

## Supporting Information

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### ***N*-Substituted aziridine-2-phosphonic acids and their antibacterial activities**

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Table of Contents		Page
Figure S1:	<sup>1</sup> H-NMR spectrum of compound 4a	2
Figure S1a:	Expanded region ( $\delta$ 1.53-1.75) from <sup>1</sup> H-NMR Spectrum of compound 4a	2
Figure S2:	<sup>13</sup> C-NMR spectrum of compound 4a	3
Figure S3:	<sup>31</sup> P-NMR spectrum of compound 4a	3
Figure S4:	<sup>1</sup> H-NMR spectrum of compound 4b	4
Figure S4a:	Expanded region ( $\delta$ 0.6-3.4) from <sup>1</sup> H-NMR Spectrum of compound 4b	4
Figure S5:	<sup>13</sup> C-NMR spectrum of compound 4b	5
Figure S6:	<sup>31</sup> P-NMR spectrum of compound 4b	5
Figure S7:	<sup>1</sup> H-NMR spectrum of compound 4c	6
Figure S7a:	Expanded region ( $\delta$ 1.15-1.85) from <sup>1</sup> H-NMR Spectrum of compound 4c	6
Figure S8:	<sup>13</sup> C-NMR spectrum of compound 4c	7
Figure S9:	<sup>31</sup> P-NMR spectrum of compound 4c	7
Figure S10:	<sup>1</sup> H-NMR spectrum of compound 4d	8
Figure S10a:	Expanded region ( $\delta$ 0.2-3.2) from <sup>1</sup> H-NMR Spectrum of compound 4d	8
Figure S11:	<sup>13</sup> C-NMR spectrum of compound 4d	9
Figure S12:	<sup>31</sup> P-NMR spectrum of compound 4d	9
Figure S13:	<sup>1</sup> H-NMR spectrum of compound 4e	10
Figure S14:	<sup>13</sup> C-NMR spectrum of compound 4e	10
Figure S15:	<sup>31</sup> P-NMR spectrum of compound 4e	11
Figure S16:	<sup>1</sup> H-NMR spectrum of compound 4f	11
Figure S17:	<sup>13</sup> C-NMR spectrum of compound 4f	12
Figure S18:	<sup>31</sup> P-NMR spectrum of compound 4f	12
Figure S19:	<sup>1</sup> H-NMR spectrum of compound 4g	13
Figure S20:	<sup>13</sup> C-NMR spectrum of compound 4g	13
Figure S21:	<sup>31</sup> P-NMR spectrum of compound 4g	14
Figure S22:	<sup>1</sup> H-NMR spectrum of compound 4h	14
Figure S23:	<sup>13</sup> C-NMR spectrum of compound 4h	15
Figure S24:	<sup>31</sup> P-NMR spectrum of compound 4h	15
Figure S25:	<sup>1</sup> H-NMR spectrum of compound 4i	16
Figure S26:	<sup>13</sup> C-NMR spectrum of compound 4i	16
Figure S27:	<sup>31</sup> P-NMR spectrum of compound 4i	17
Figure S28:	<sup>1</sup> H-NMR spectrum of compound 4j	17
Figure S29:	<sup>13</sup> C-NMR spectrum of compound 4j	18
Figure S30:	<sup>31</sup> P-NMR spectrum of compound 4j	18
Figure S31:	<sup>1</sup> H-NMR spectrum of compound 4k	19
Figure S32:	<sup>13</sup> C-NMR spectrum of compound 4k	19
Figure S33:	<sup>31</sup> P-NMR spectrum of compound 4k	20
Figure S34:	<sup>1</sup> H-NMR spectrum of compound 4l	20
Figure S35:	<sup>13</sup> C-NMR spectrum of compound 4l	21
Figure S36:	<sup>31</sup> P-NMR spectrum of compound 4l	21

