

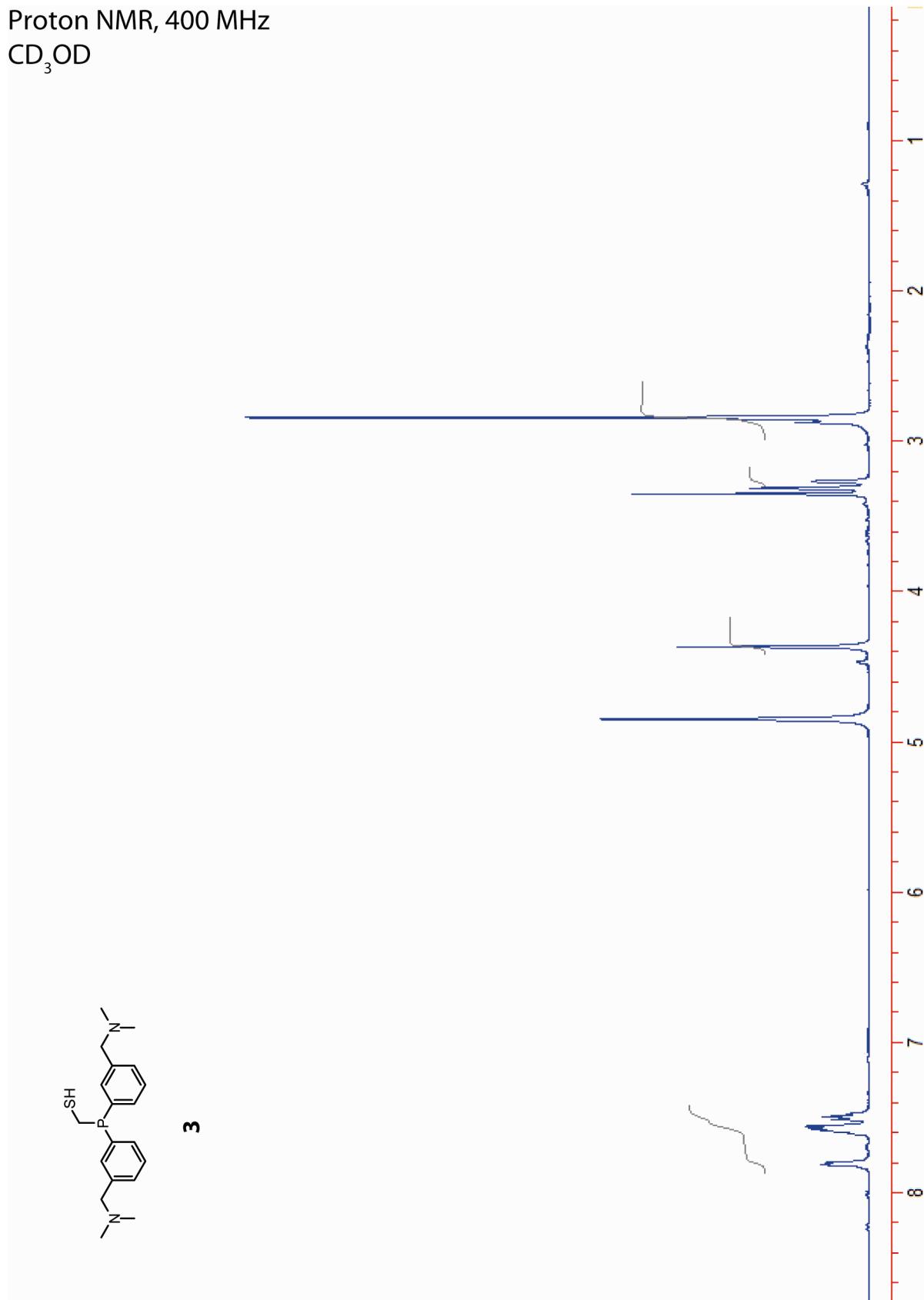
## Coulombic Effects on the Traceless Staudinger Ligation in Water

Annie Tam and Ronald T. Raines\*

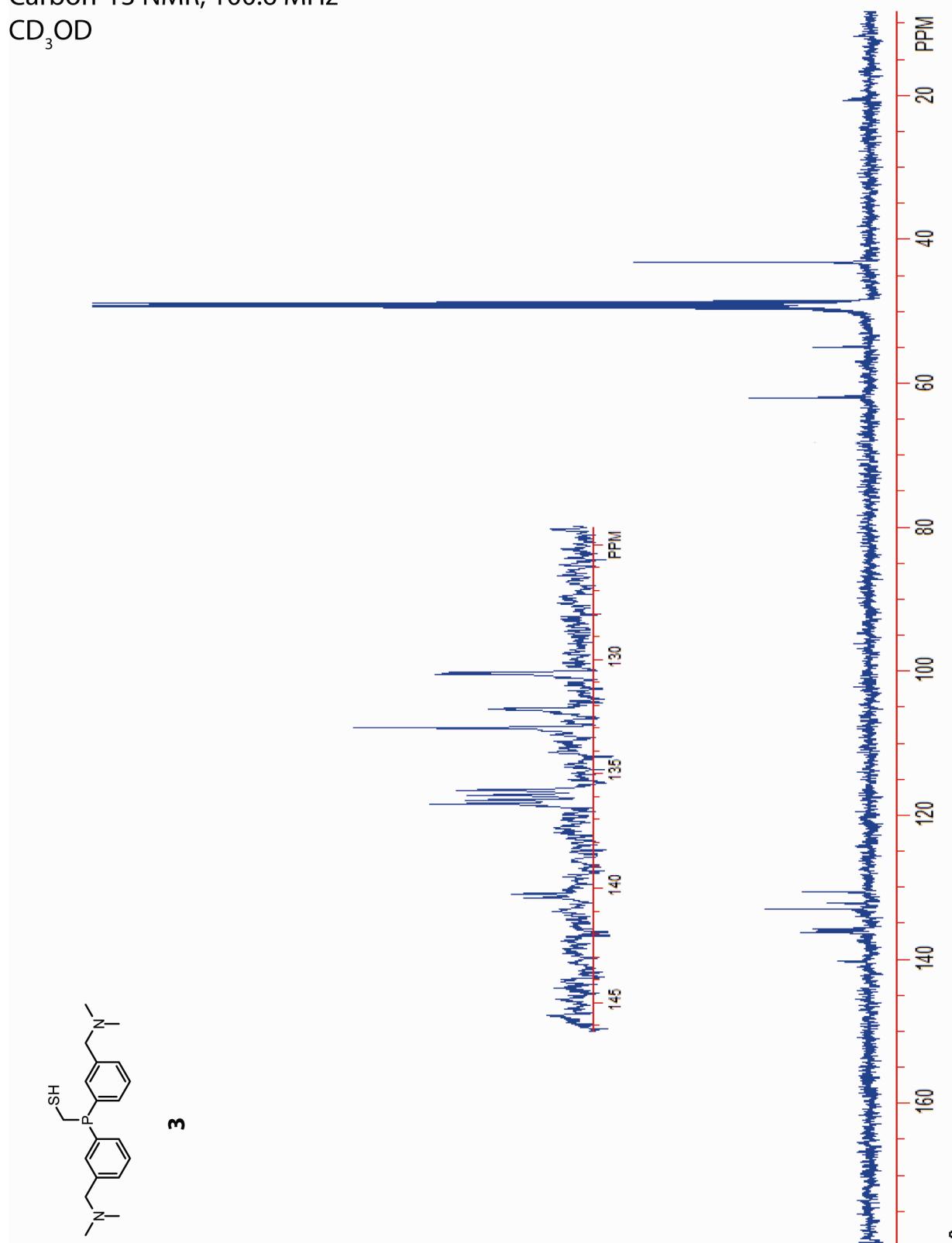
*Departments of Chemistry and Biochemistry, University of Wisconsin, Madison, Wisconsin 53706*

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S28	$^{13}\text{C}$ NMR Spectrum of Compound <b>15</b>	S56	$^{31}\text{P}$ NMR Spectrum of Compound <b>26</b>

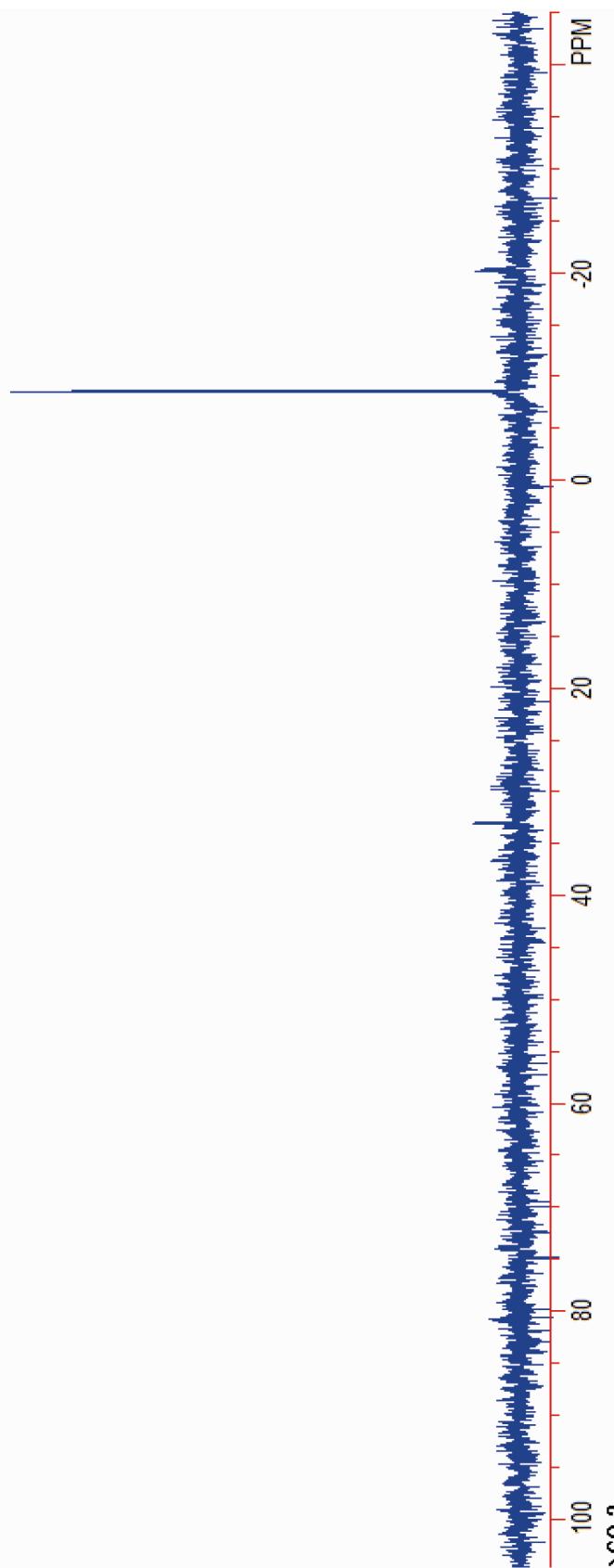
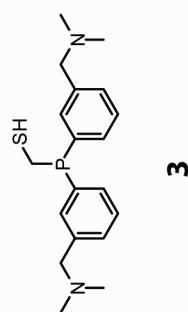
Proton NMR, 400 MHz

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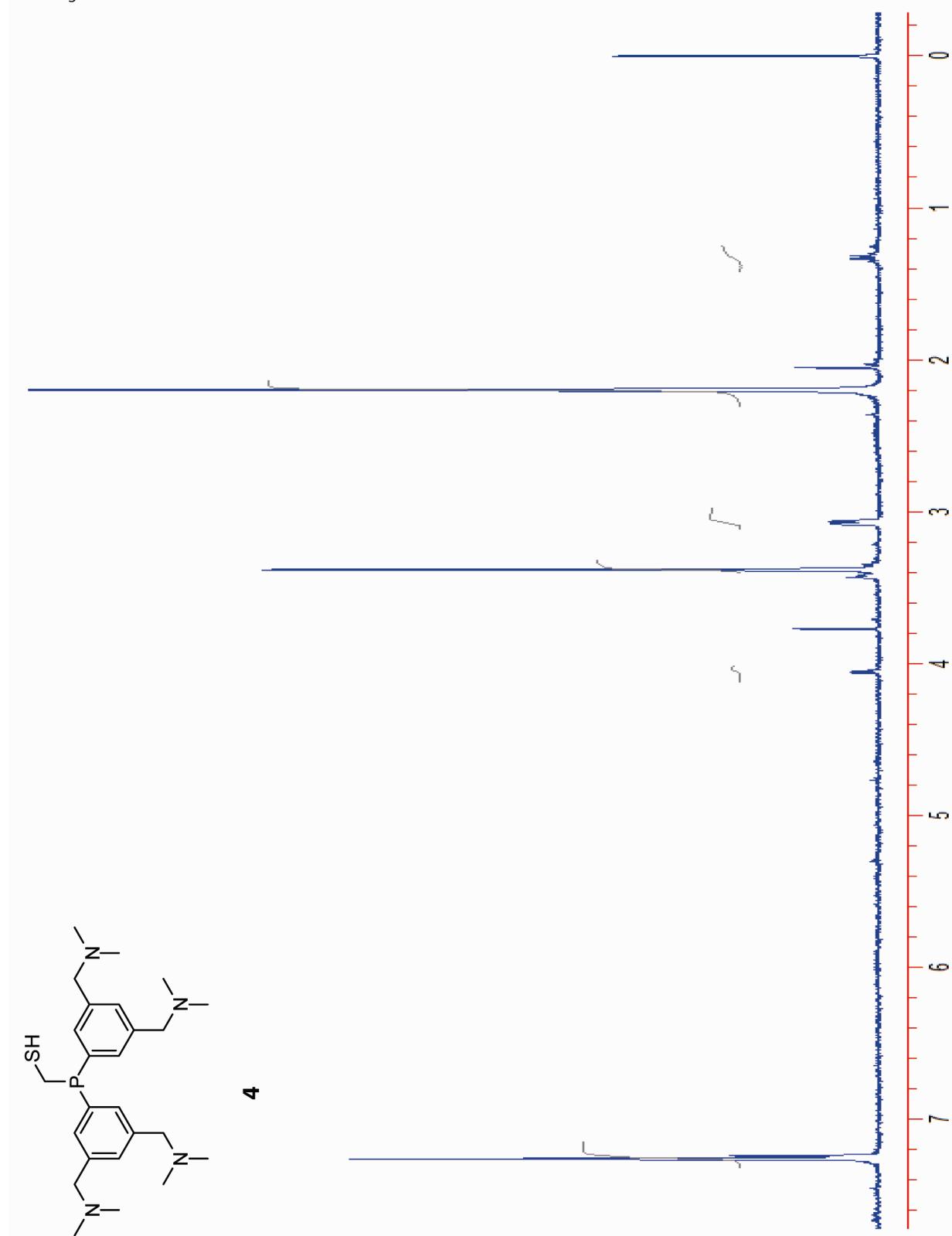
Carbon-13 NMR, 100.6 MHz

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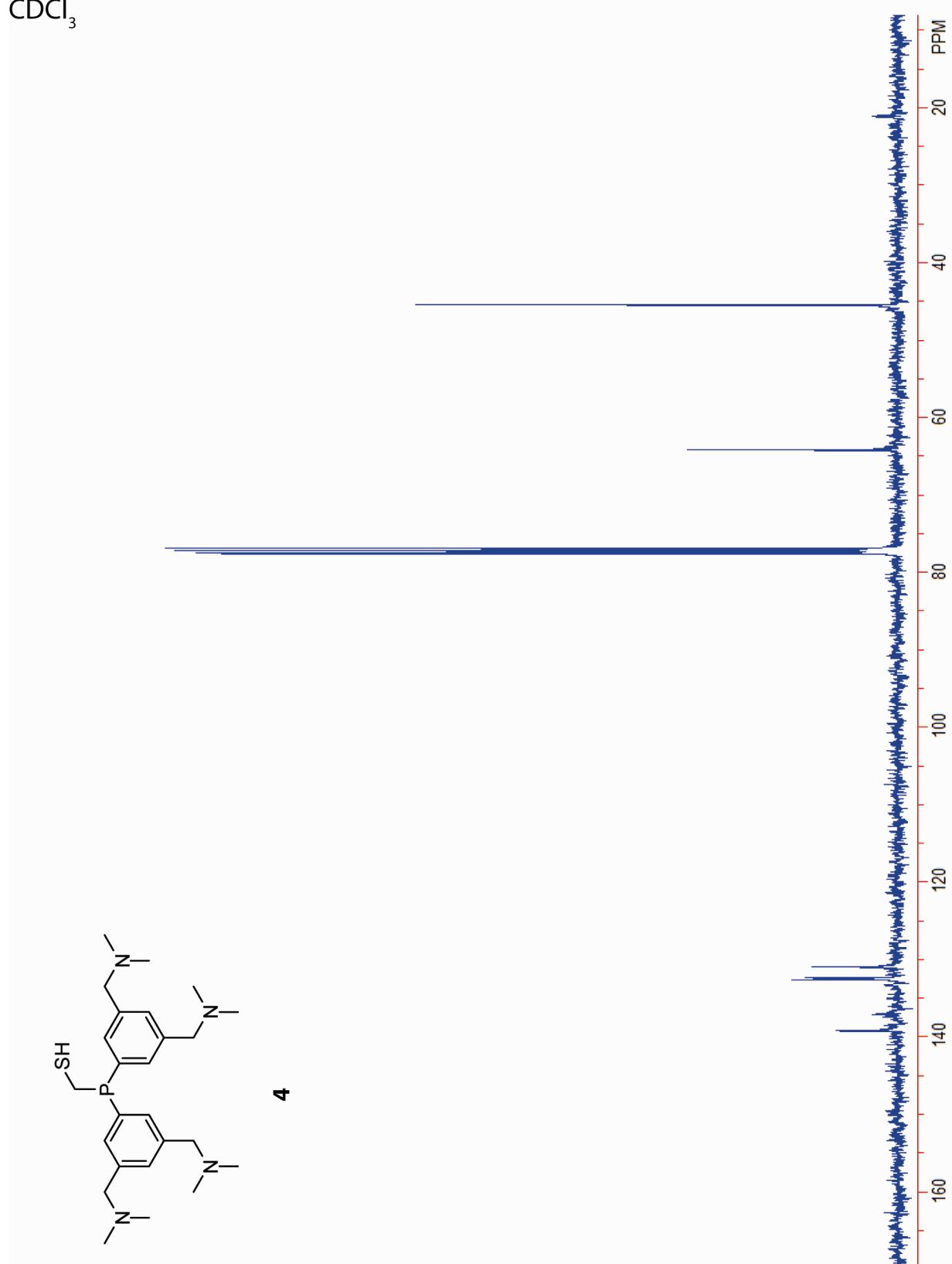
Phosphorus-31 NMR, 121 MHz  
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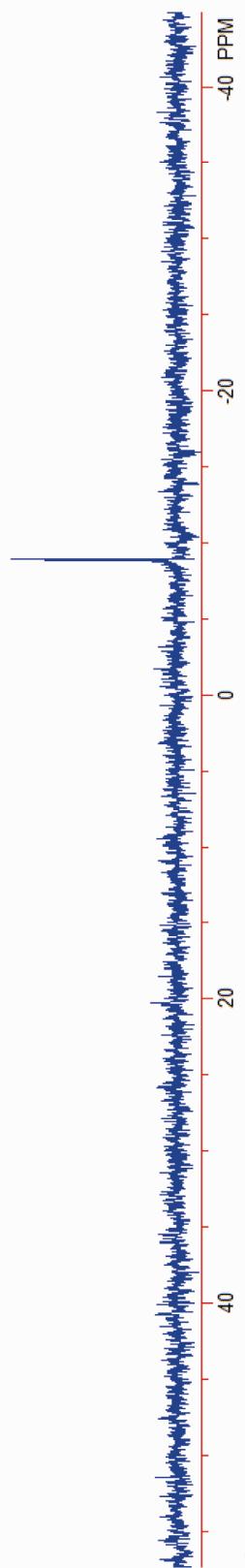
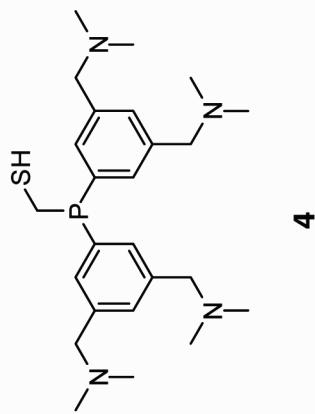
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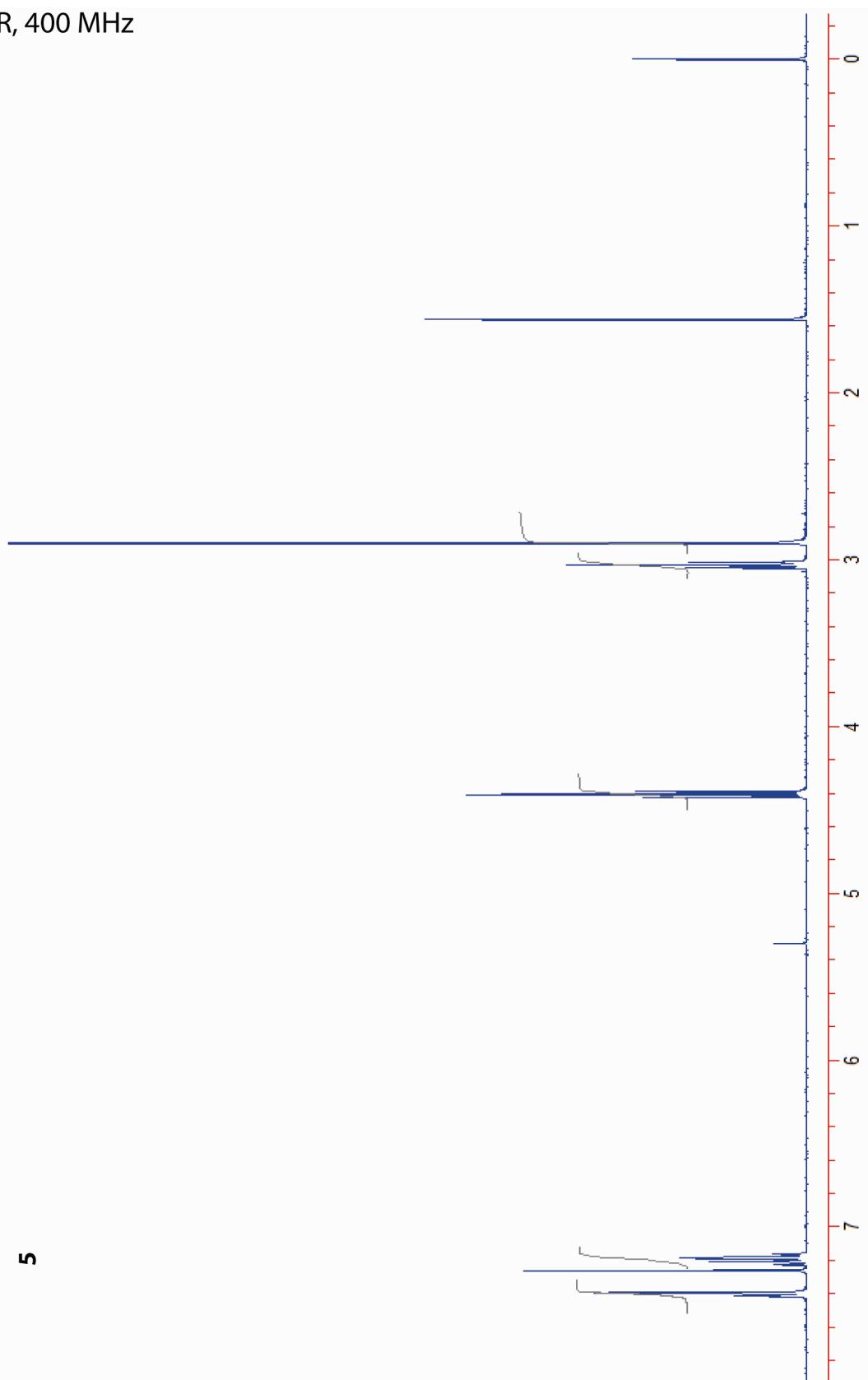
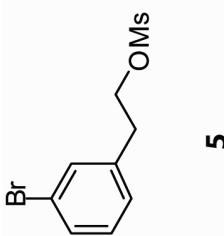
Carbon-13 NMR, 100.6 MHz

