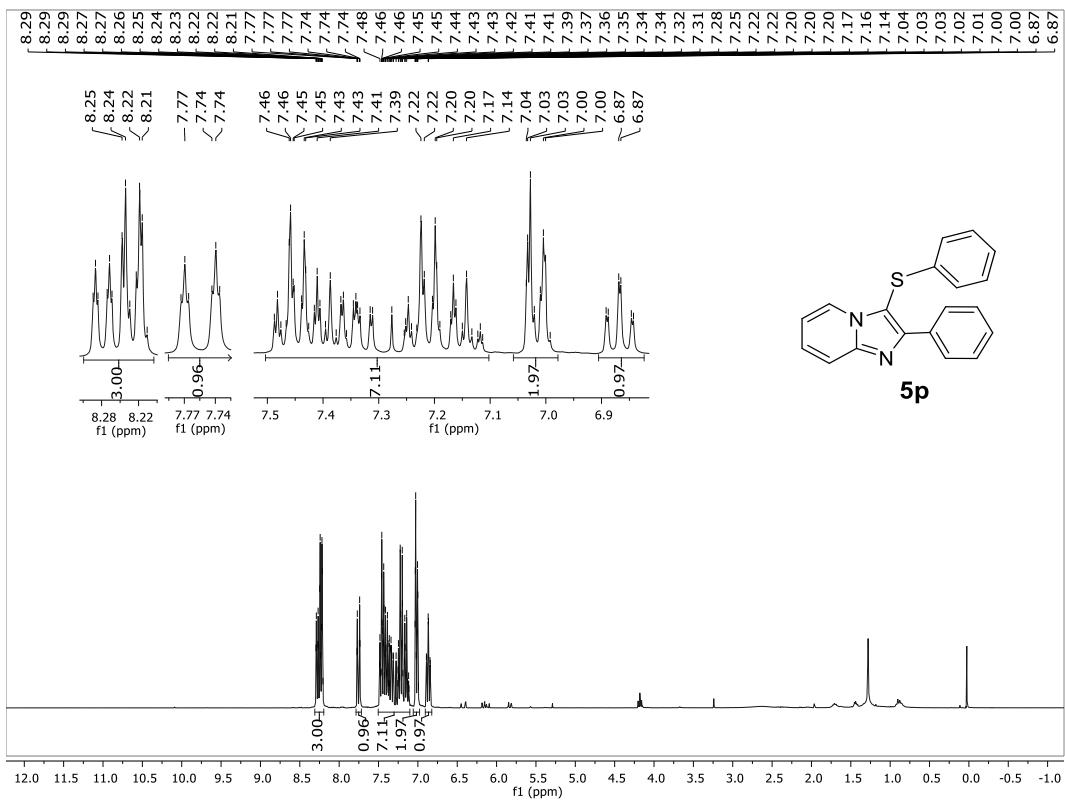
<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 3-(phenylselanyl)-2-(p-tolyl)imidazo[1,2-a]pyridine (**5m**).



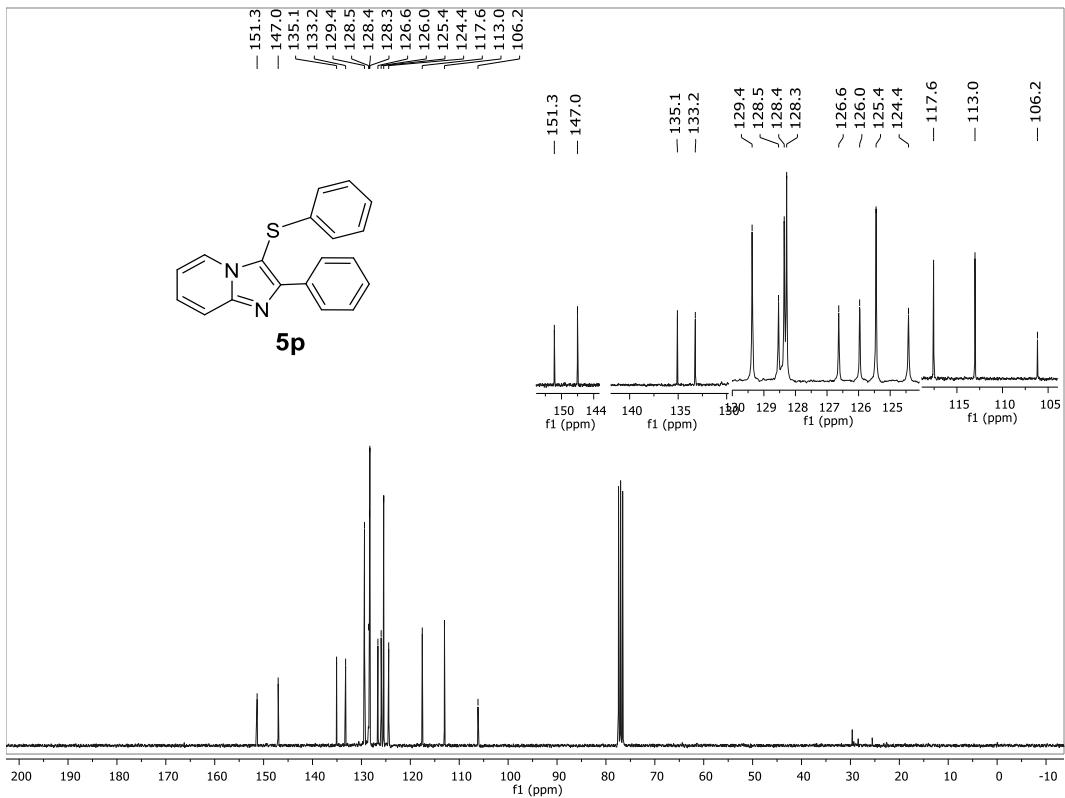
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 2-(4-methoxyphenyl)-3-(phenylselanyl)imidazo[1,2-*a*]pyridine (**5n**).



<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 2-(4-methoxyphenyl)-3-(phenylselanyl)imidazo[1,2-*a*]pyridine (**5n**).



<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 2-phenyl-3-(phenylthio)imidazo[1,2-*a*]pyridine (**5p**).



<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 2-phenyl-3-(phenylthio)imidazo[1,2-*a*]pyridine (**5p**).