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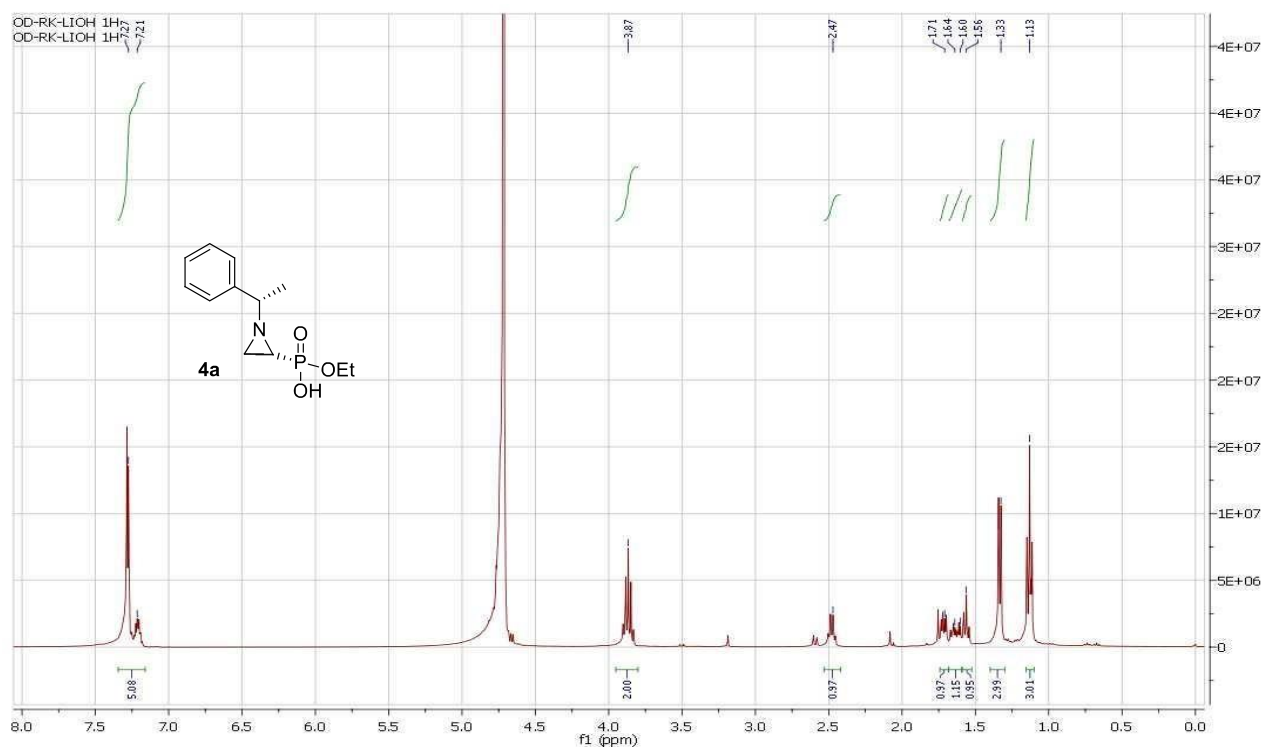