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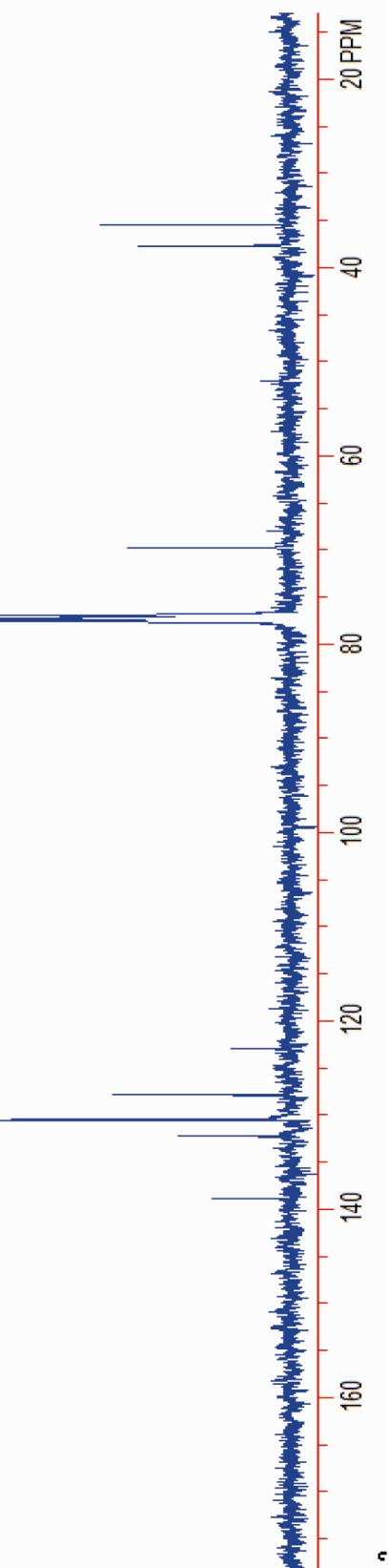
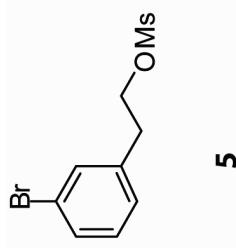
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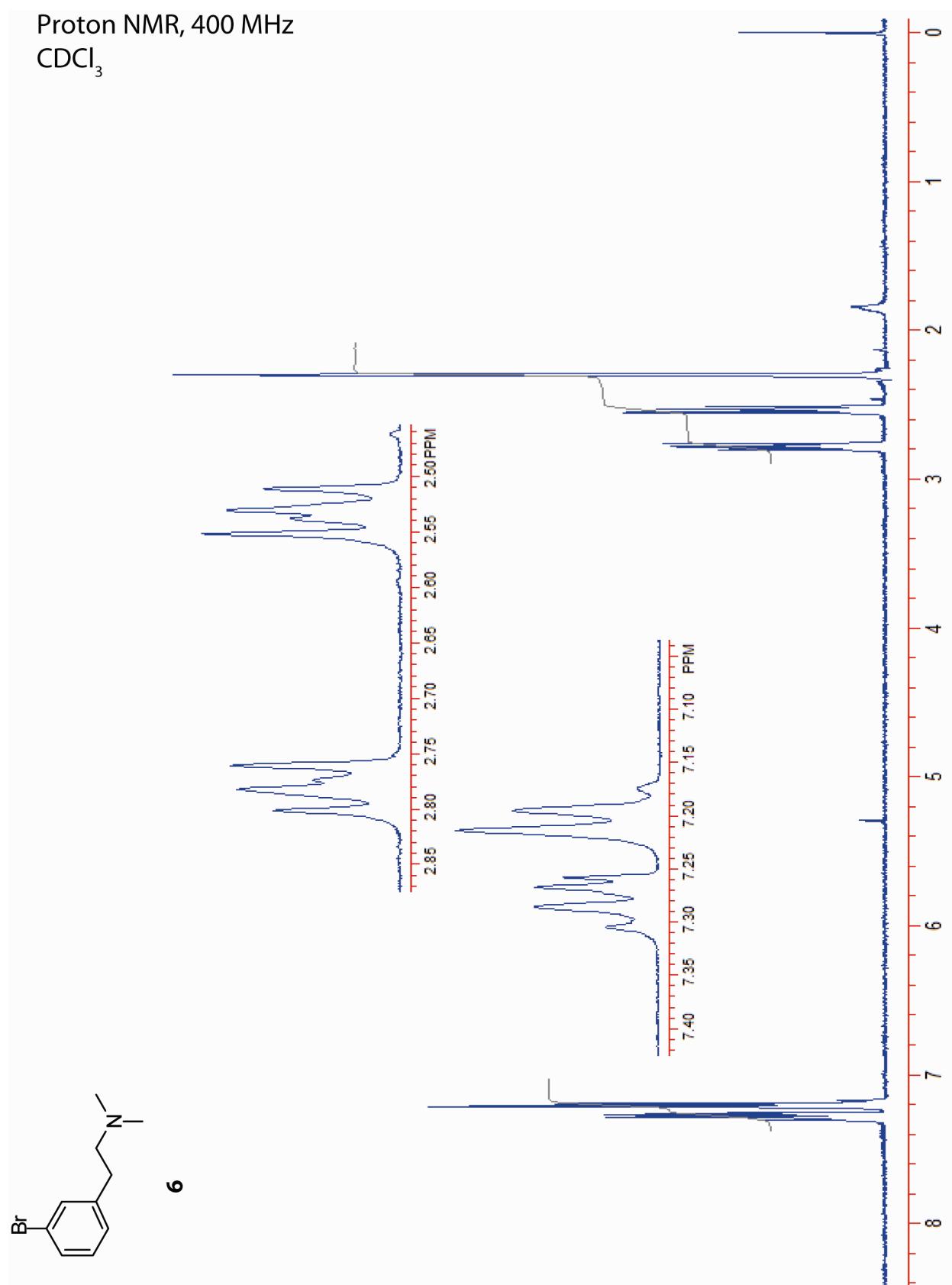


Proton NMR, 400 MHz  
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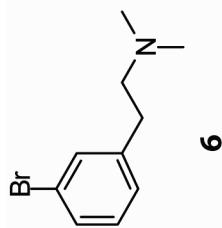
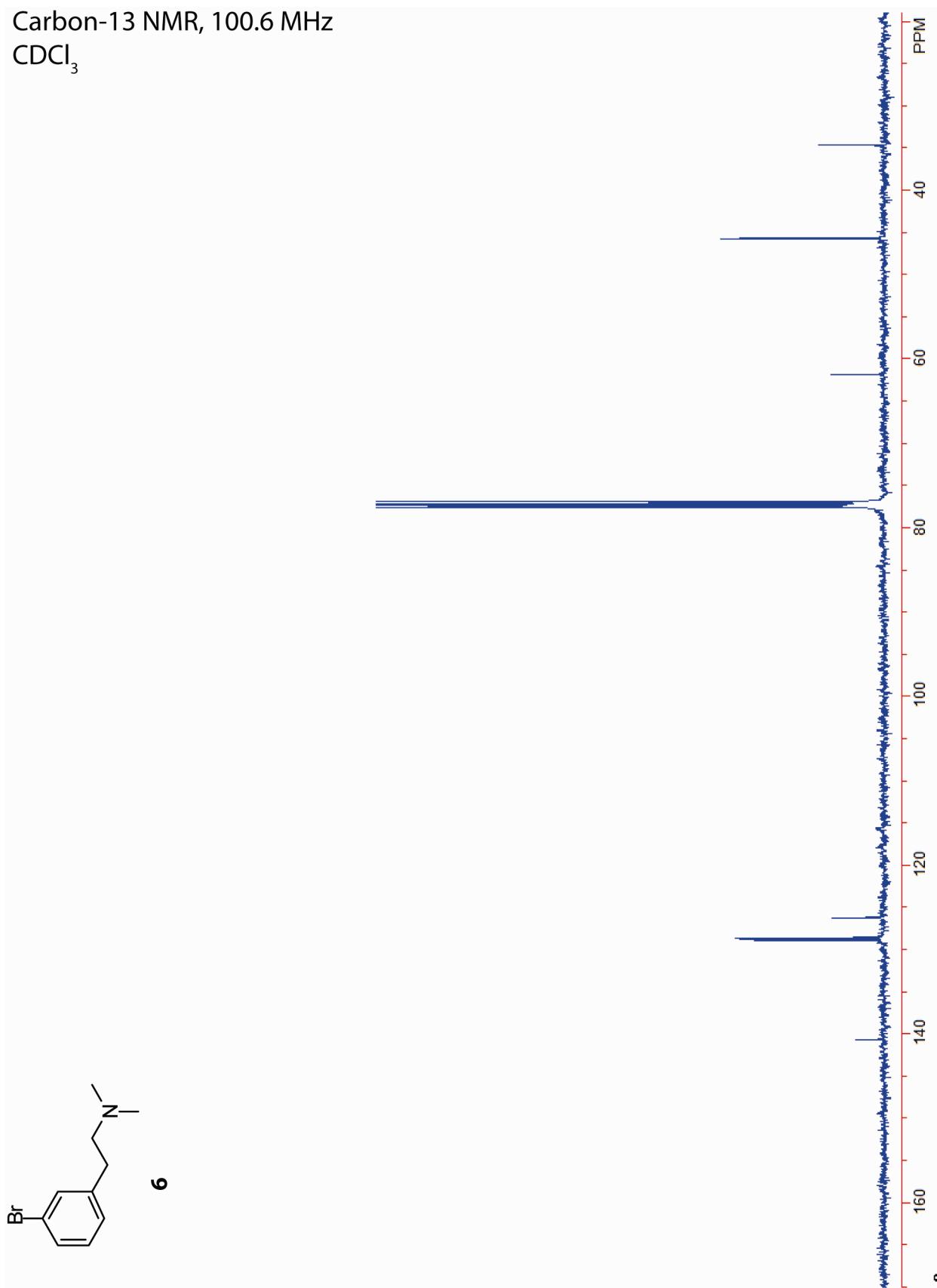


Carbon-13 NMR, 100.6 MHz

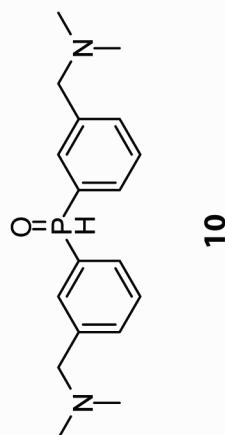
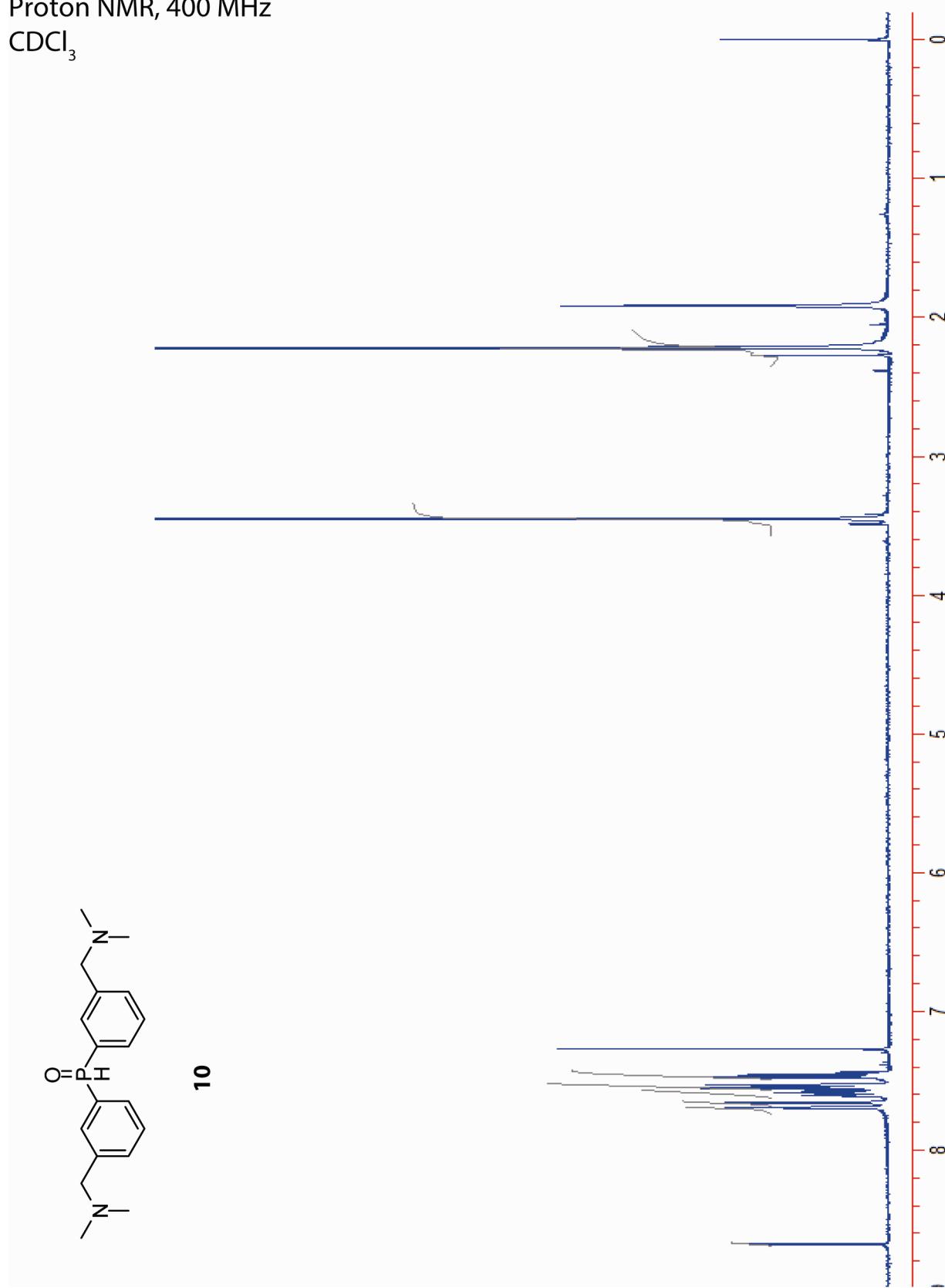
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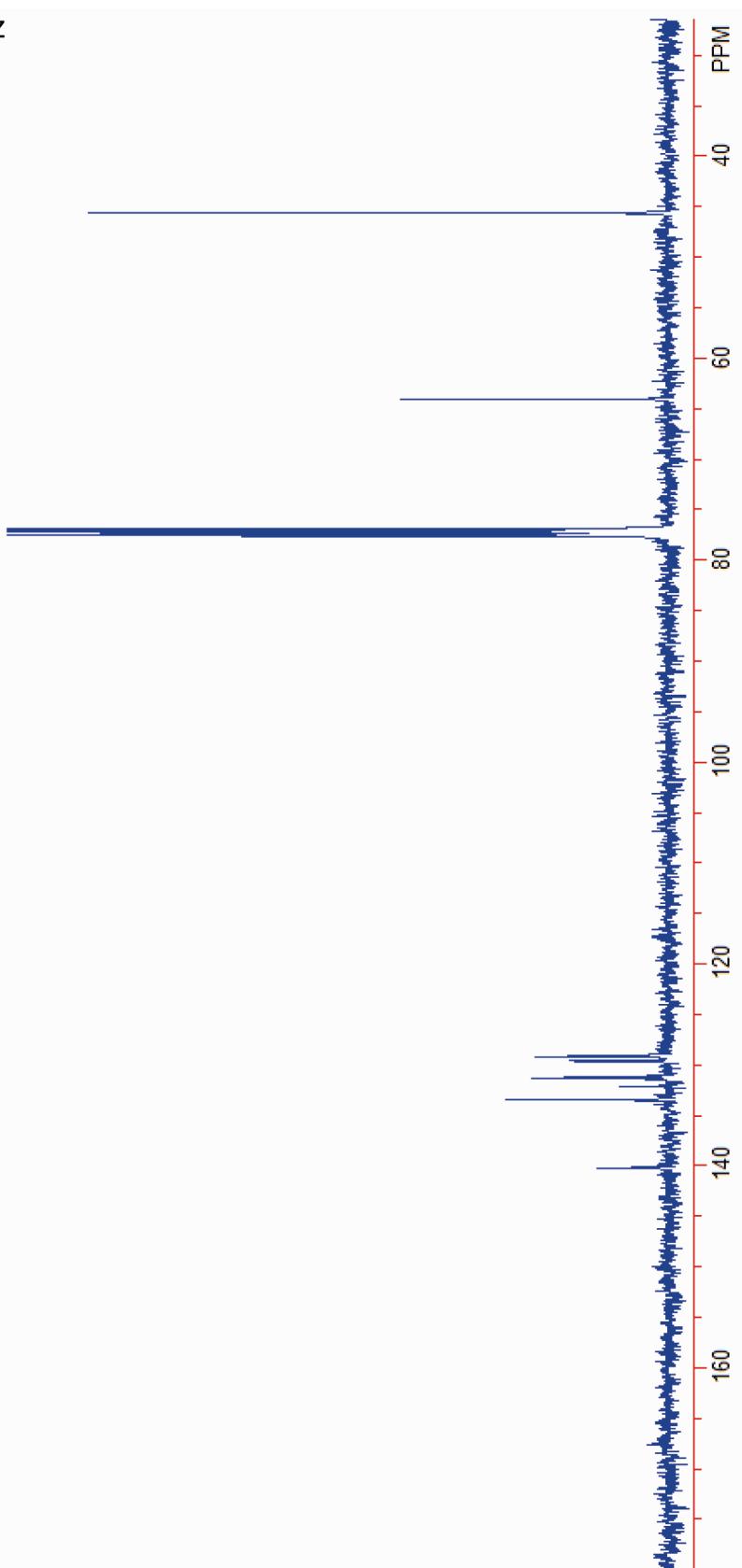
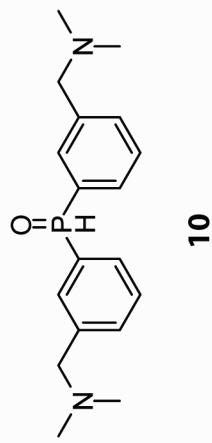
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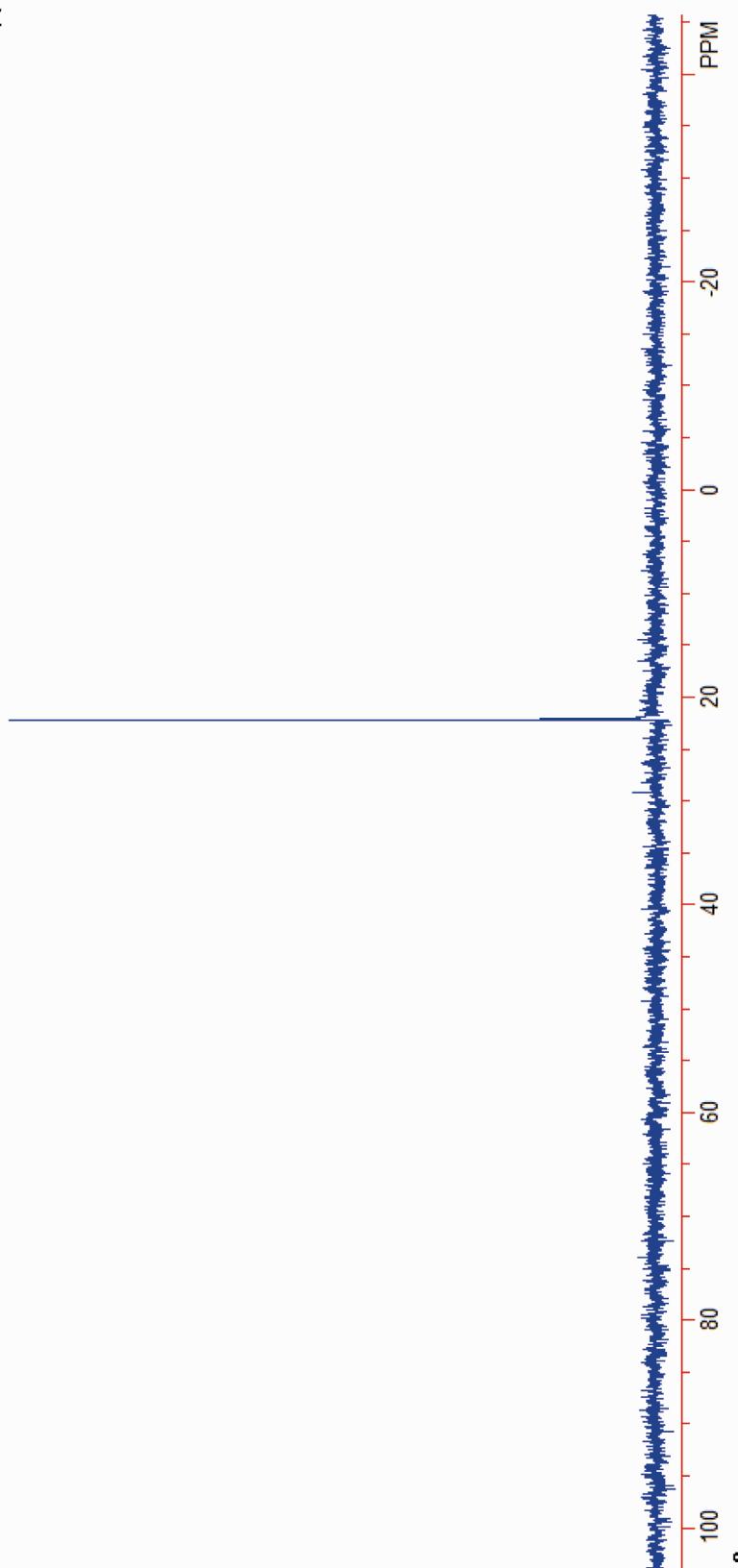
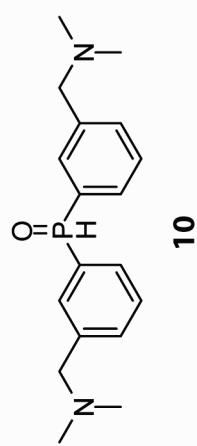
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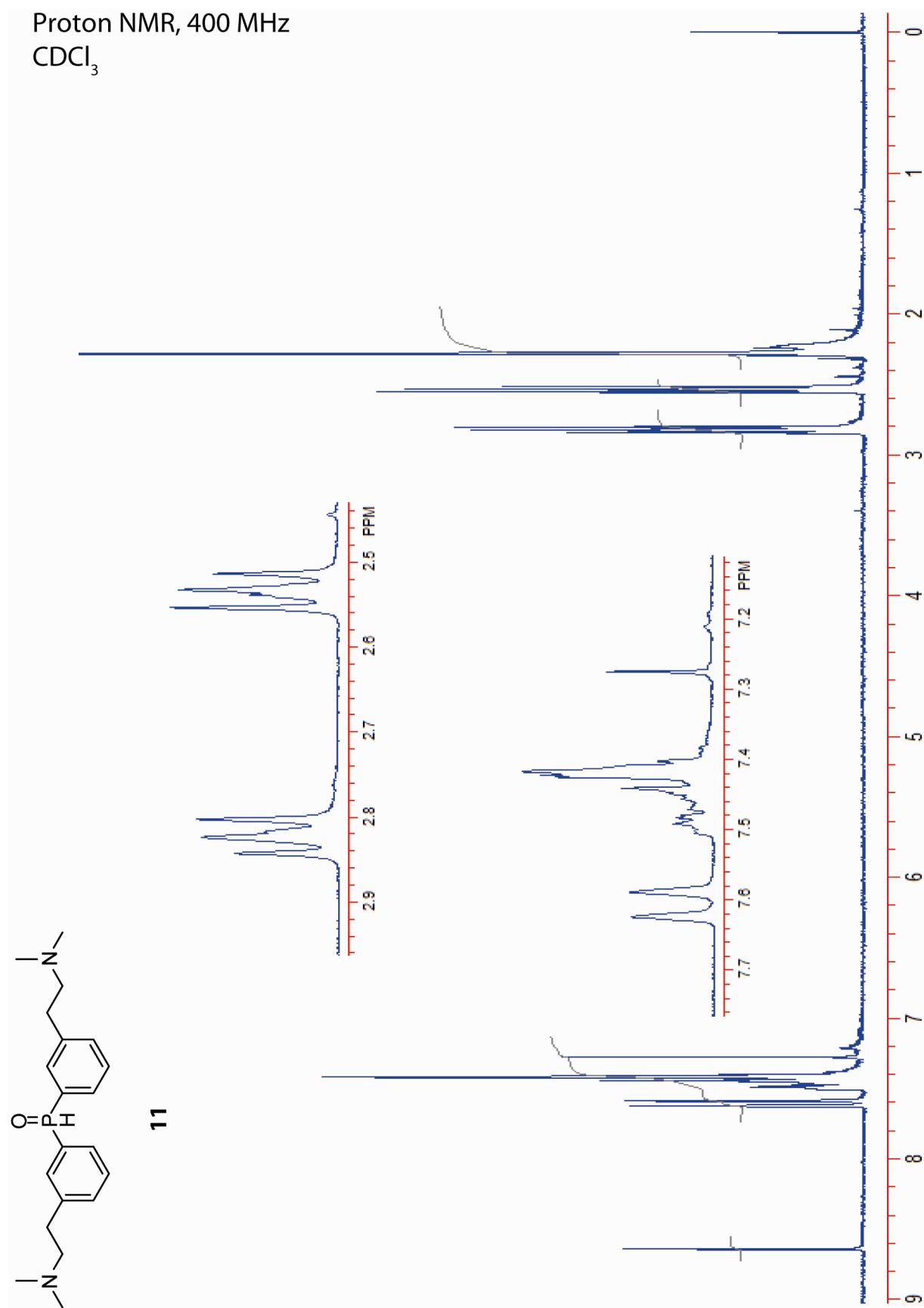
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Carbon-13 NMR, 100.6 MHz