Figure S1:  $^1\text{H-NMR}$  spectrum of compound 4a

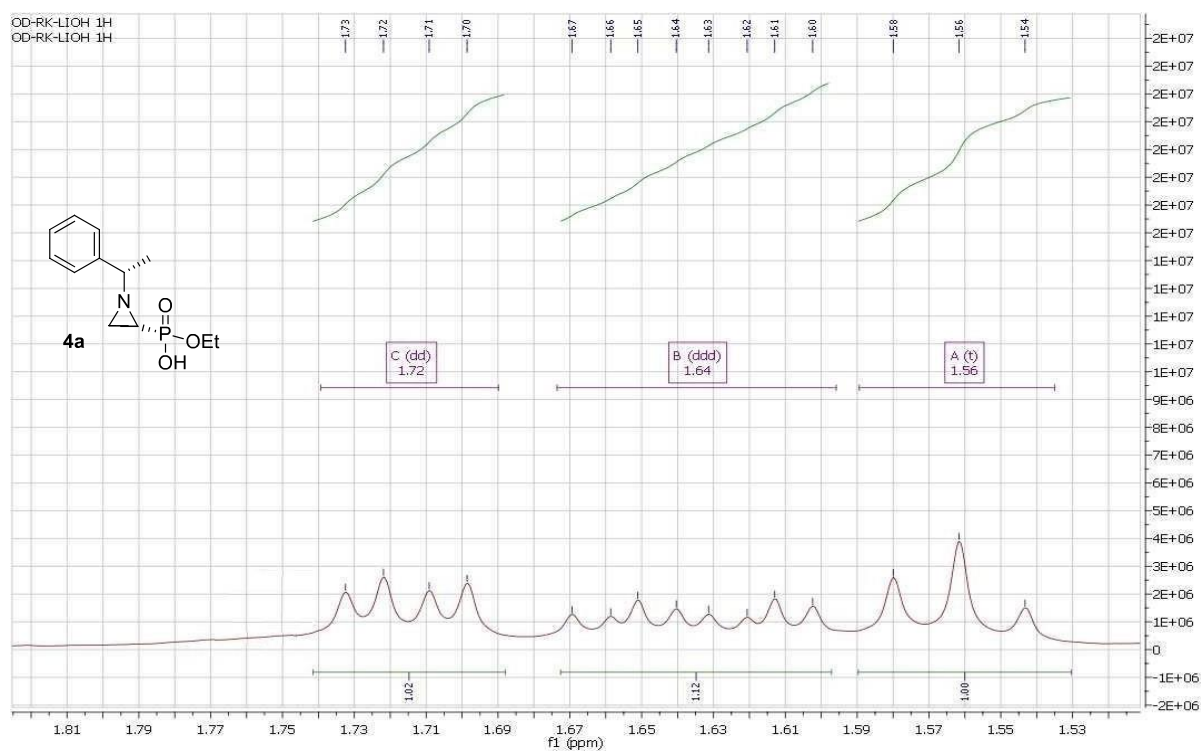


Figure S1a: Expanded region ( $\delta$  1.53-1.75) from  $^1\text{H-NMR}$  Spectrum of compound 4a