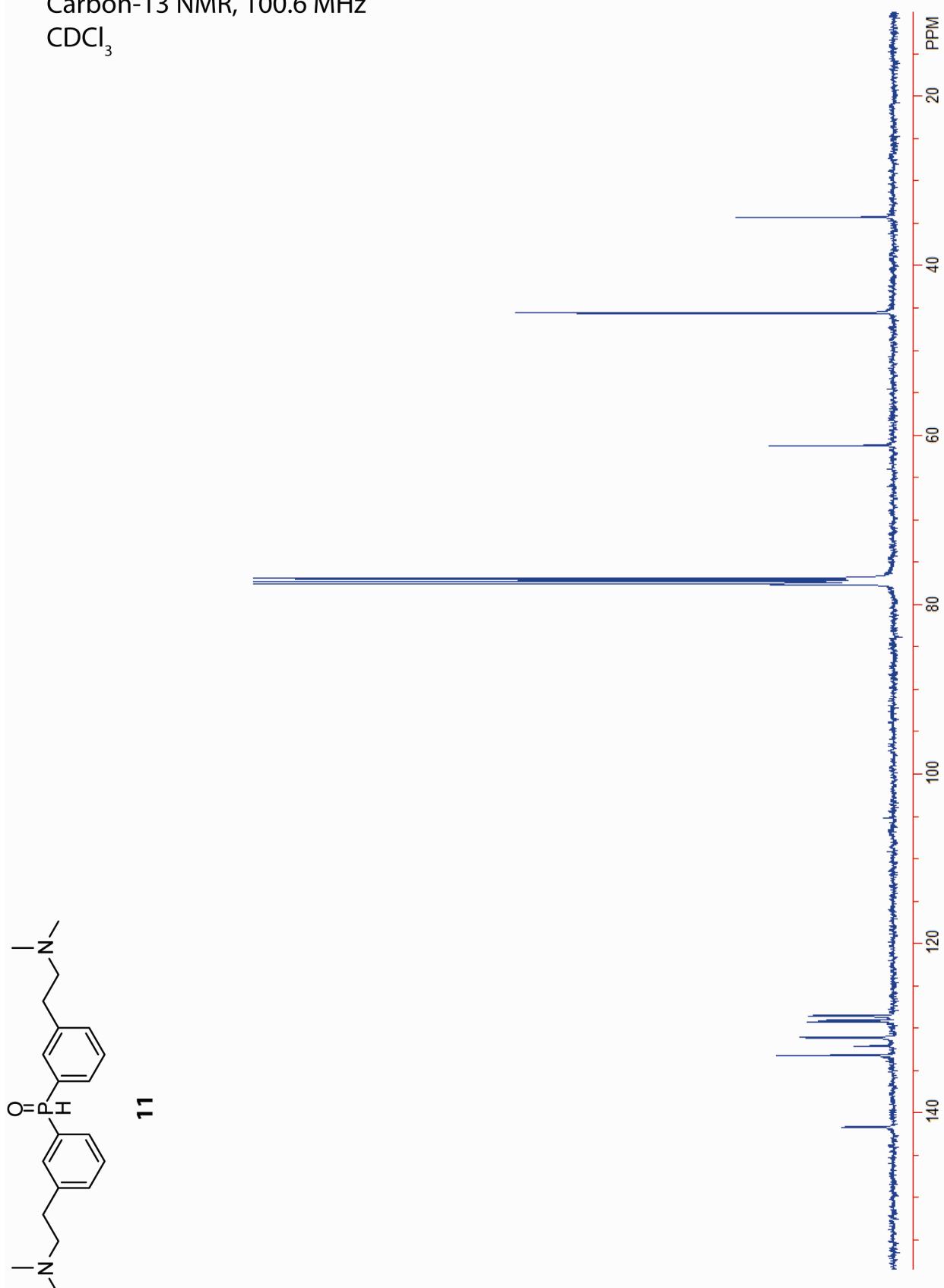
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Phosphorus-31 NMR, 121 MHz  
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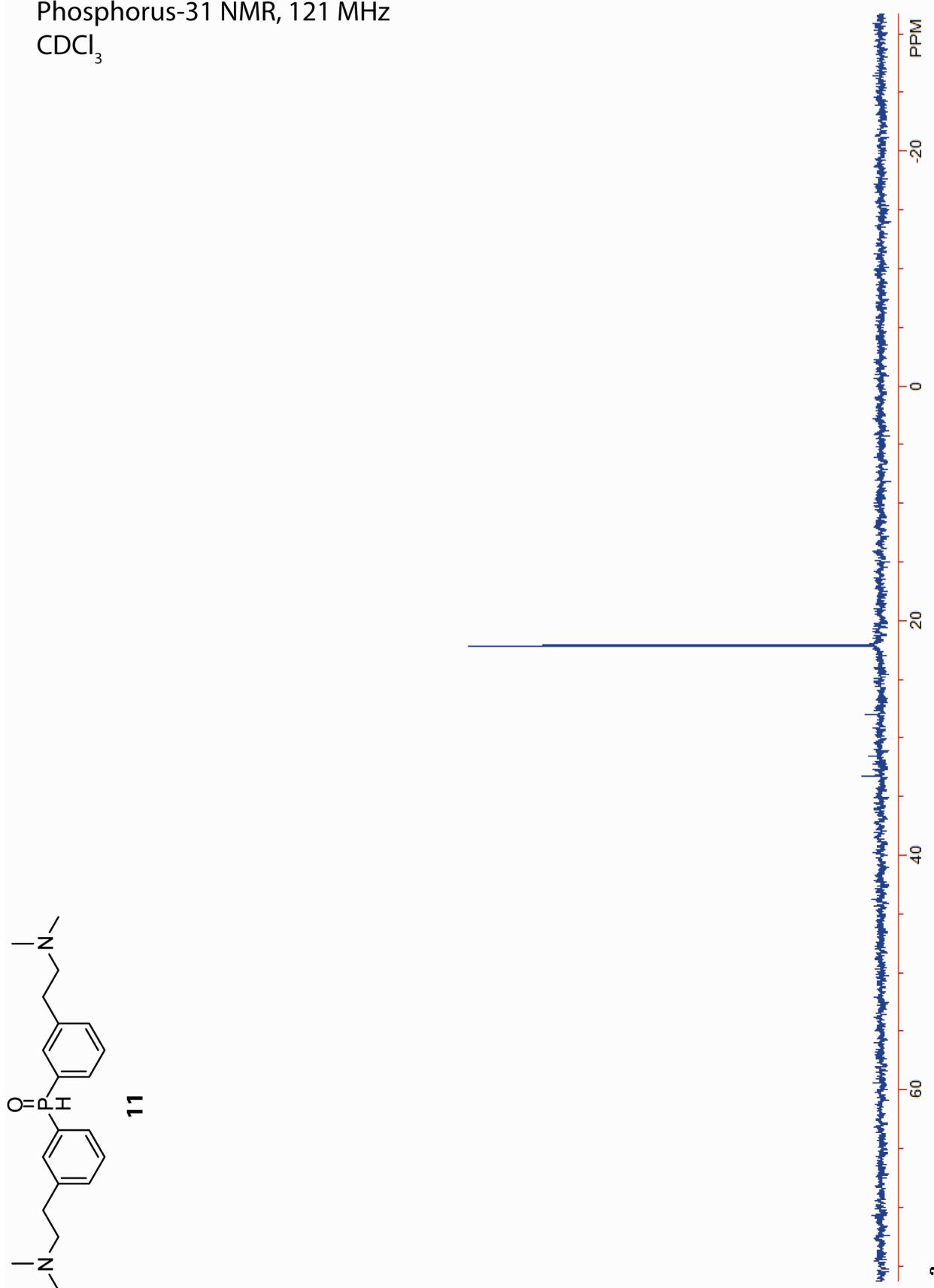




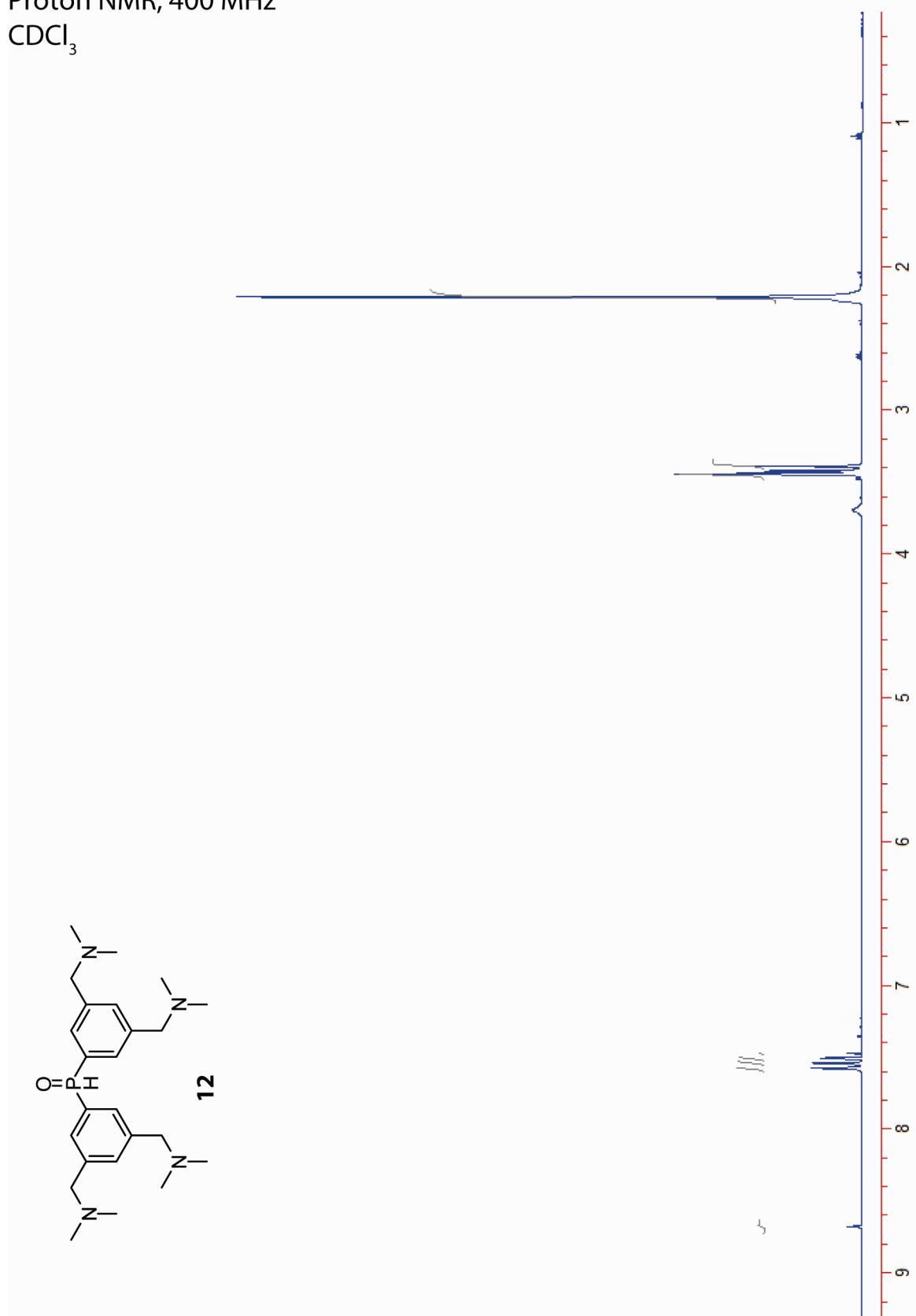
Carbon-13 NMR, 100.6 MHz

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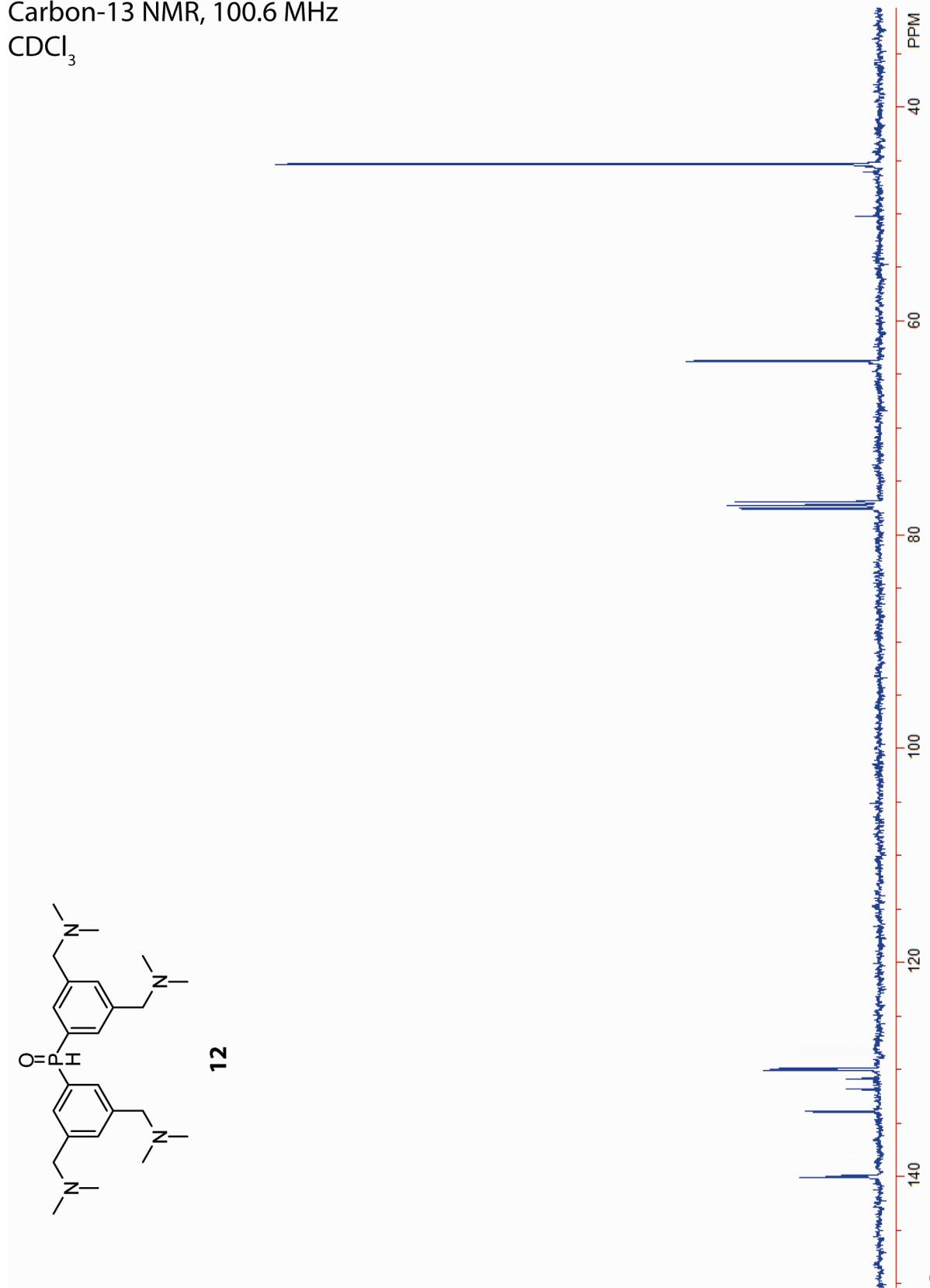
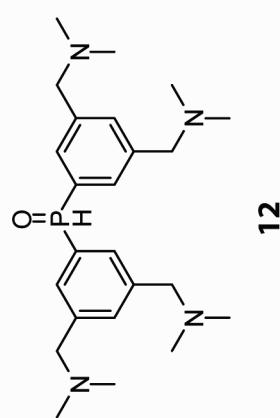
Phosphorus-31 NMR, 121 MHz  
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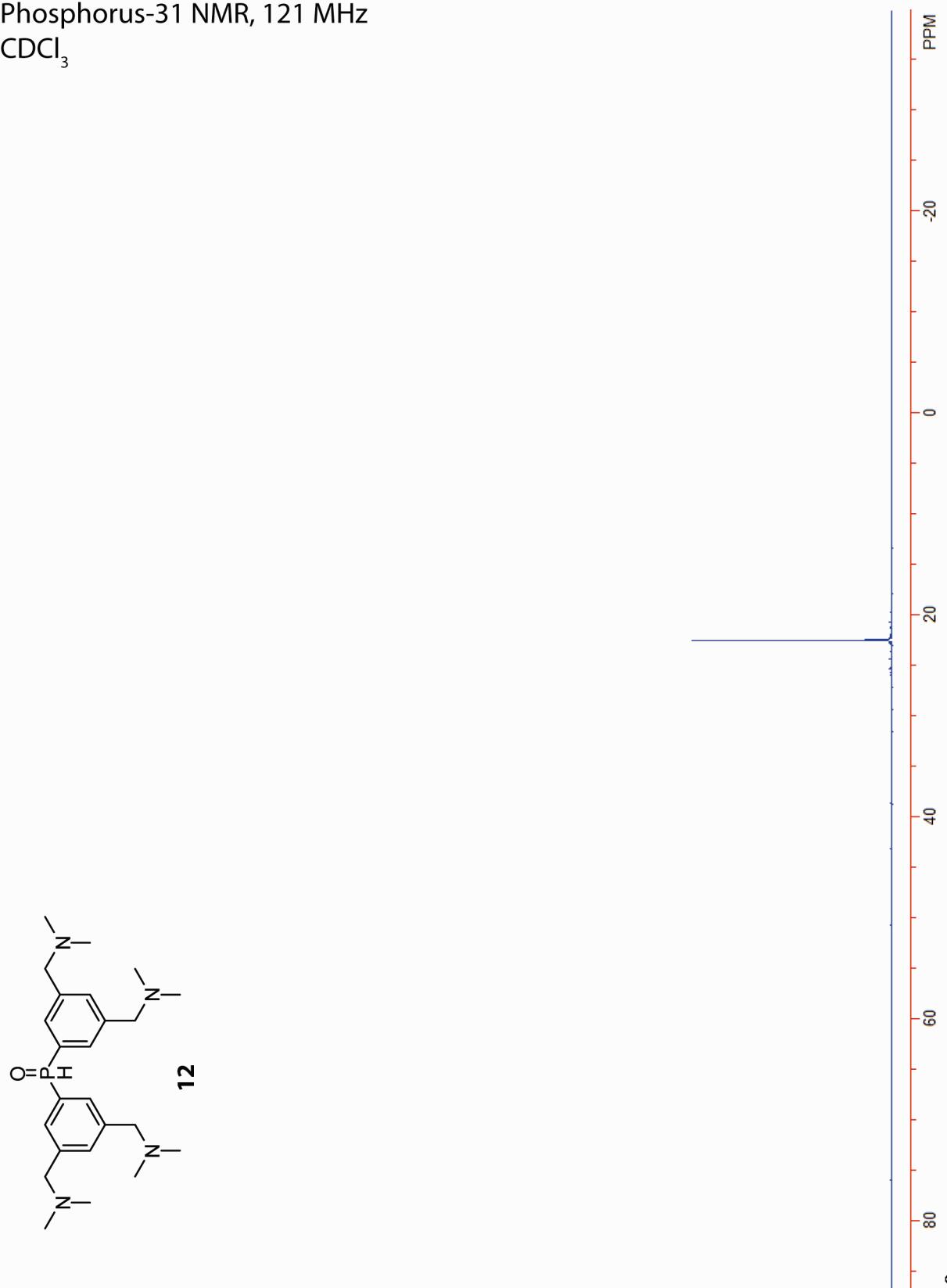
Proton NMR, 400 MHz