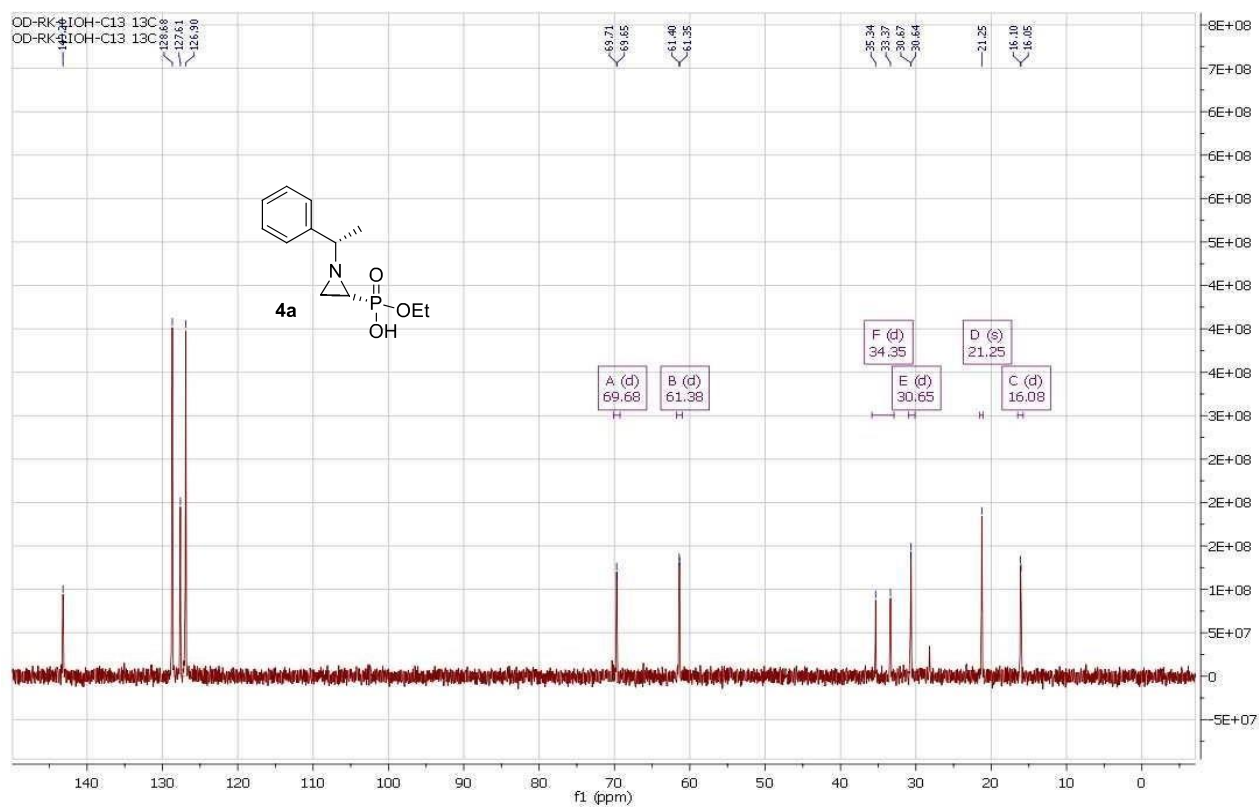


Figure S2:  $^{13}\text{C}$ -NMR