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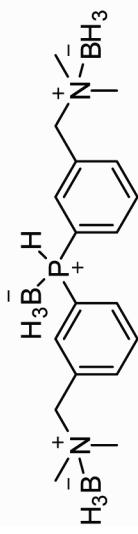
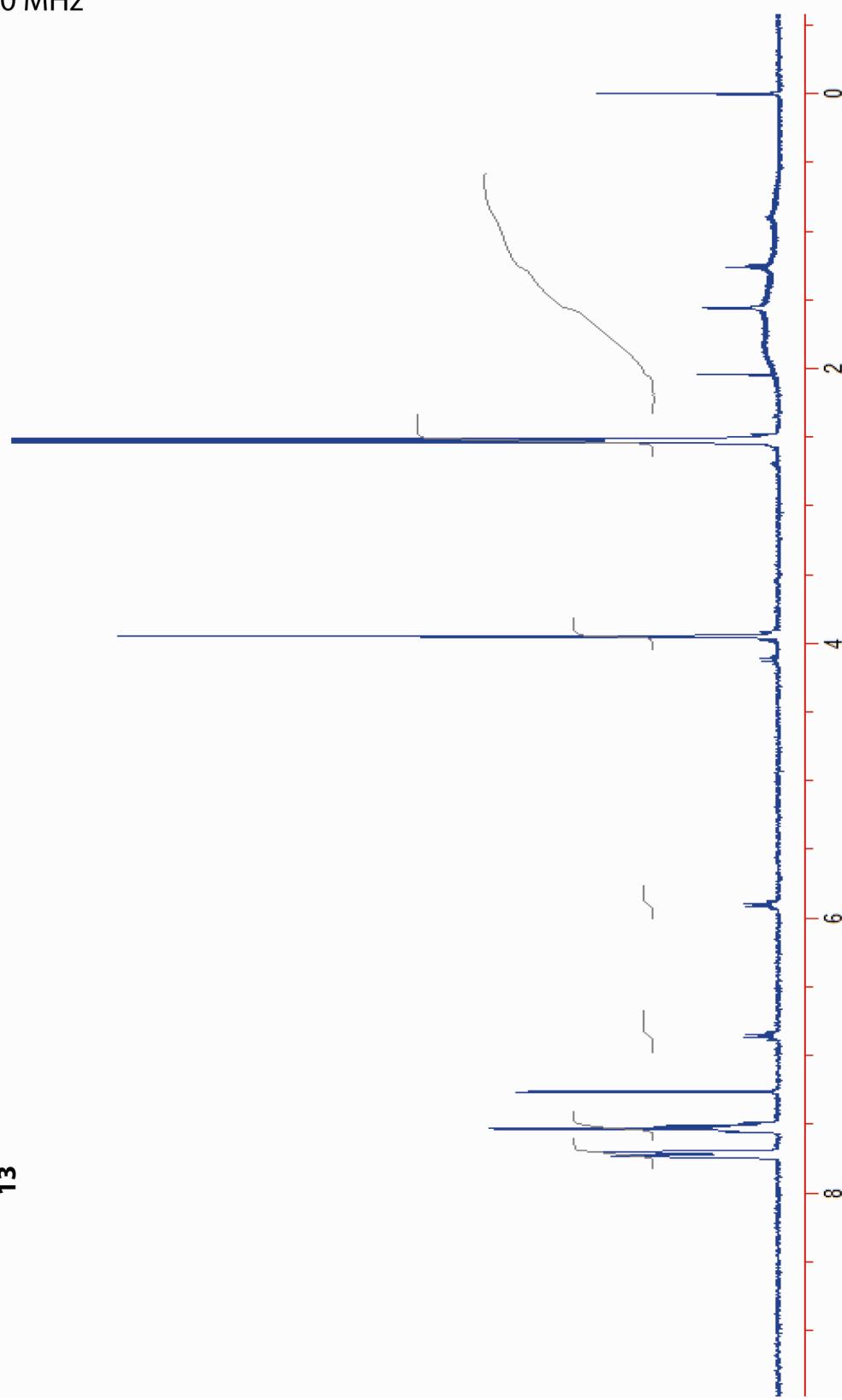
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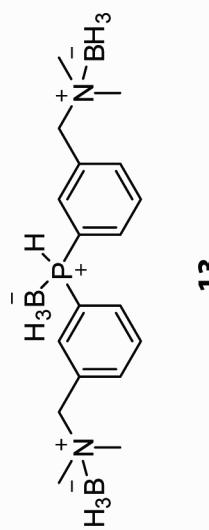
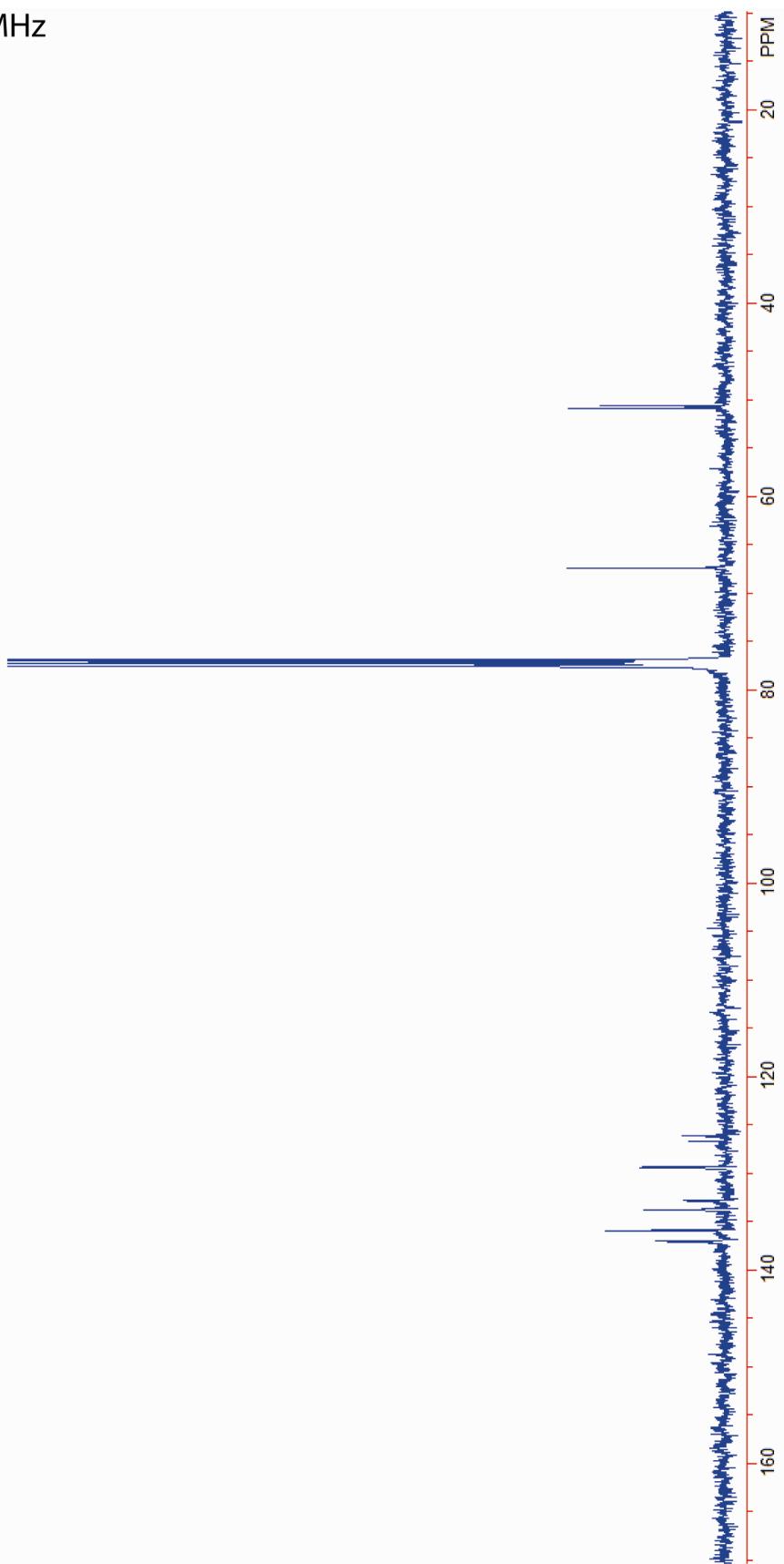
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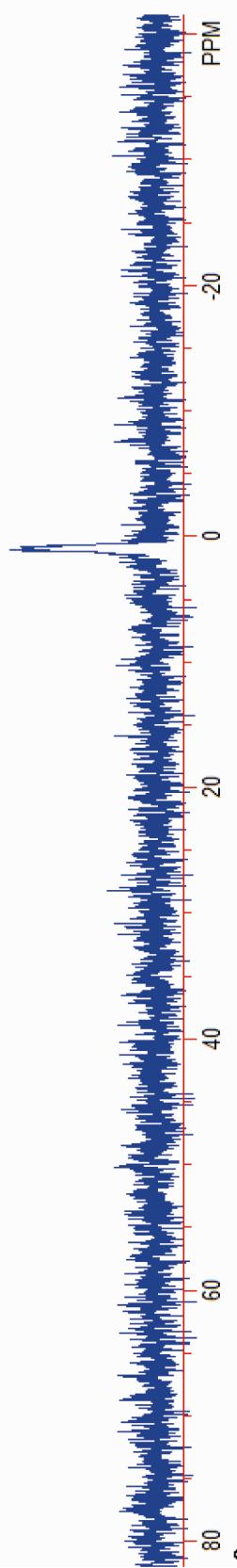
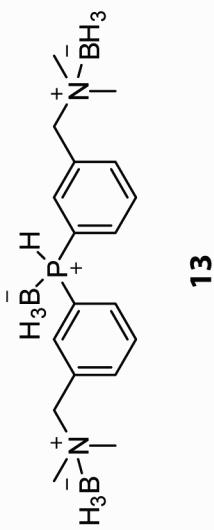
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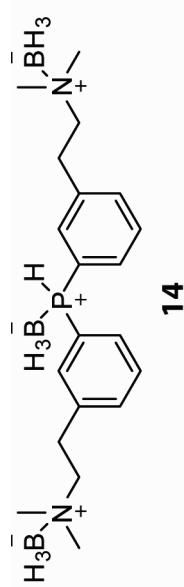
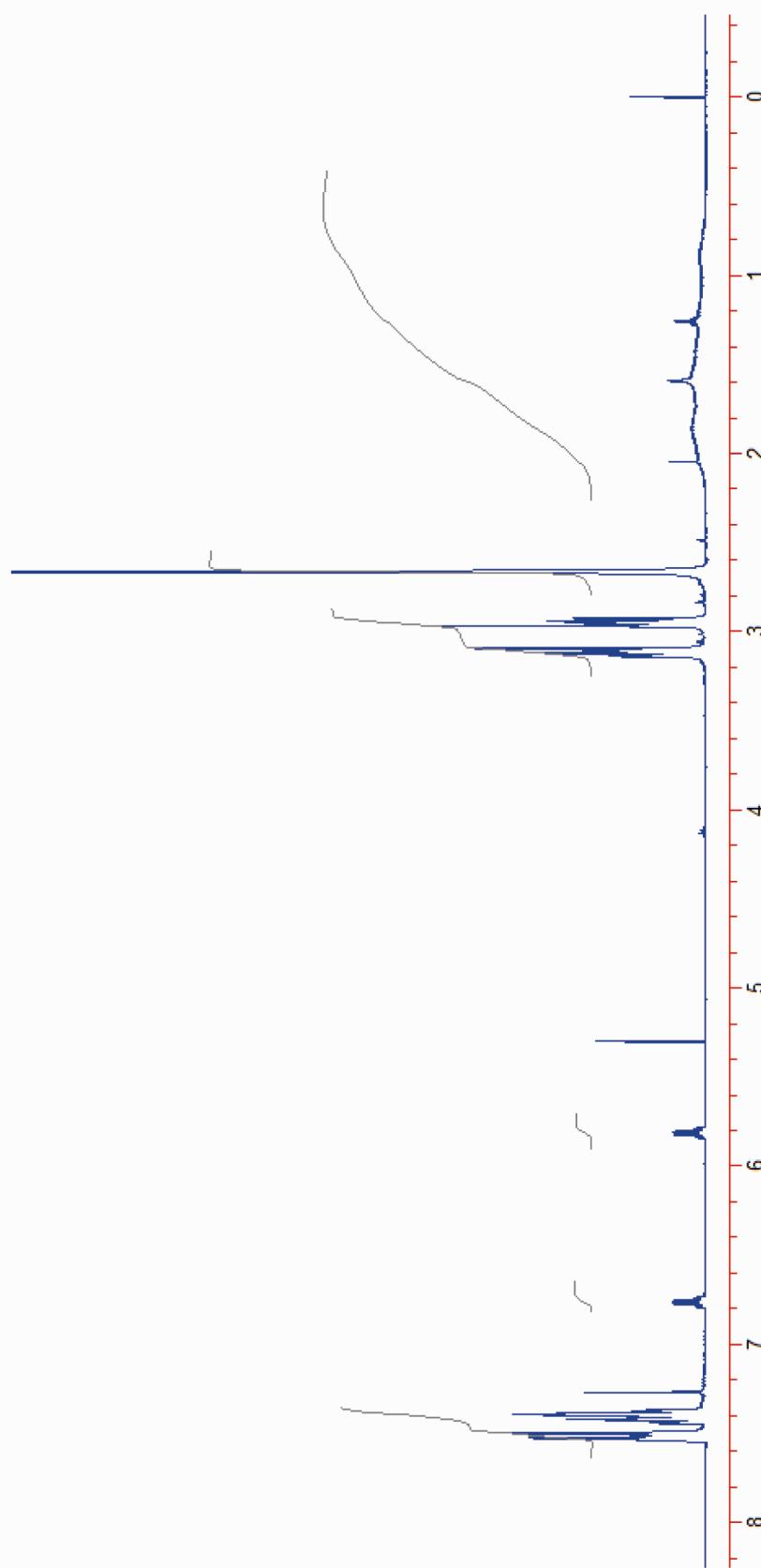
Carbon-13 NMR, 100.6 MHz

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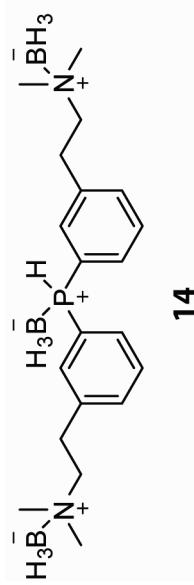
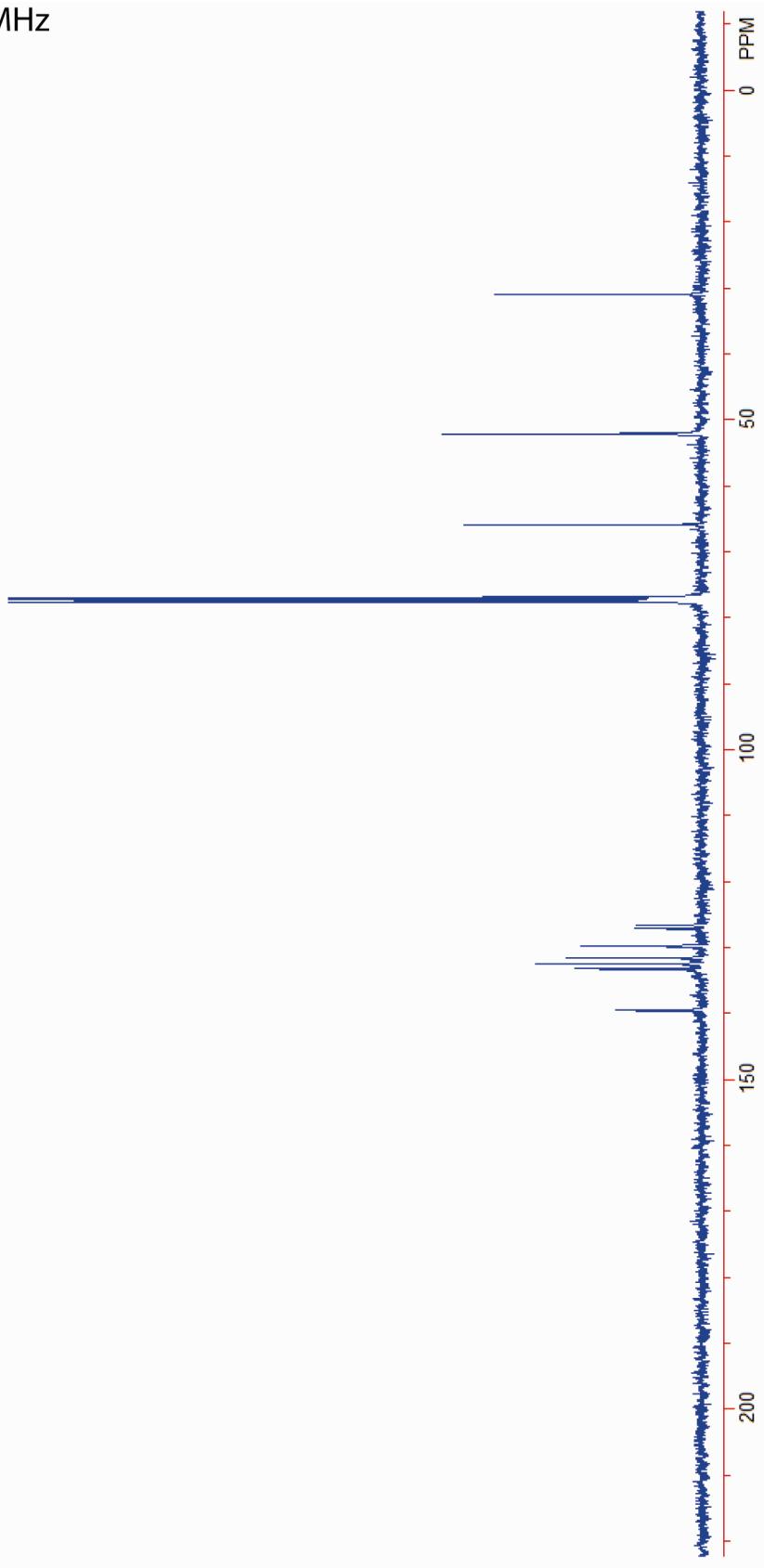
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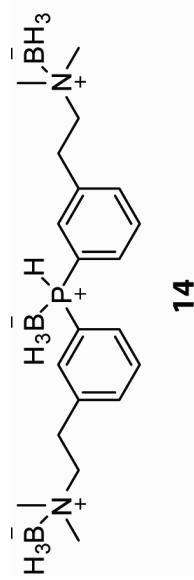
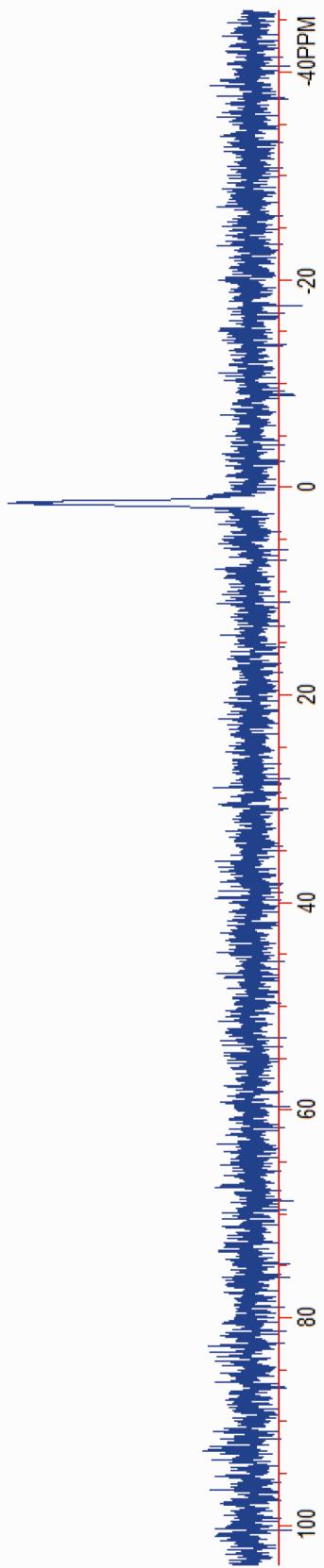
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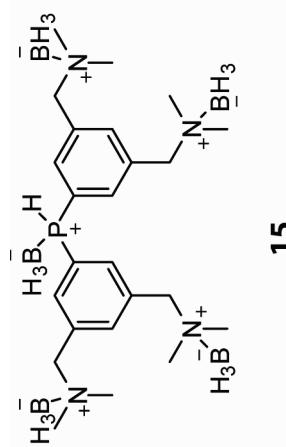
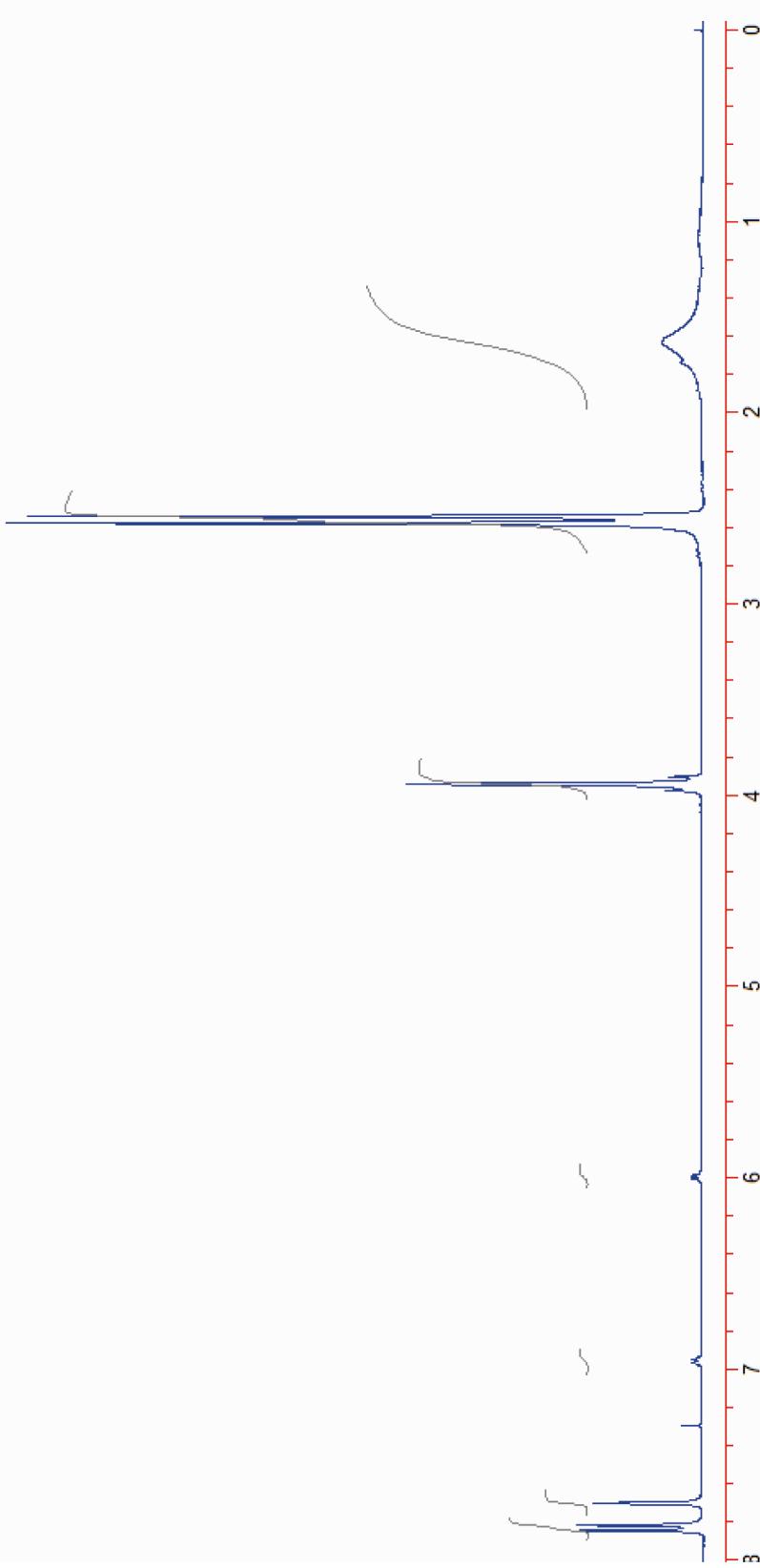
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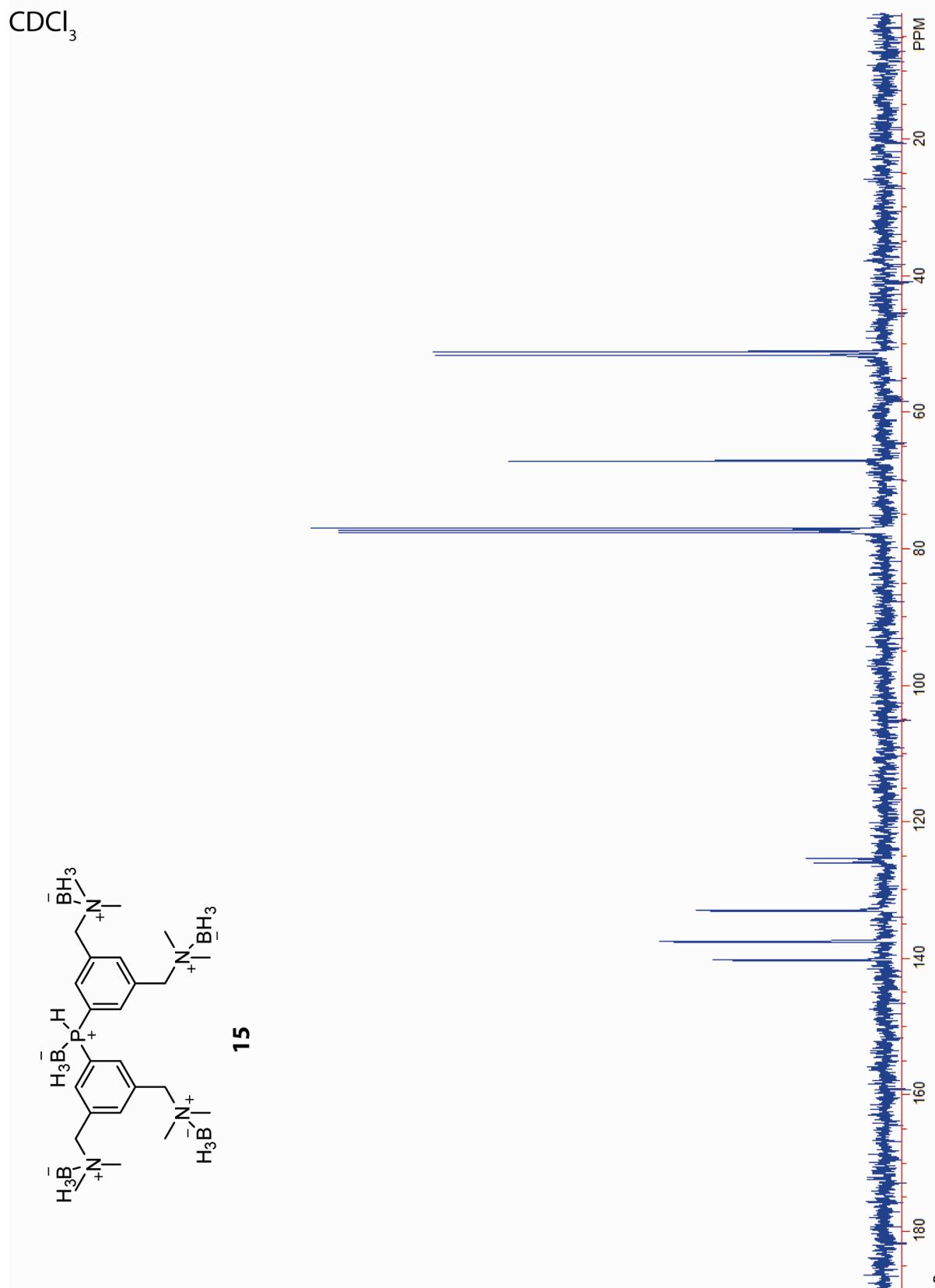
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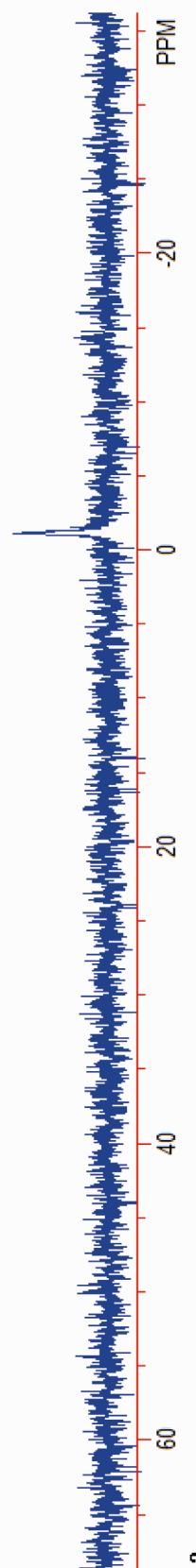
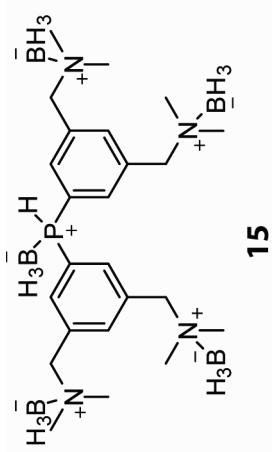
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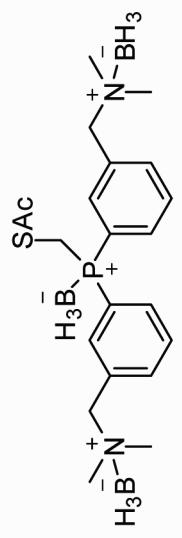
Carbon-13 NMR, 100.6 MHz

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Phosphorus-31 NMR, 121 MHz  
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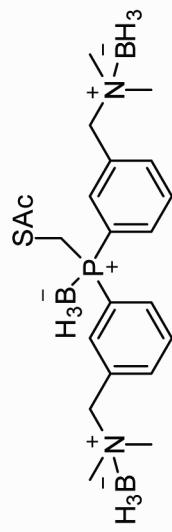
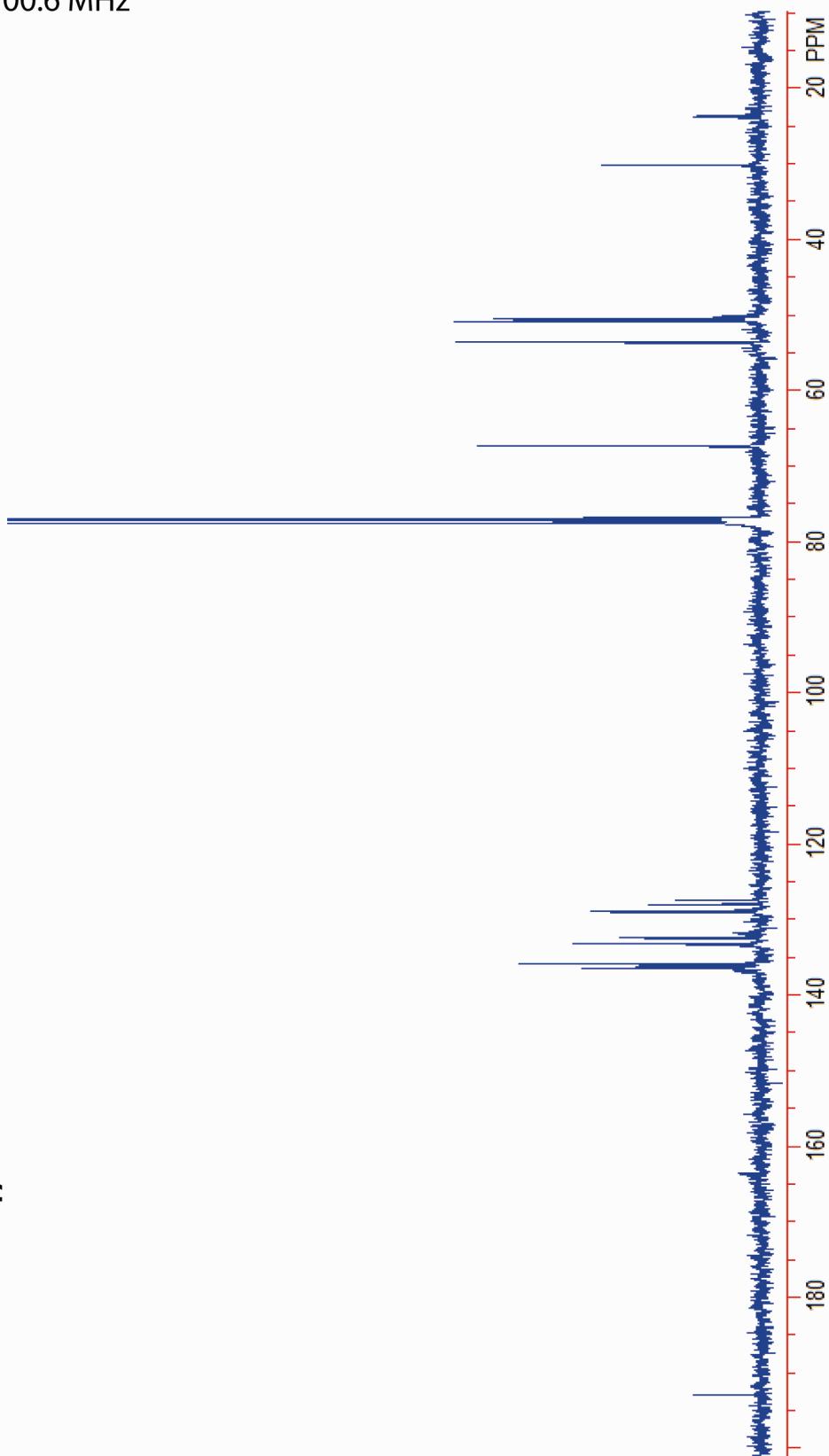


Proton NMR, 400 MHz

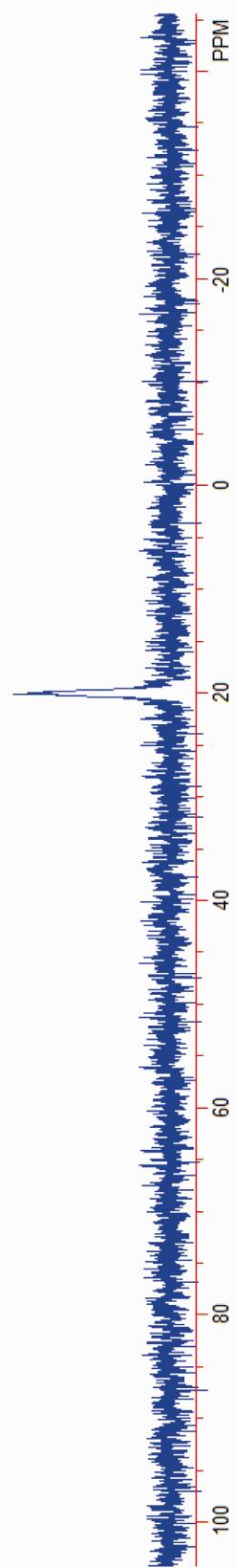
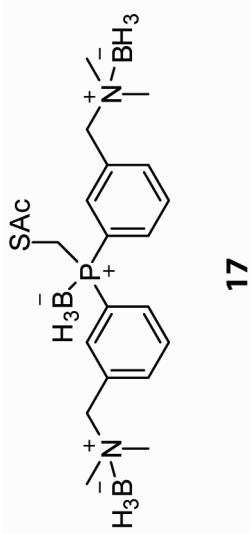
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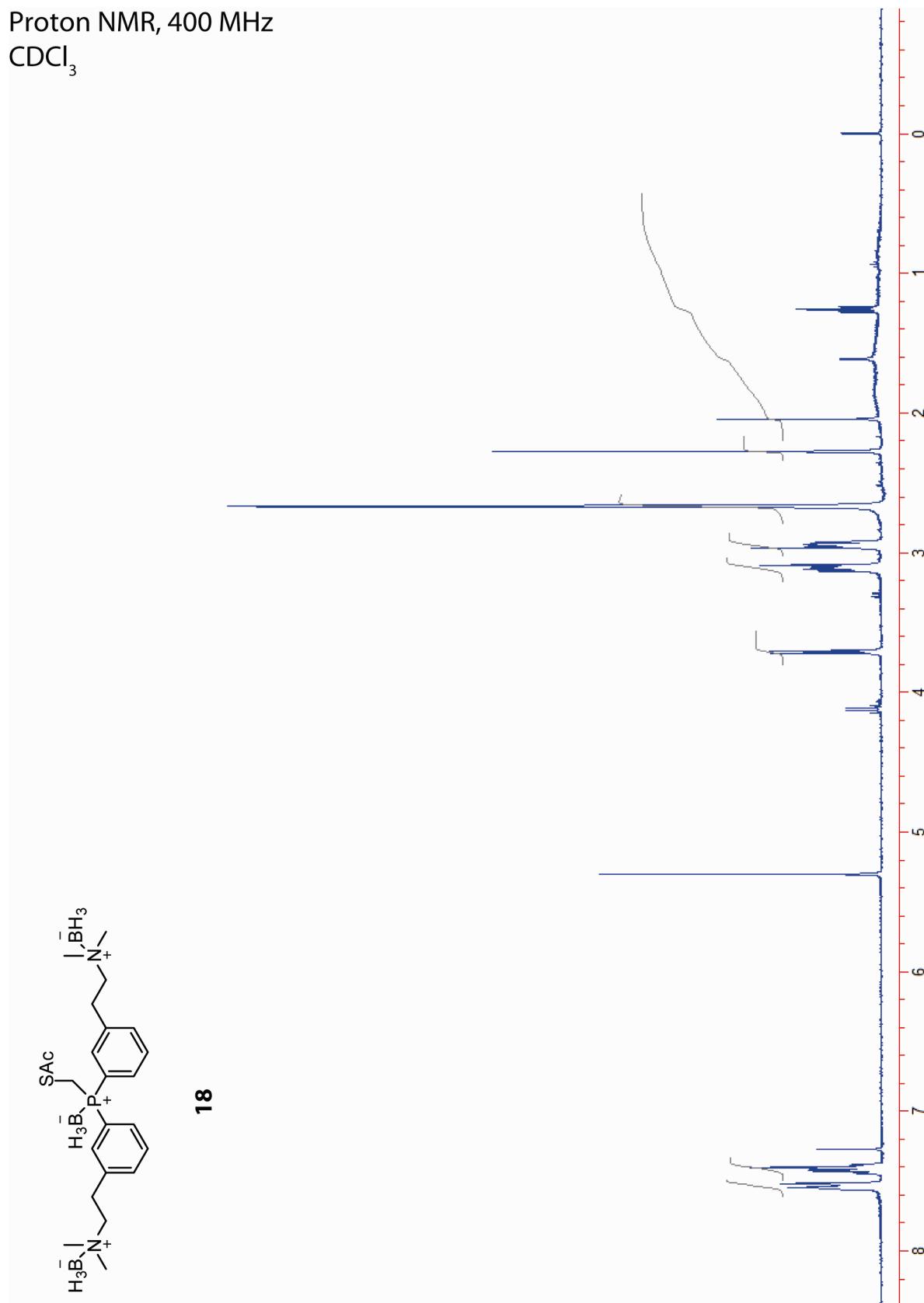
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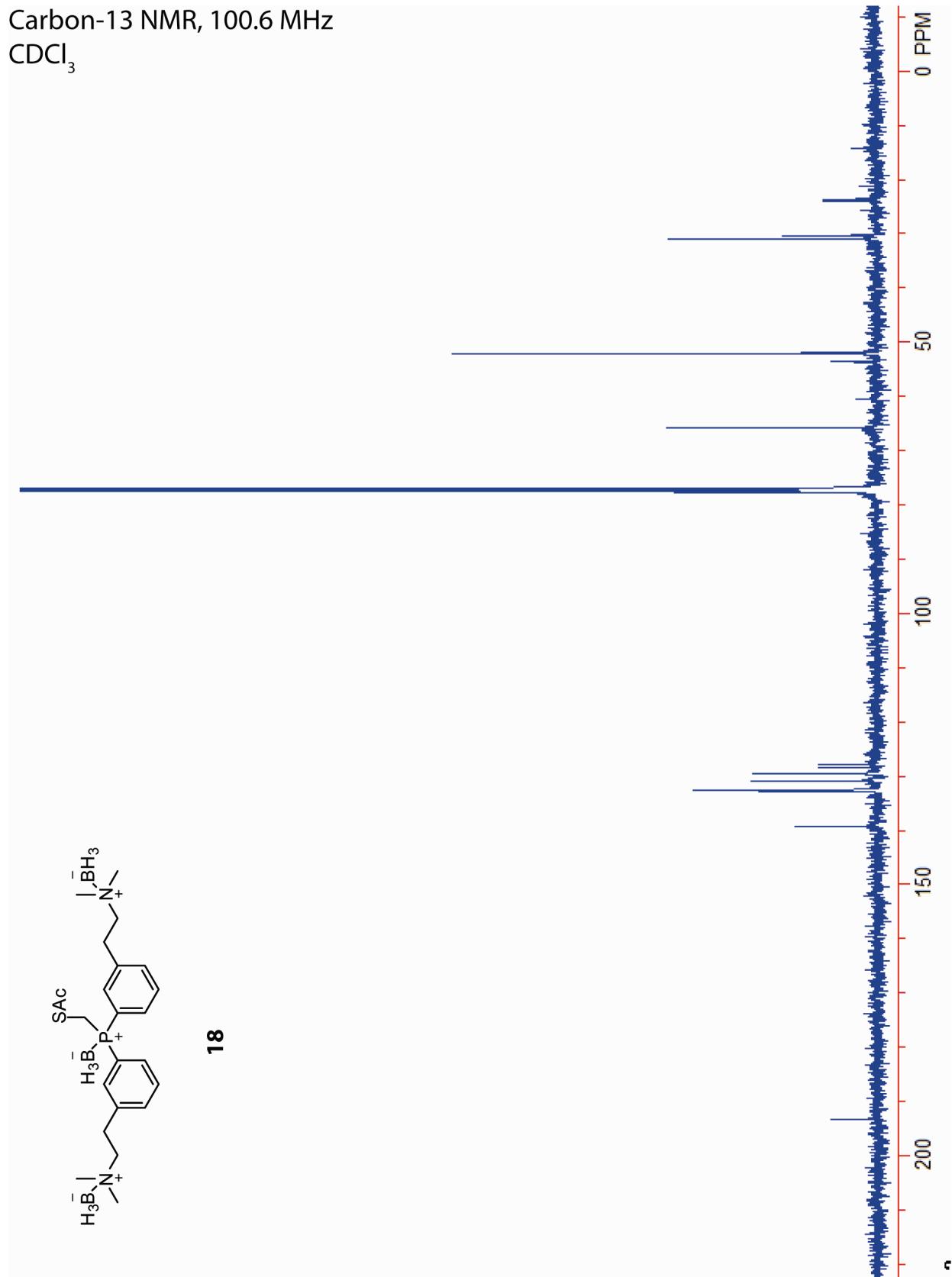
Phosphorus-31 NMR, 121 MHz  
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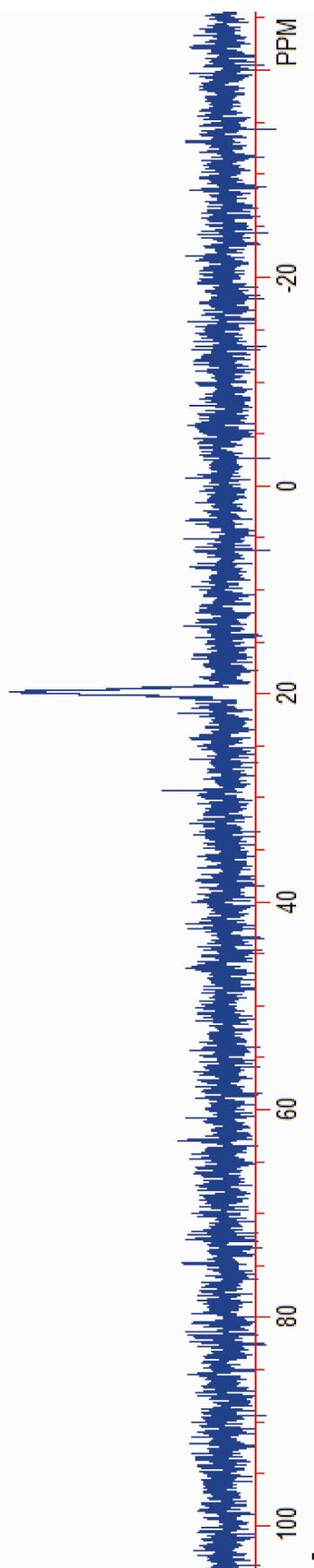
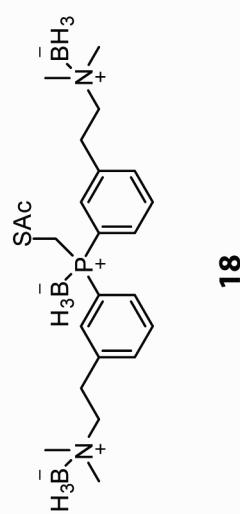
Proton NMR, 400 MHz

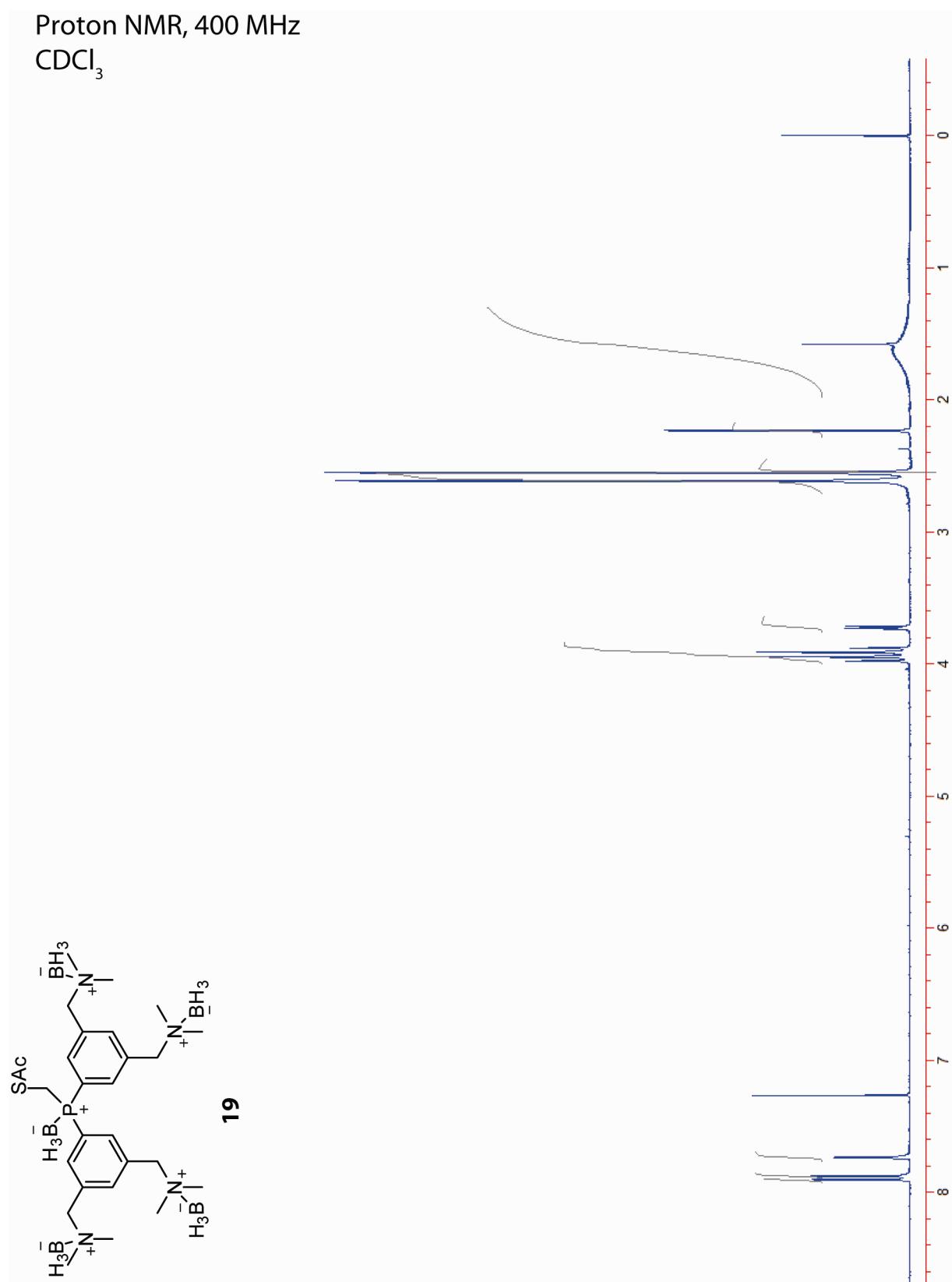
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Carbon-13 NMR, 100.6 MHz