spectrum of compound 4a

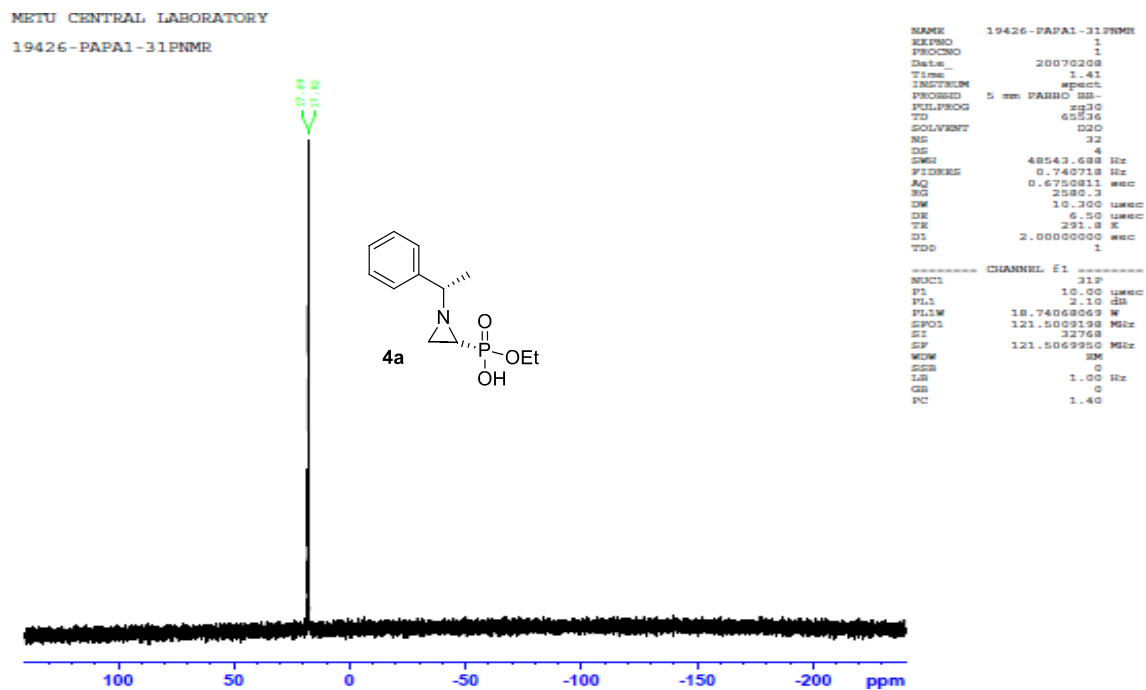
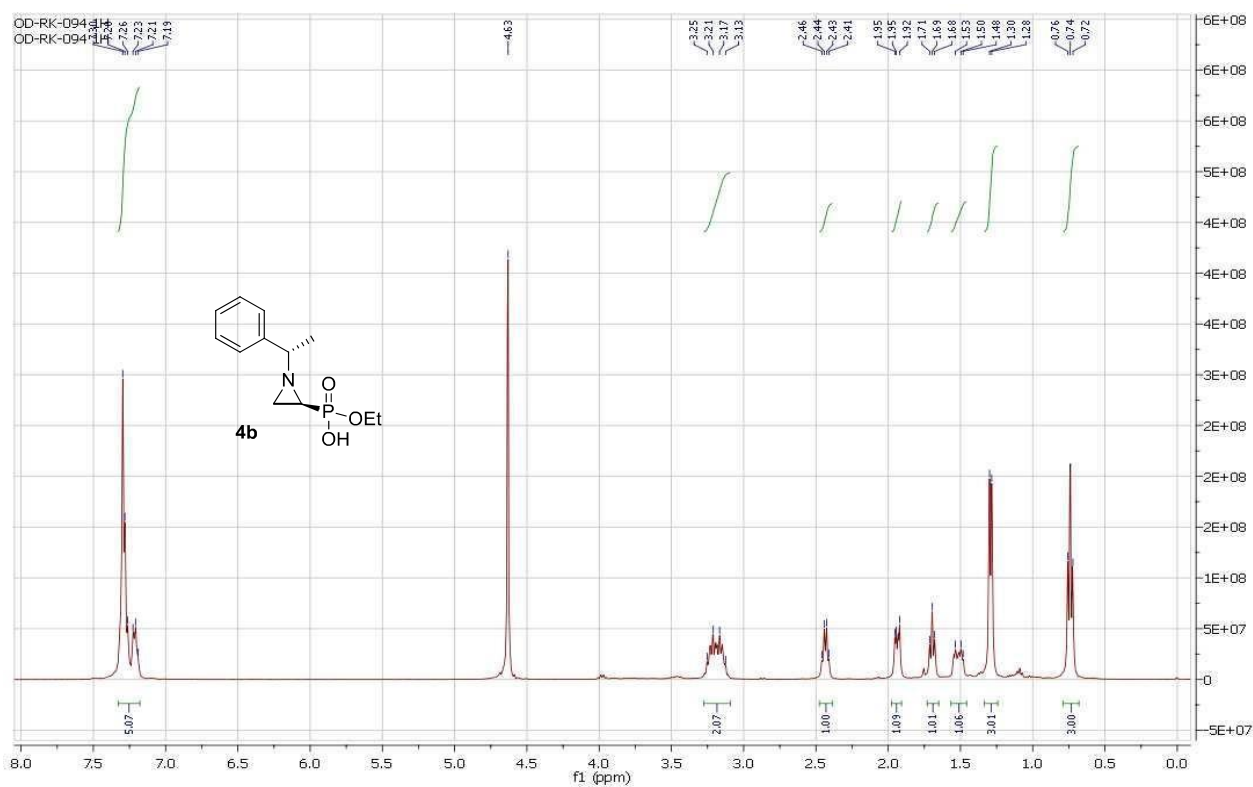
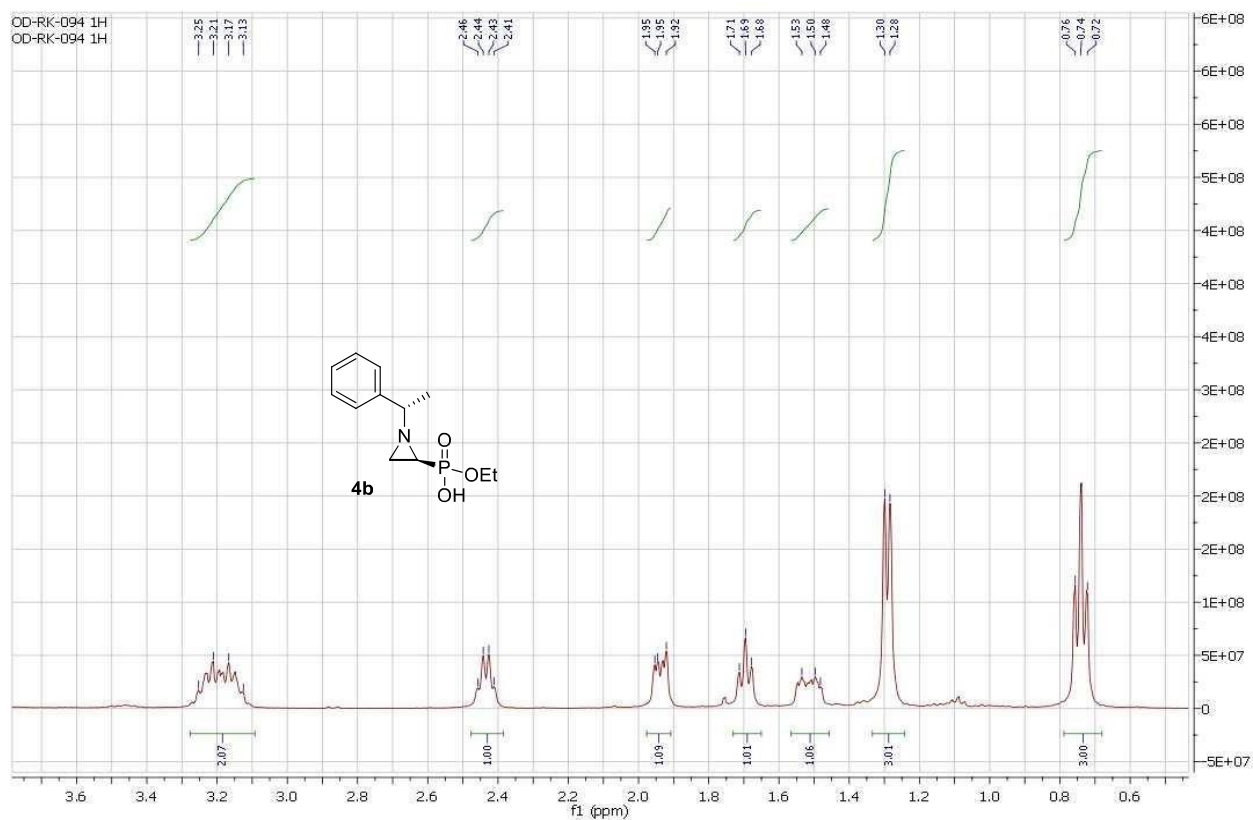