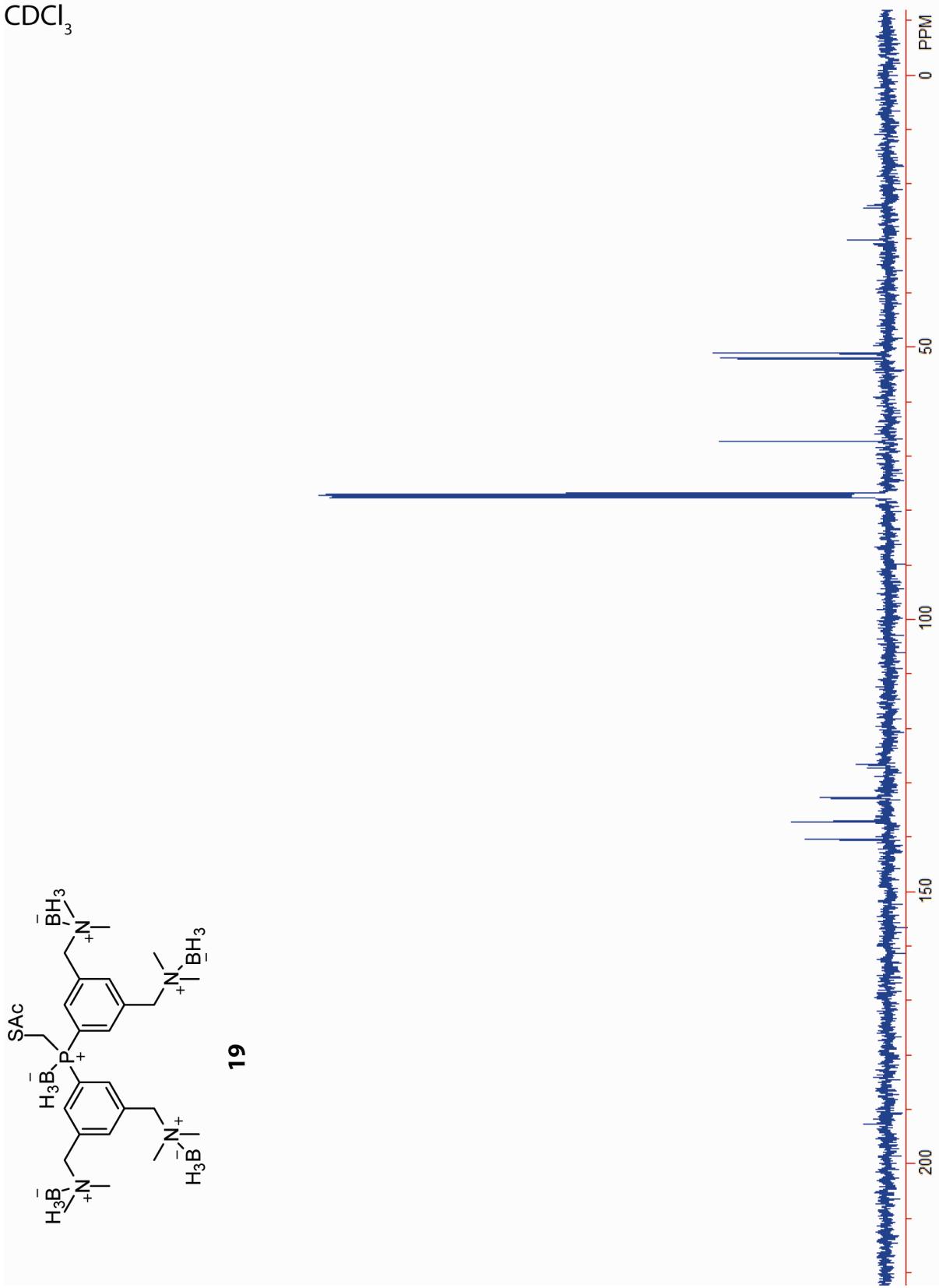
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Phosphorus-31 NMR, 121 MHz  
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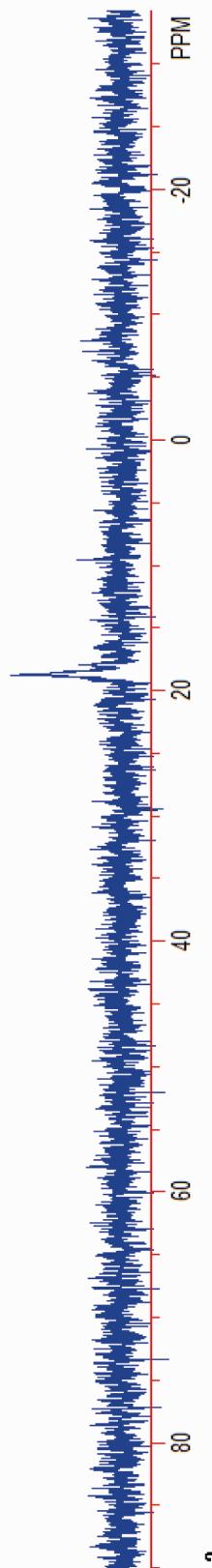
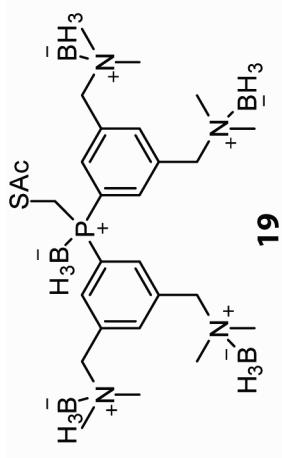




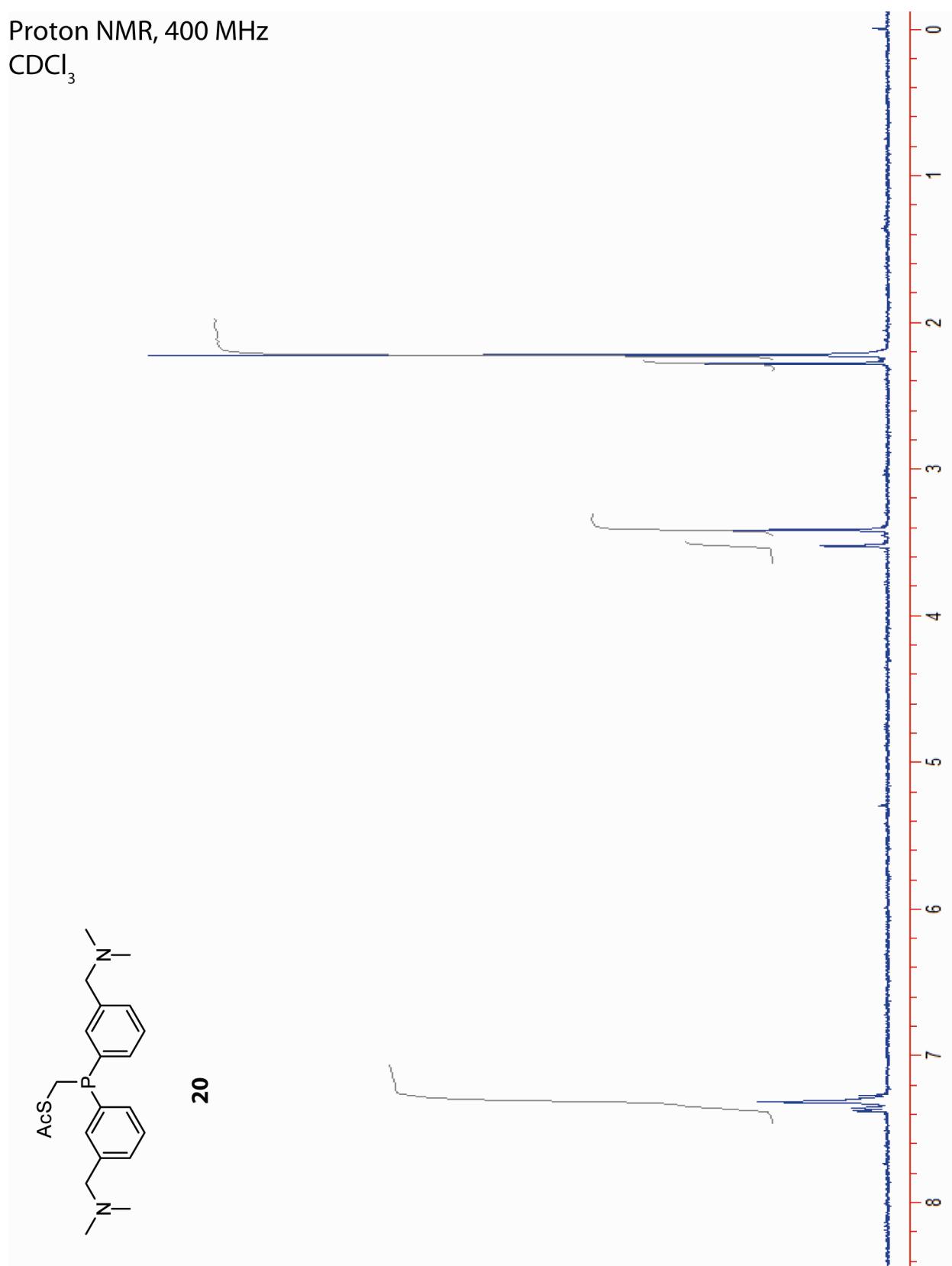
Carbon-13 NMR, 100.6 MHz

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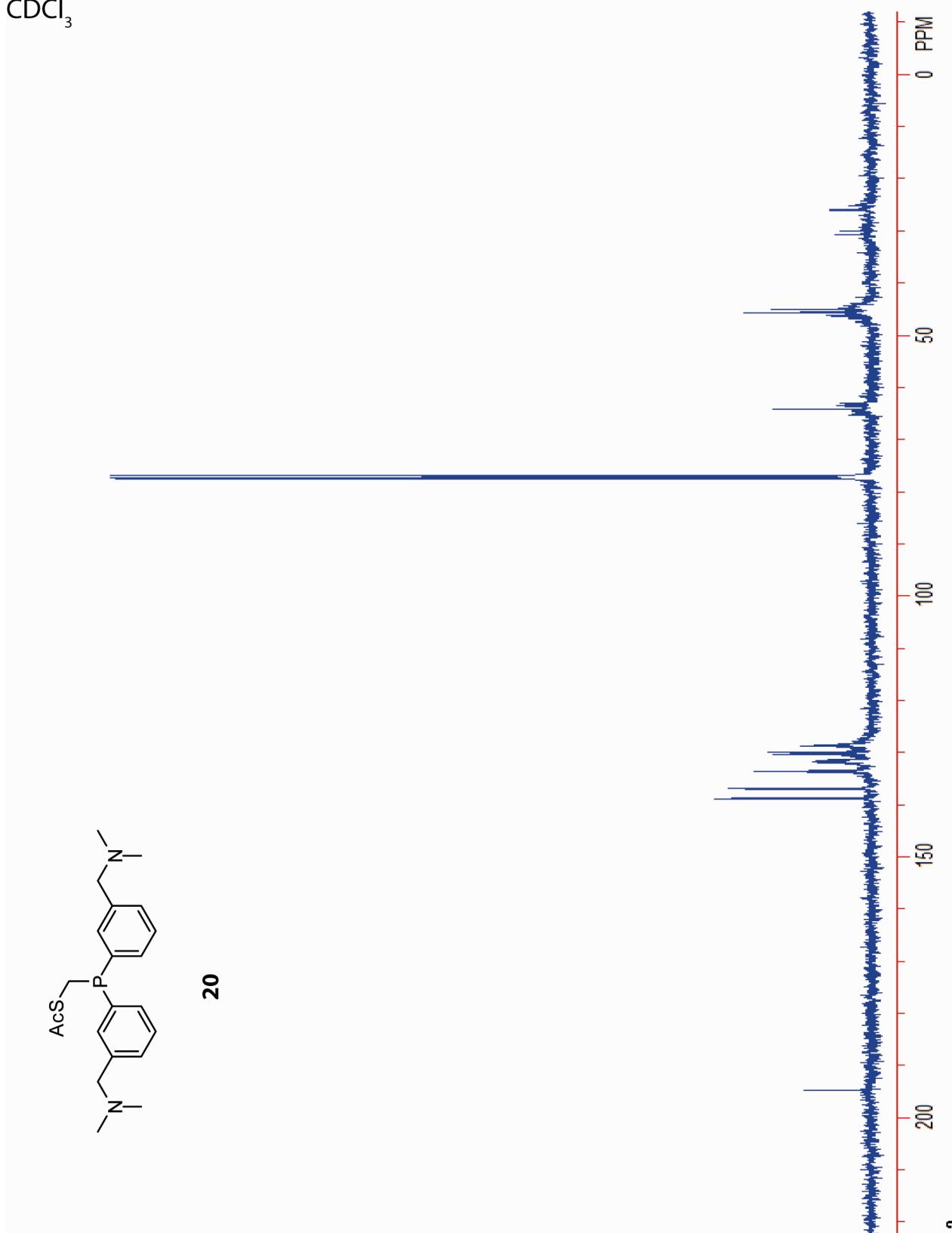
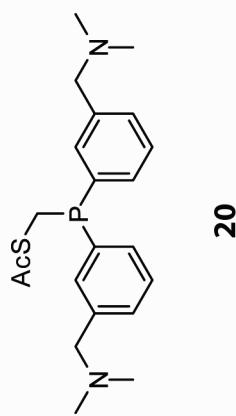
Phosphorus-31 NMR, 121 MHz  
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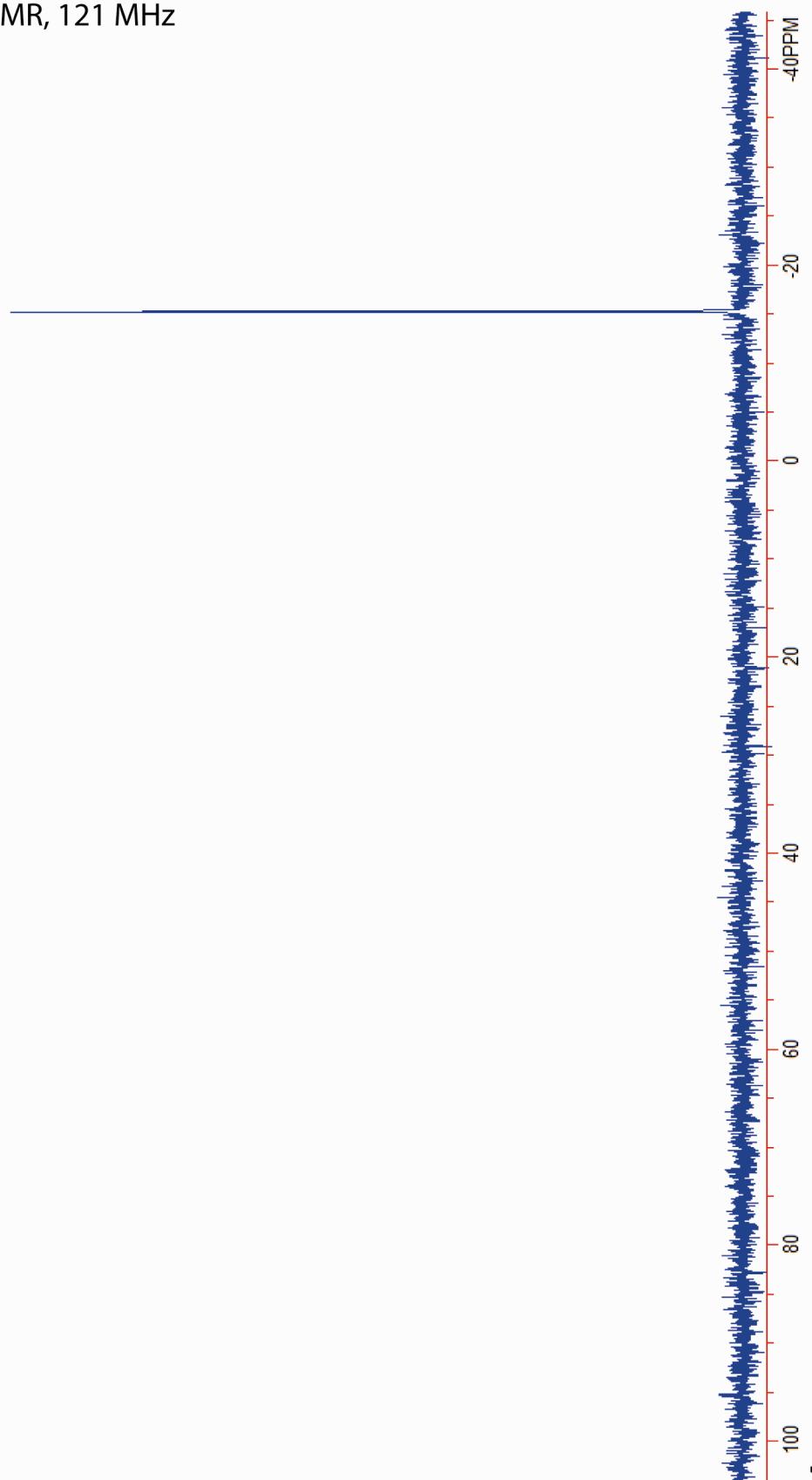
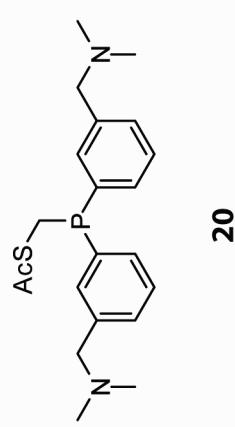
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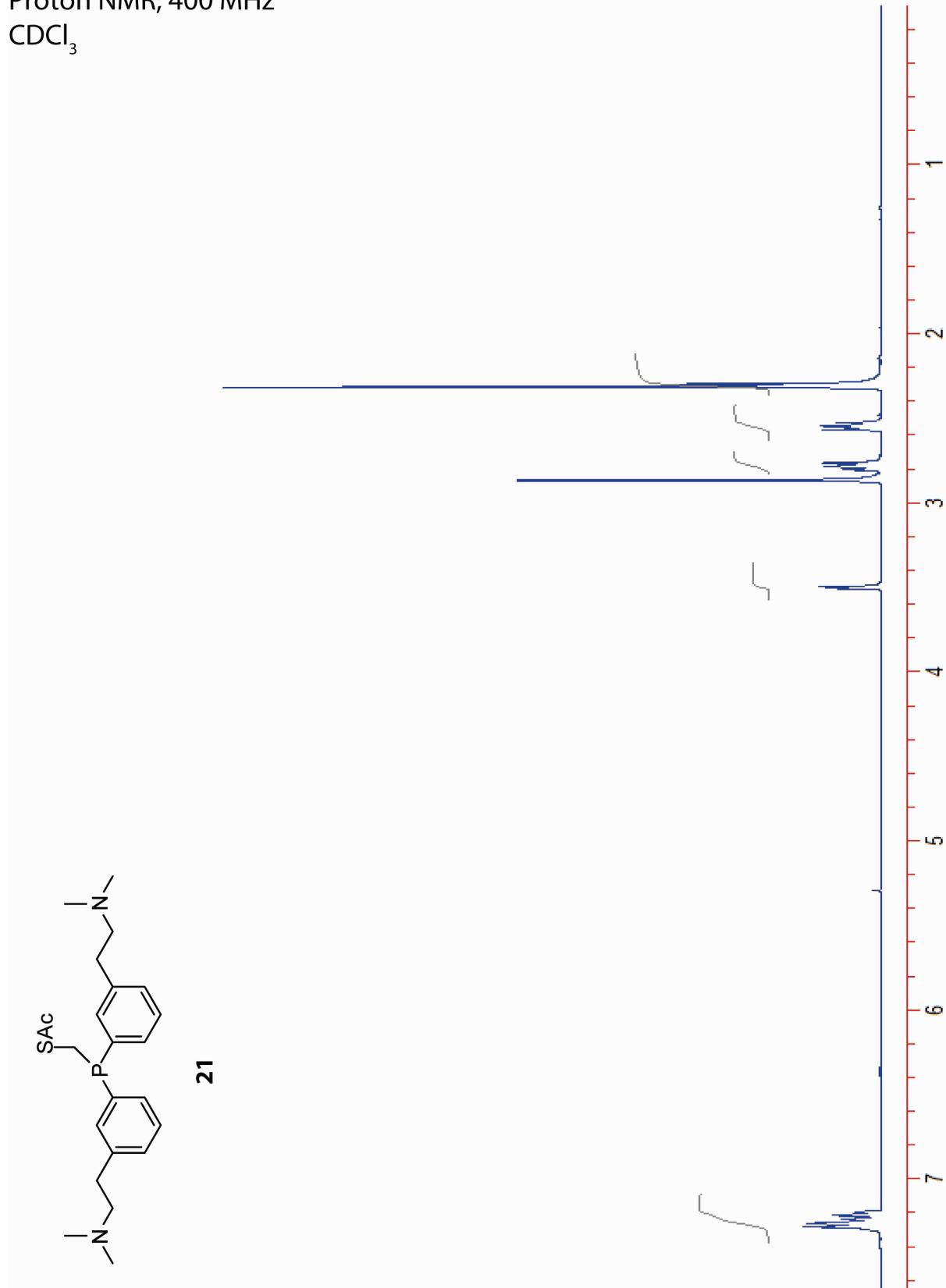
Carbon-13 NMR, 100.6 MHz