Figure S3:  $^{31}\text{P}$ -NMR spectrum of compound 4a



**Figure S4:**  $^1\text{H-NMR}$  spectrum of compound **4b**



**Figure S4a:** Expanded region ( $\delta$  0.6-3.4) from  $^1\text{H-NMR}$  Spectrum of compound **4b**

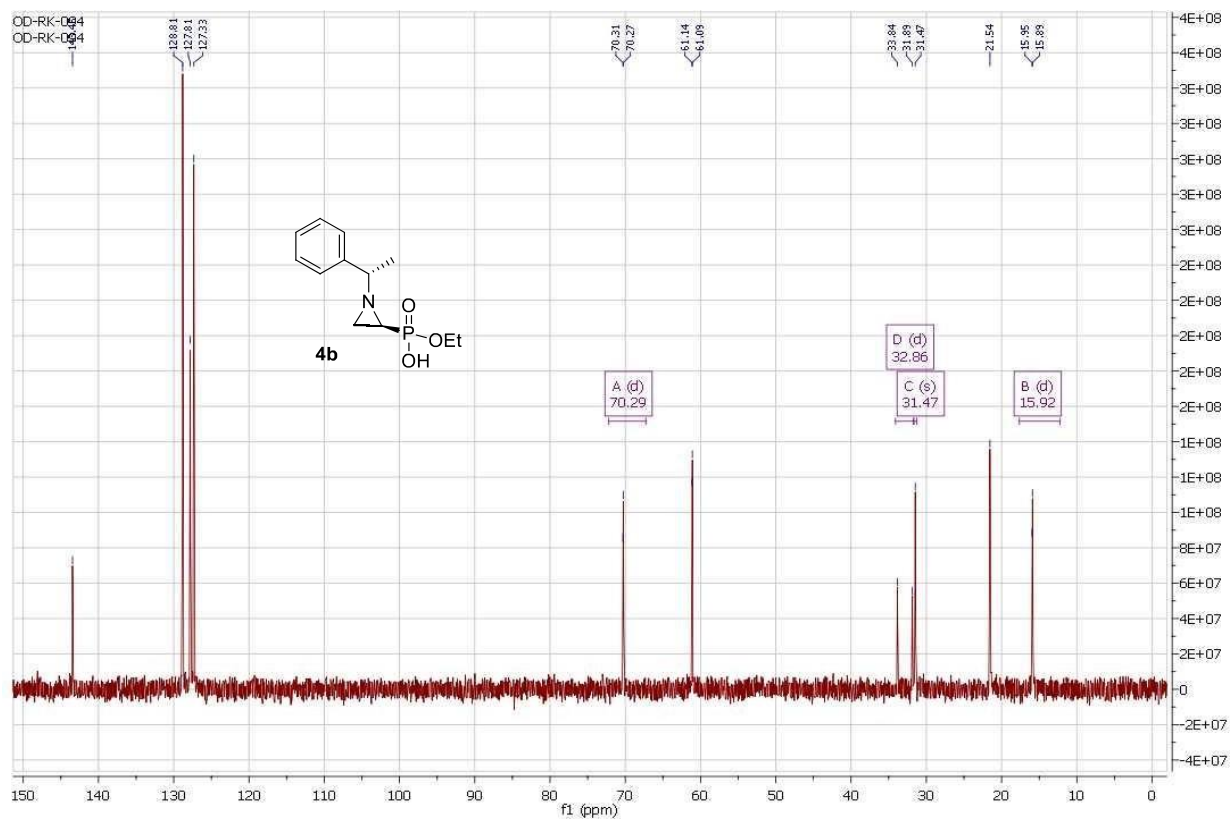