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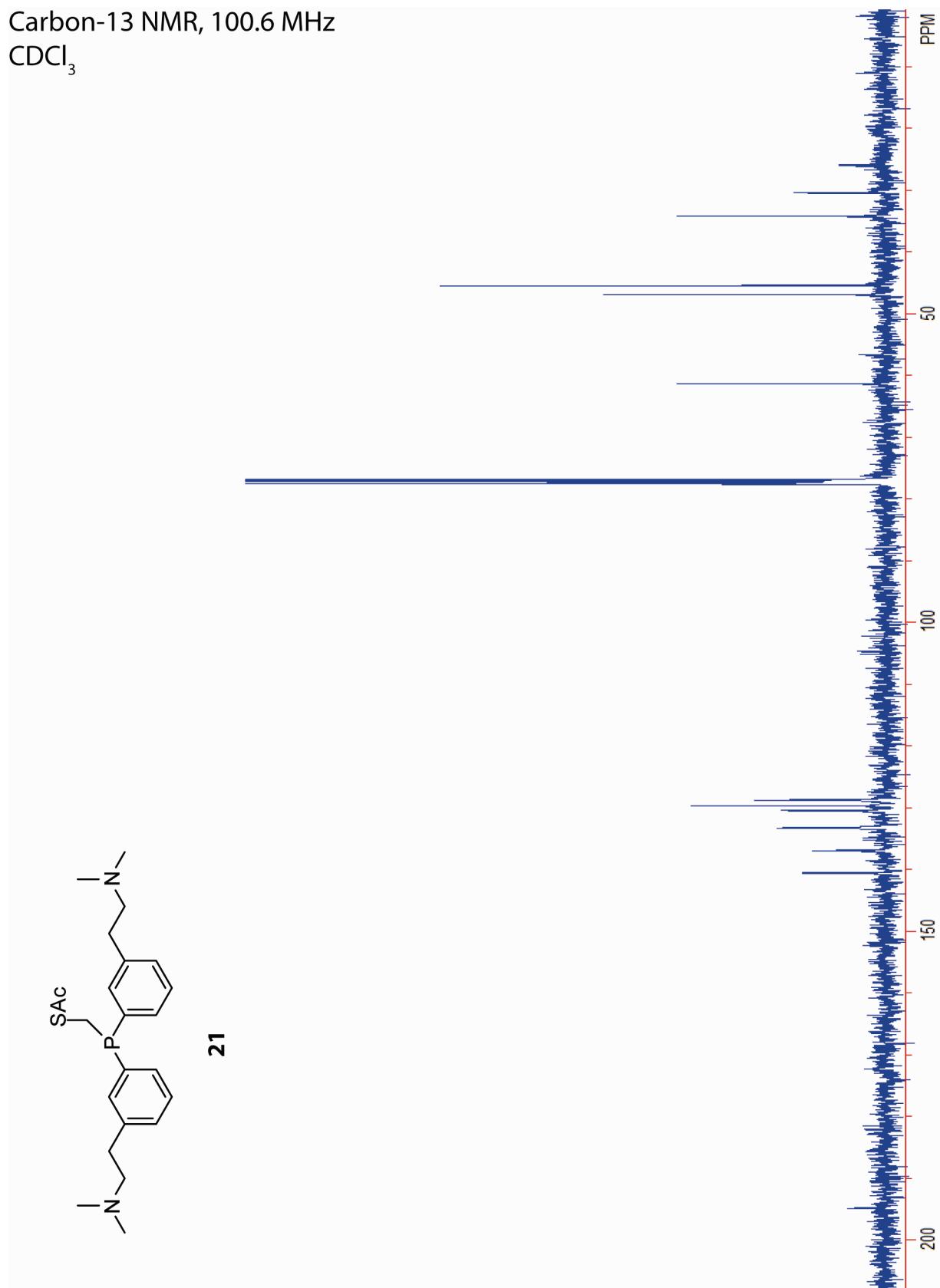
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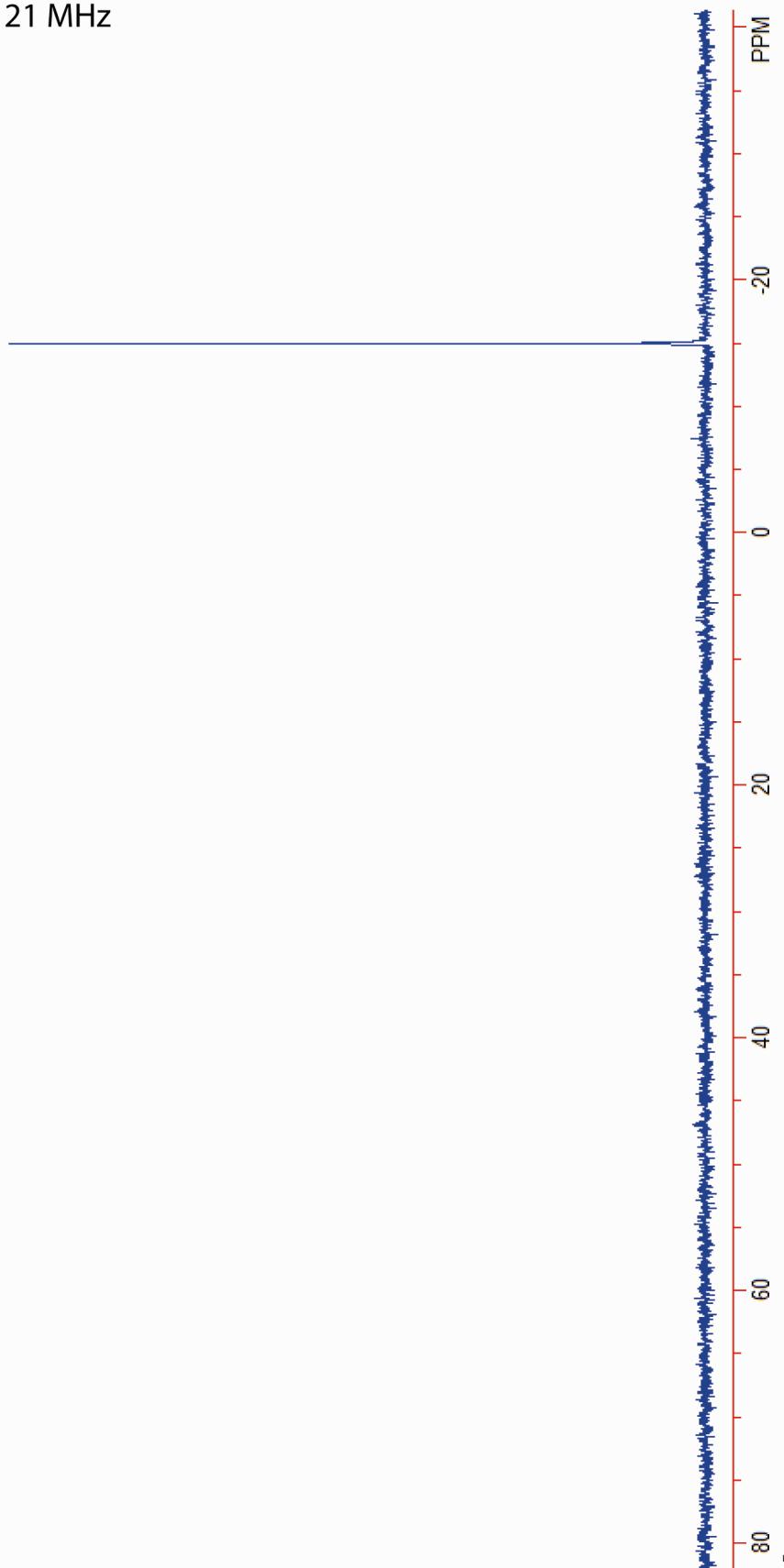
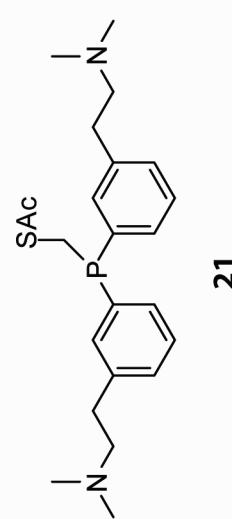
Proton NMR, 400 MHz

 $\text{CDCl}_3$ 

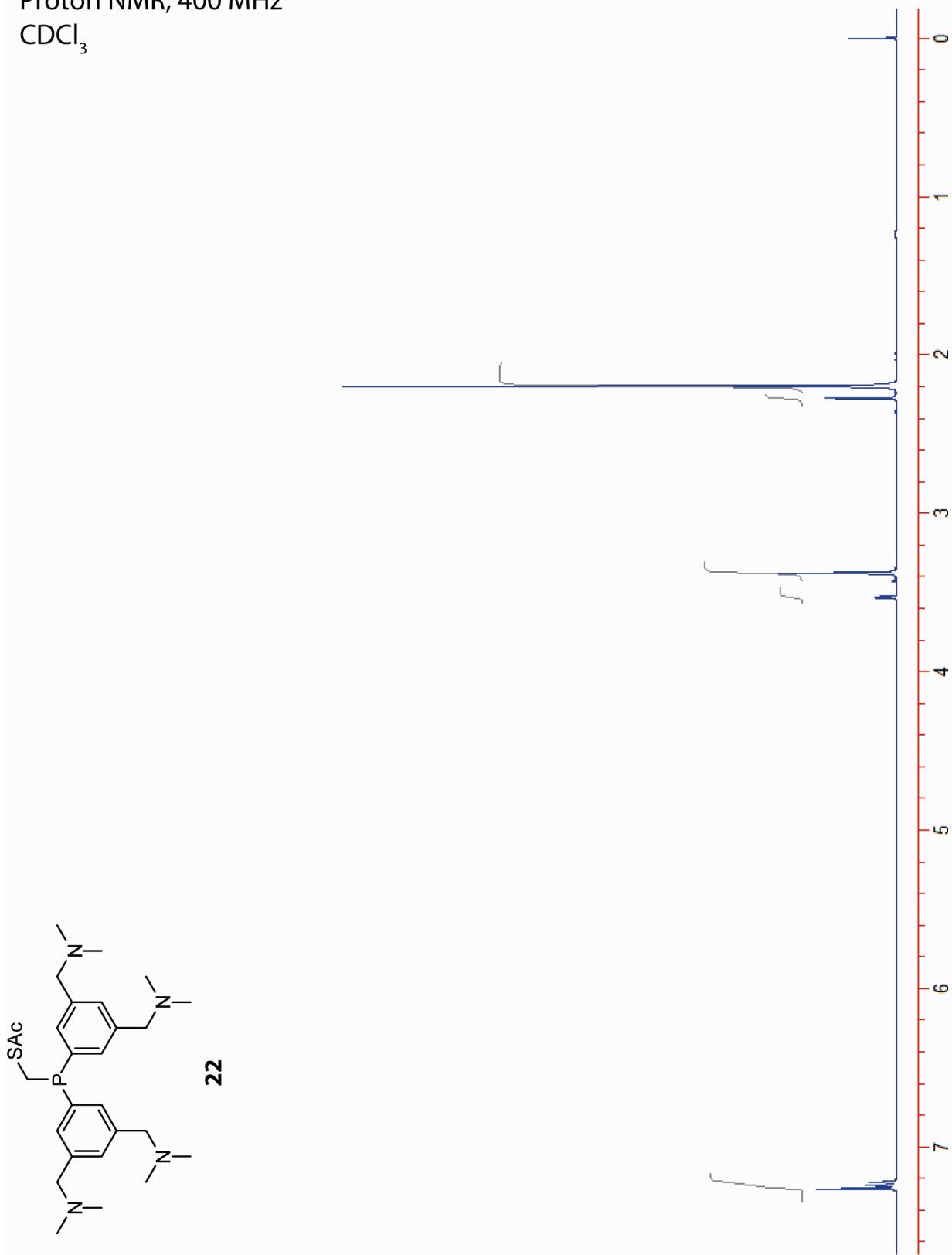
Carbon-13 NMR, 100.6 MHz

 $\text{CDCl}_3$ 

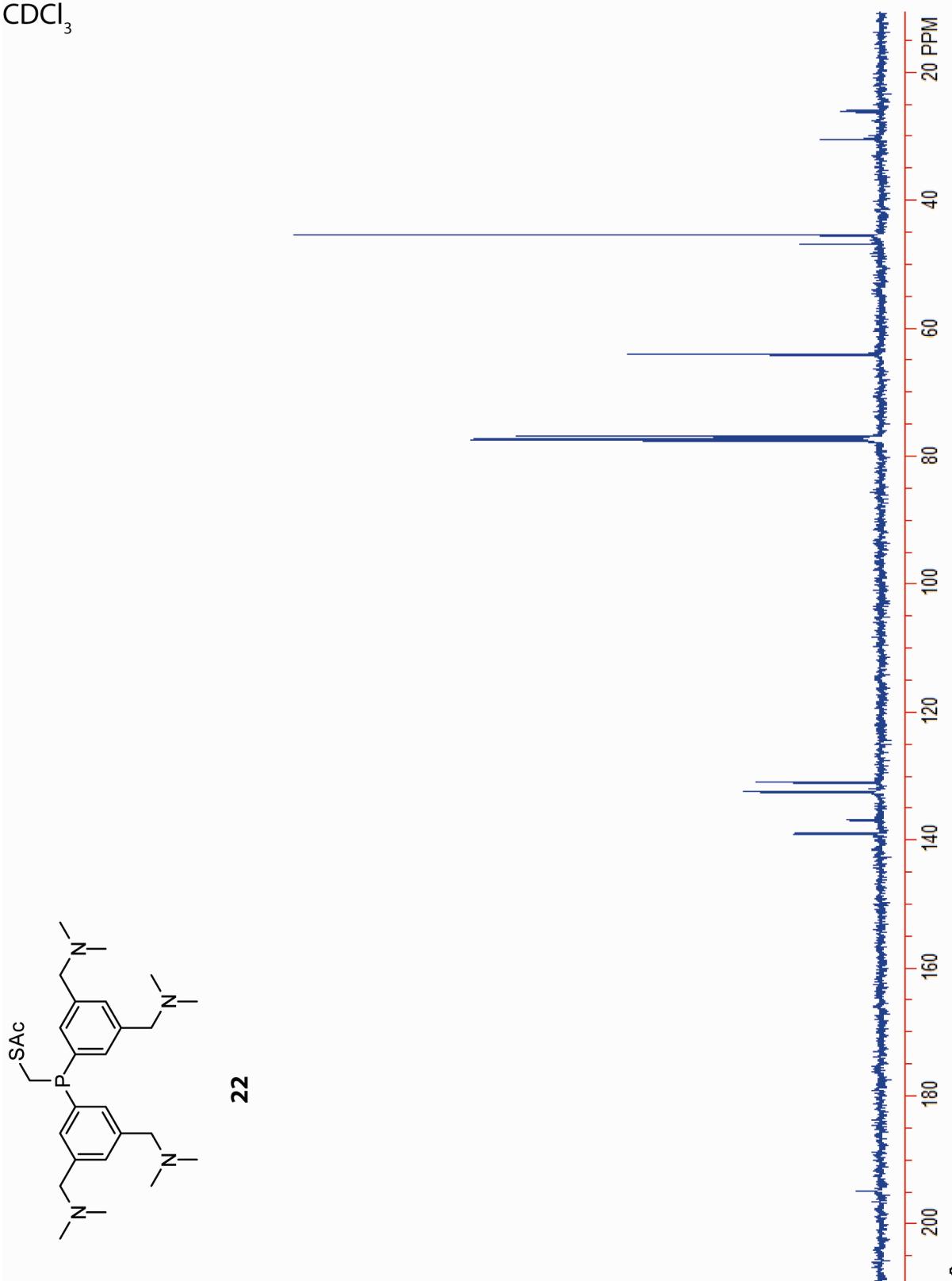
Phosphorus-31 NMR, 121 MHz

 $\text{CDCl}_3$ 

Proton NMR, 400 MHz

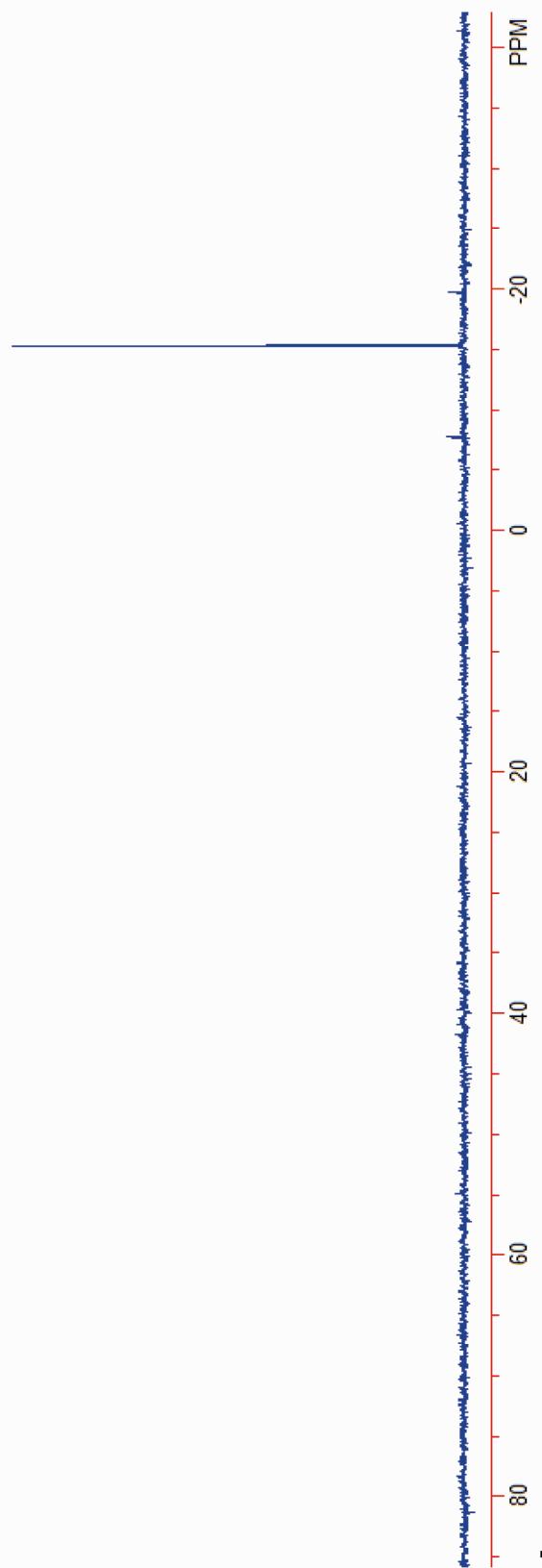
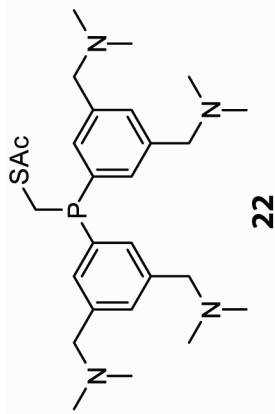
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Carbon-13 NMR, 100.6 MHz

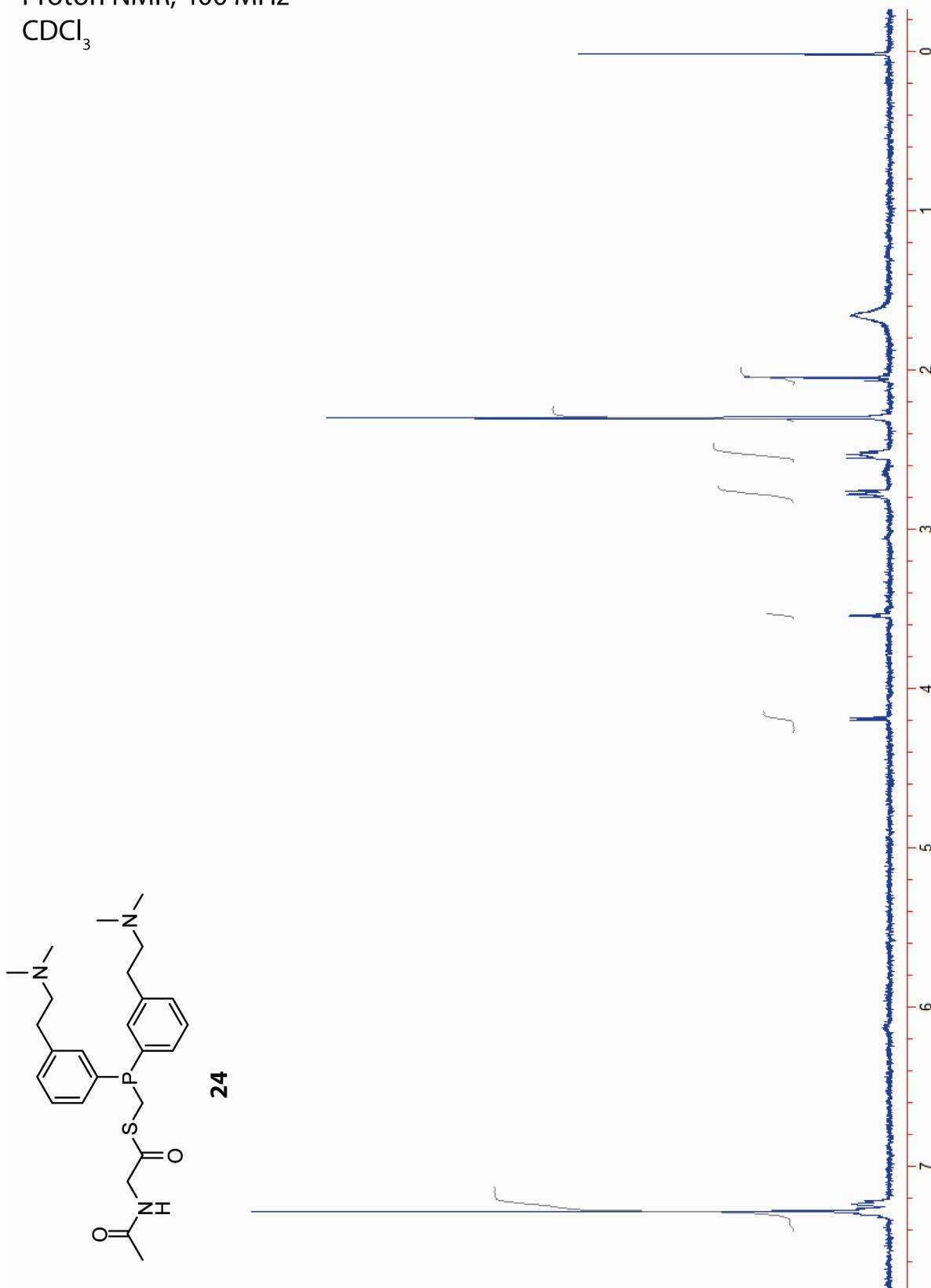
 $\text{CDCl}_3$ 

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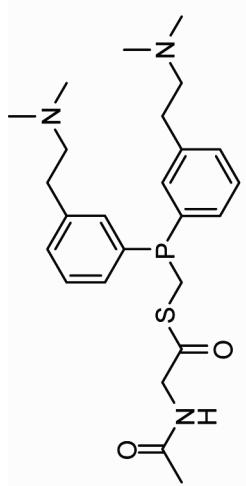
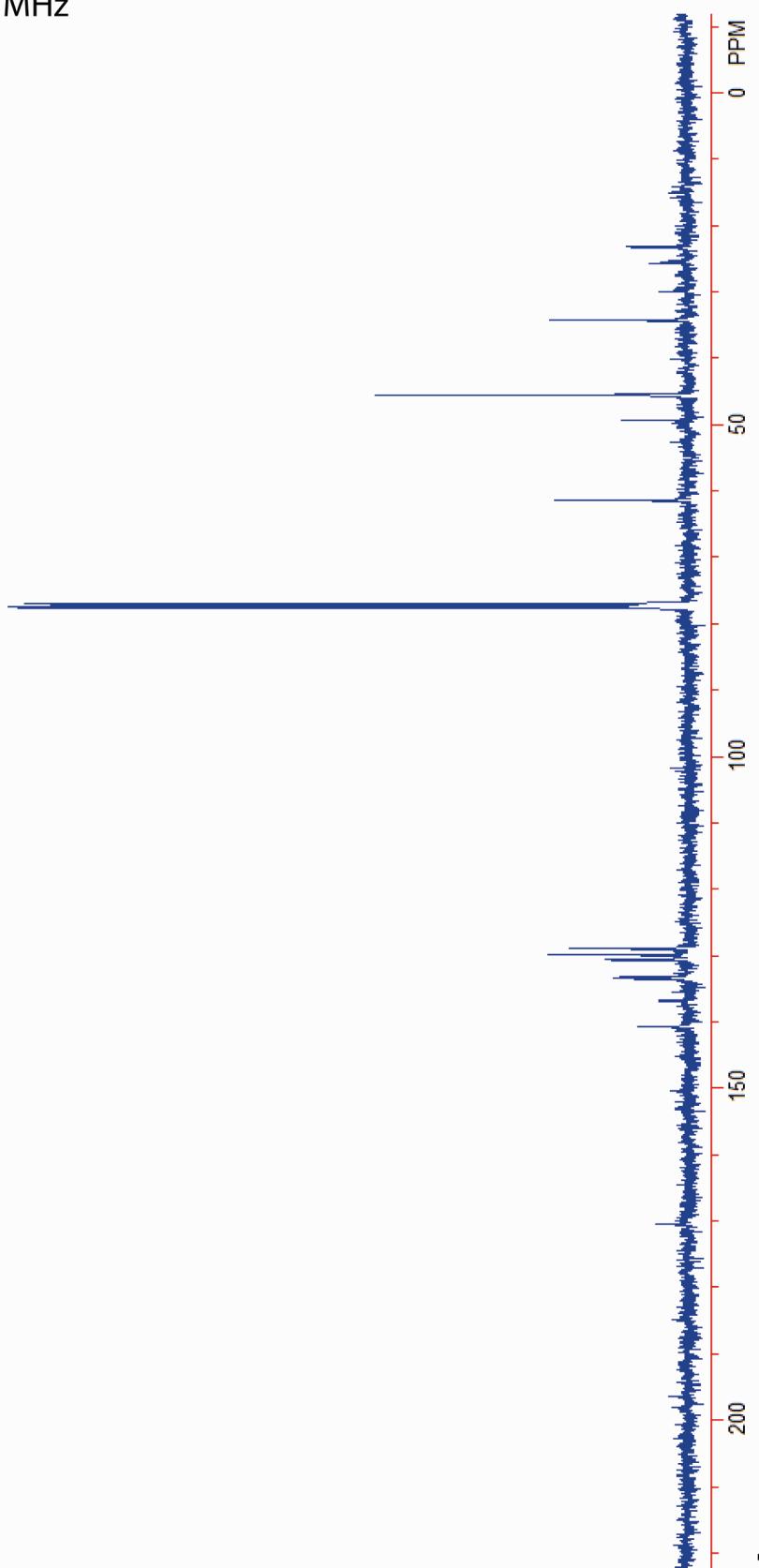
Phosphorus-31 NMR, 121 MHz  
 $\text{CDCl}_3$



Proton NMR, 400 MHz

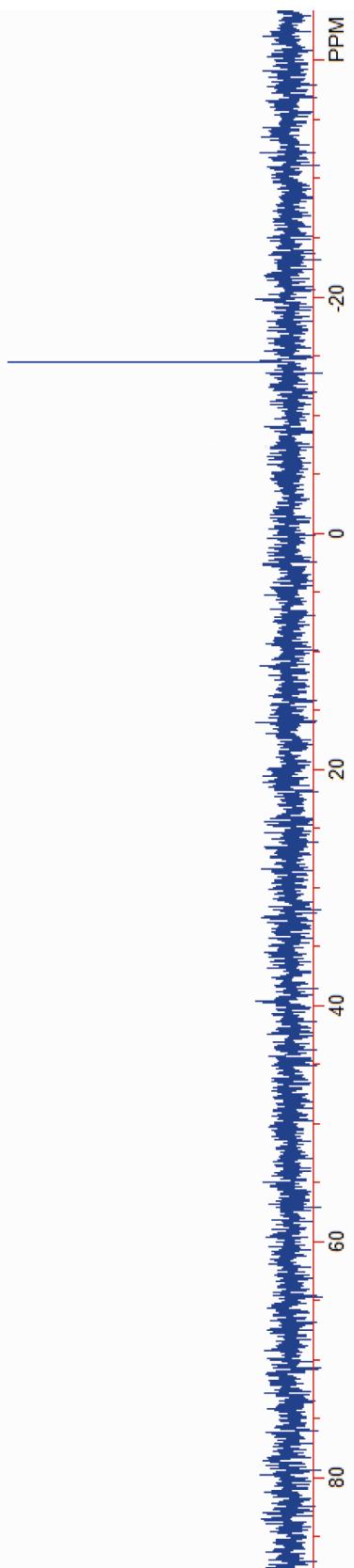
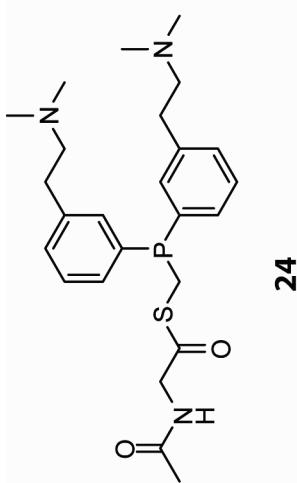
 $\text{CDCl}_3$ **24**

Carbon-13 NMR, 100.6 MHz

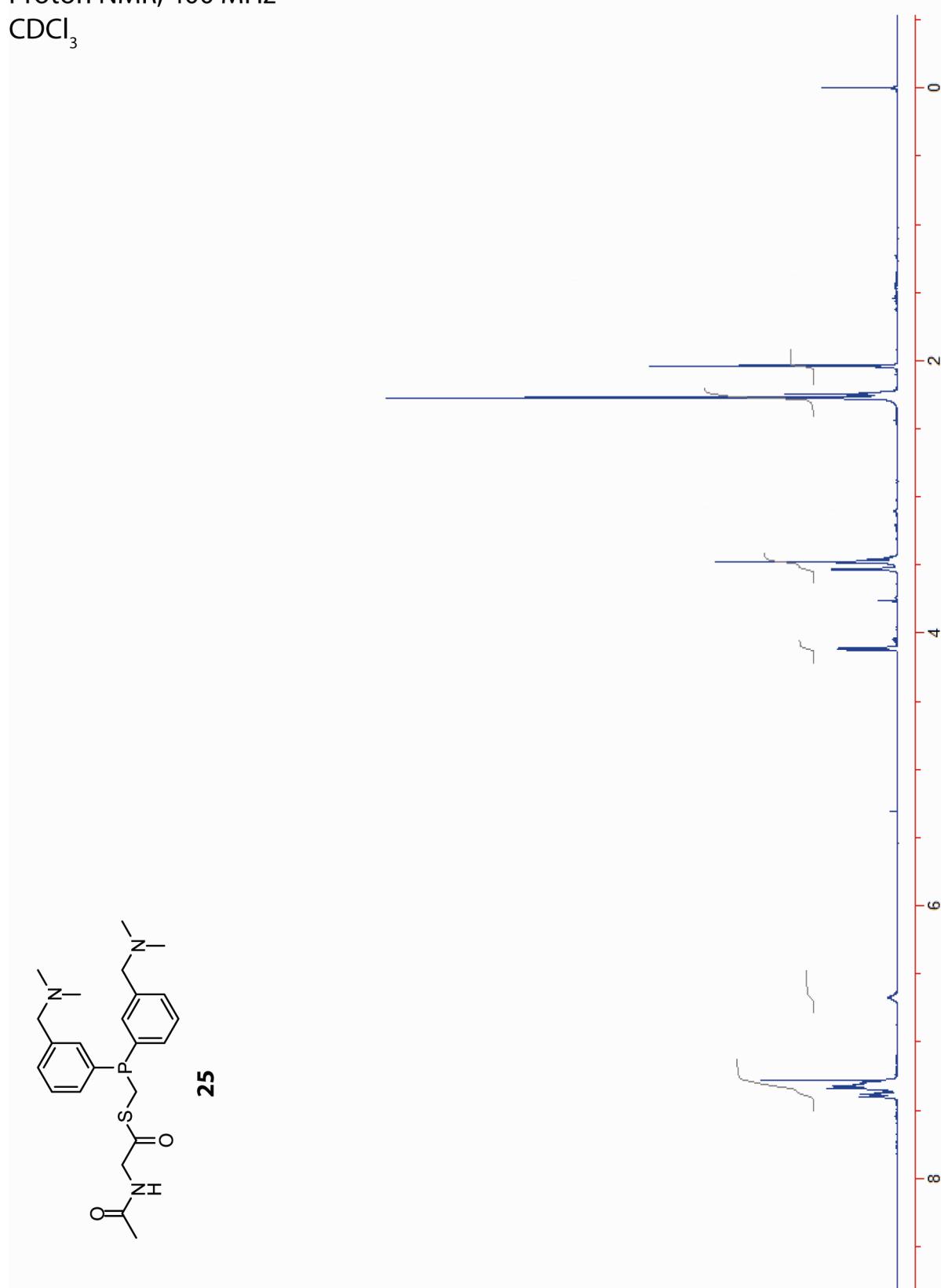
 $\text{CDCl}_3$ 

24

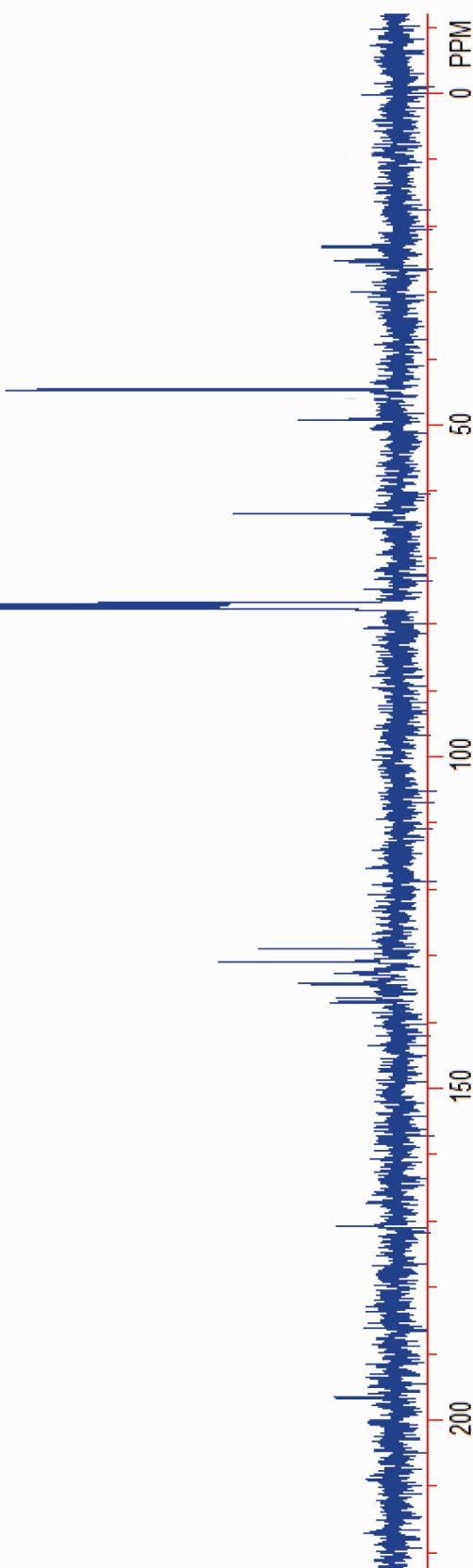
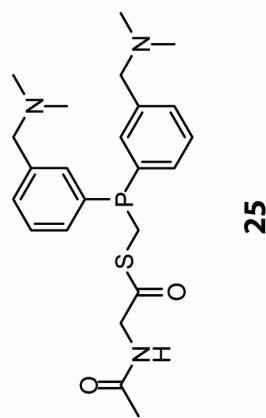
Phosphorus-31 NMR, 121 MHz  
 $\text{CDCl}_3$



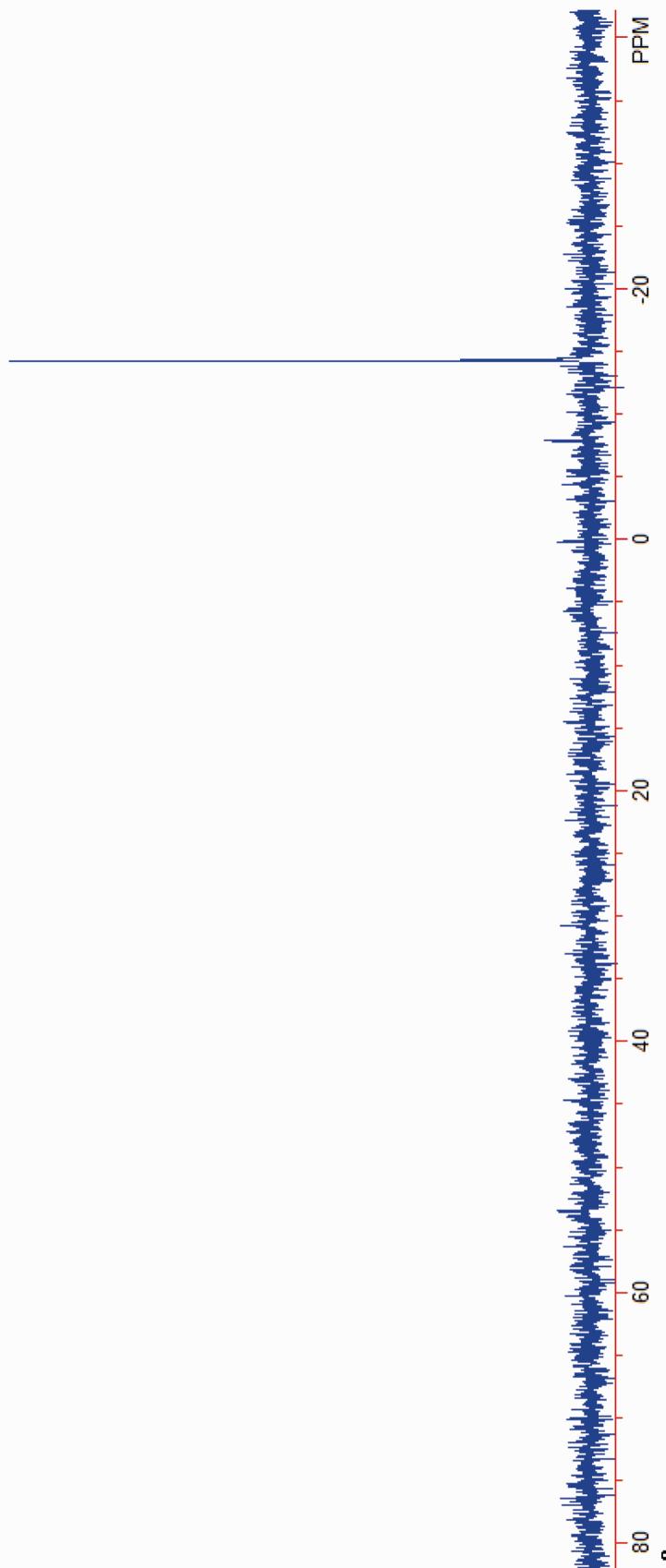
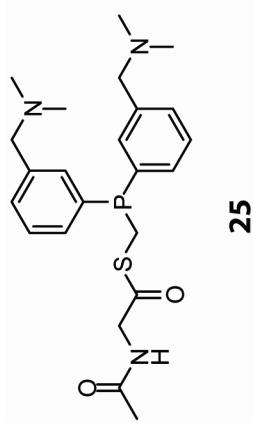
Proton NMR, 400 MHz

 $\text{CDCl}_3$ 

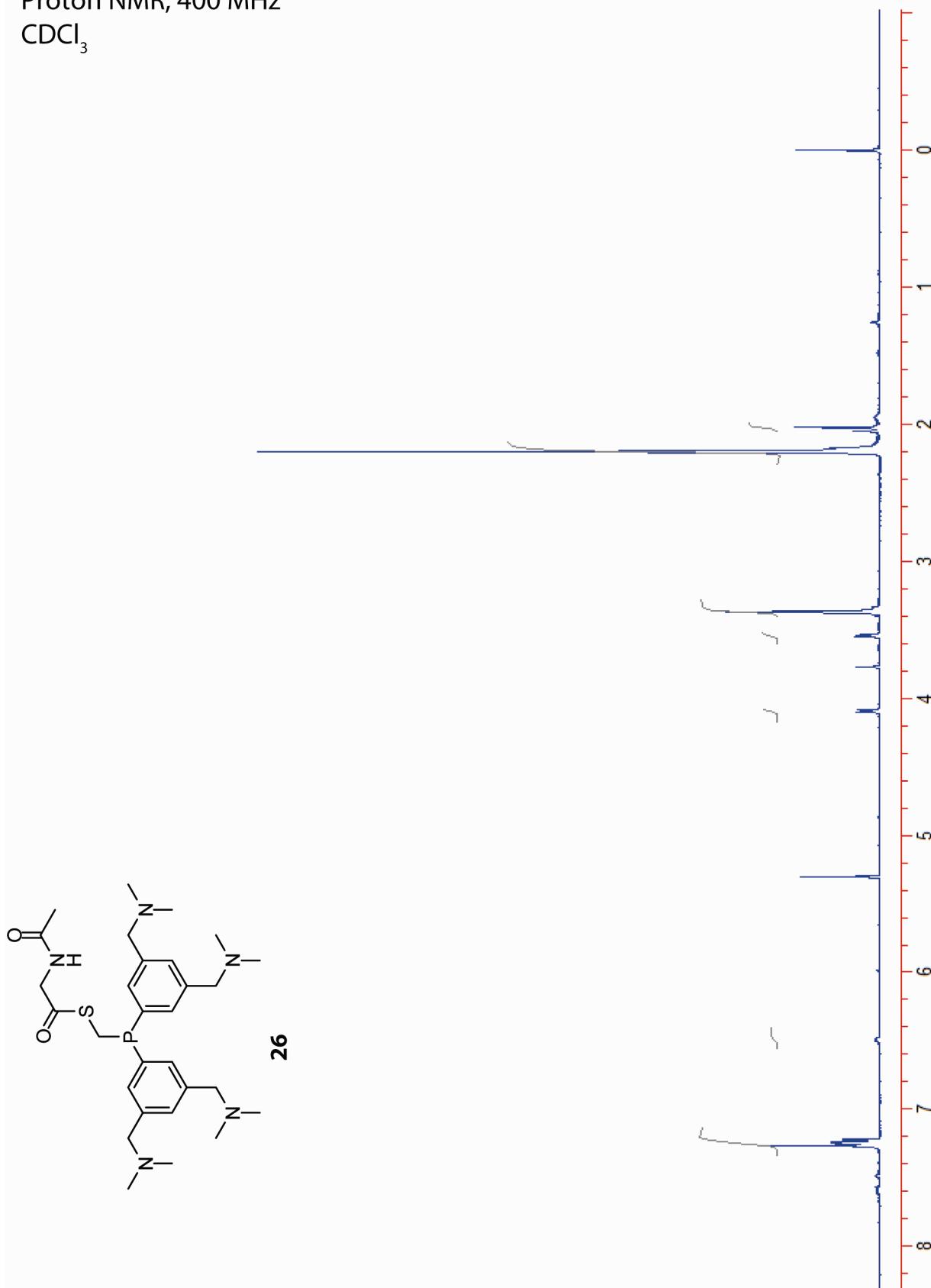
Carbon-13 NMR, 100.6 MHz

 $\text{CDCl}_3$ 

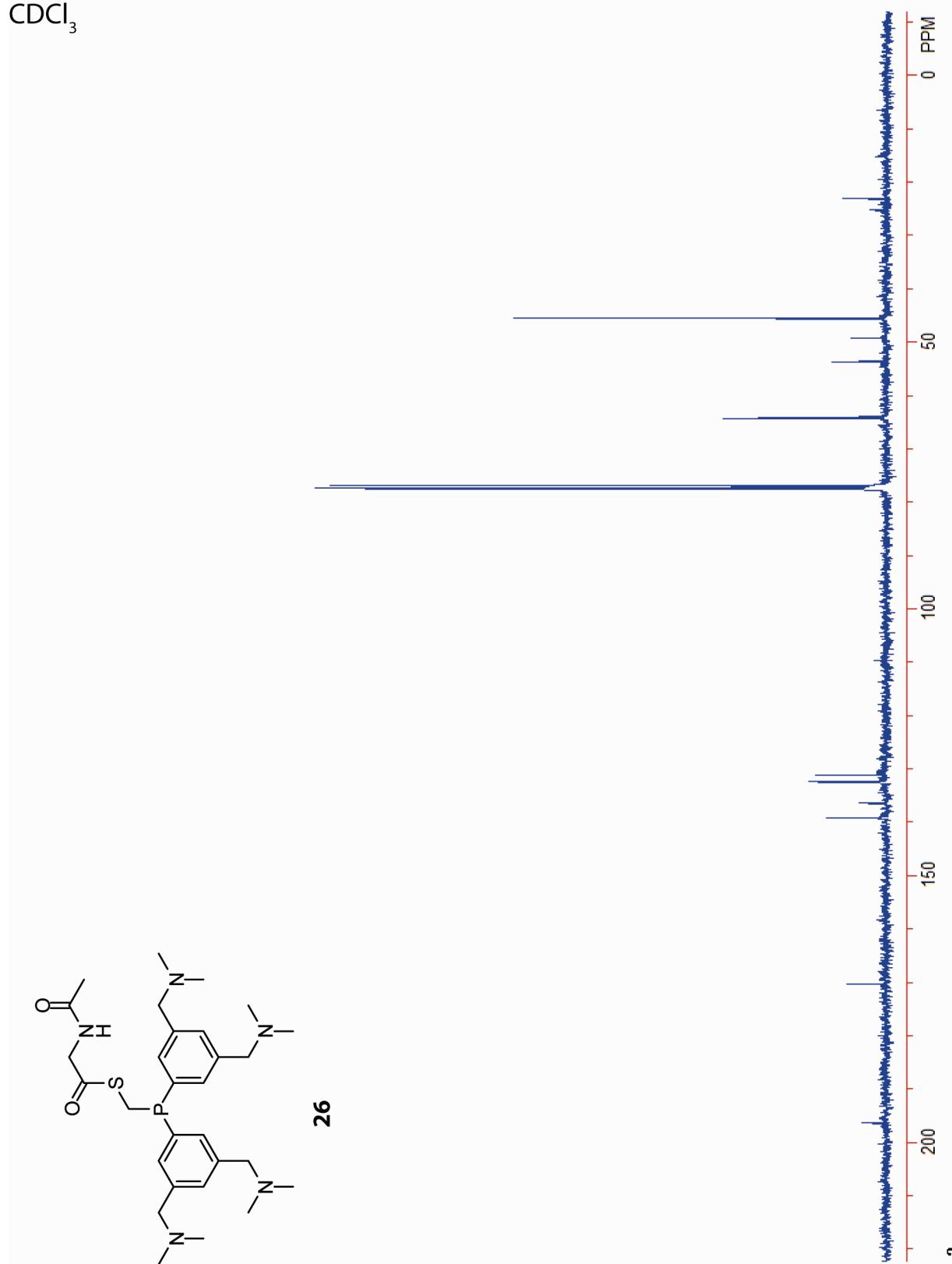
Phosphorus-31 NMR, 121 MHz  
 $\text{CDCl}_3$



Proton NMR, 400 MHz

 $\text{CDCl}_3$ 

Carbon-13 NMR, 100.6 MHz

 $\text{CDCl}_3$ 

Phosphorus-31 NMR, 121 MHz  
 $\text{CDCl}_3$