Figure S5:  $^{13}\text{C}$ -NMR spectrum of compound **4b**

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21081-OD-RK-0094

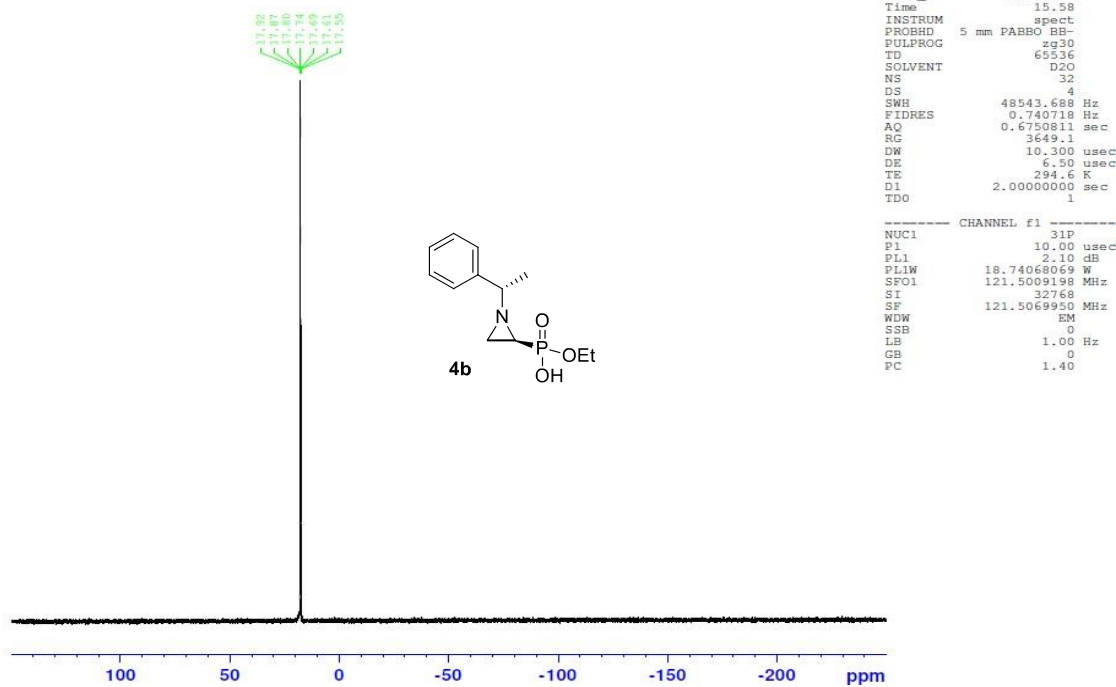
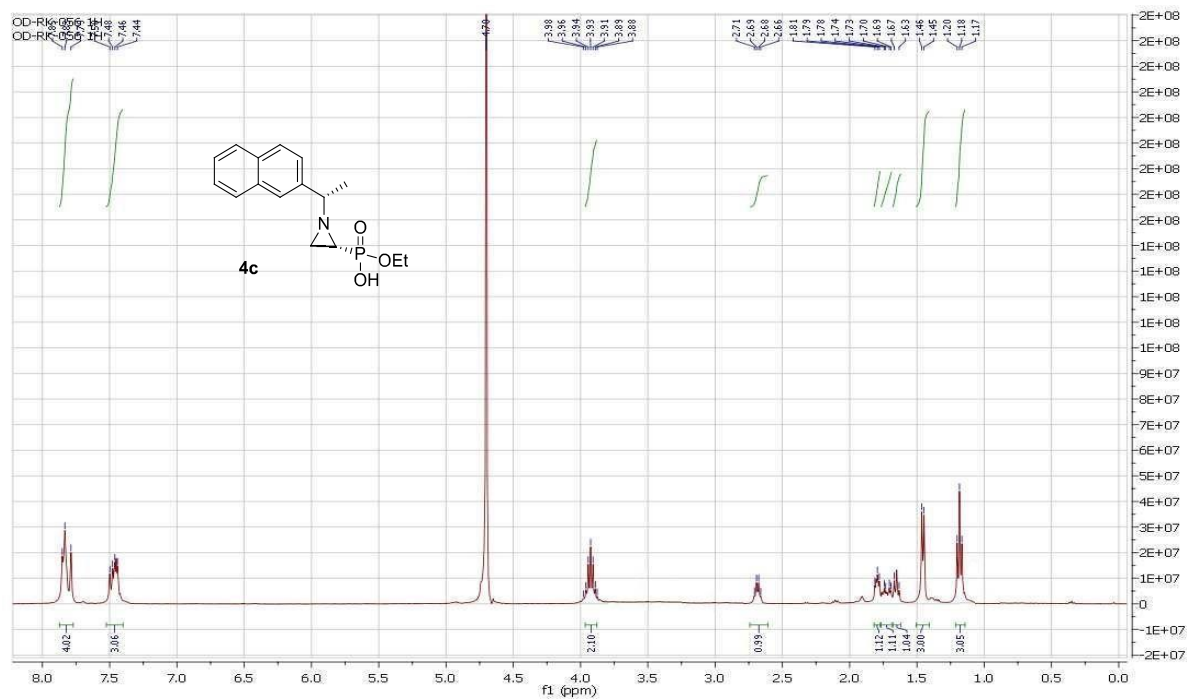
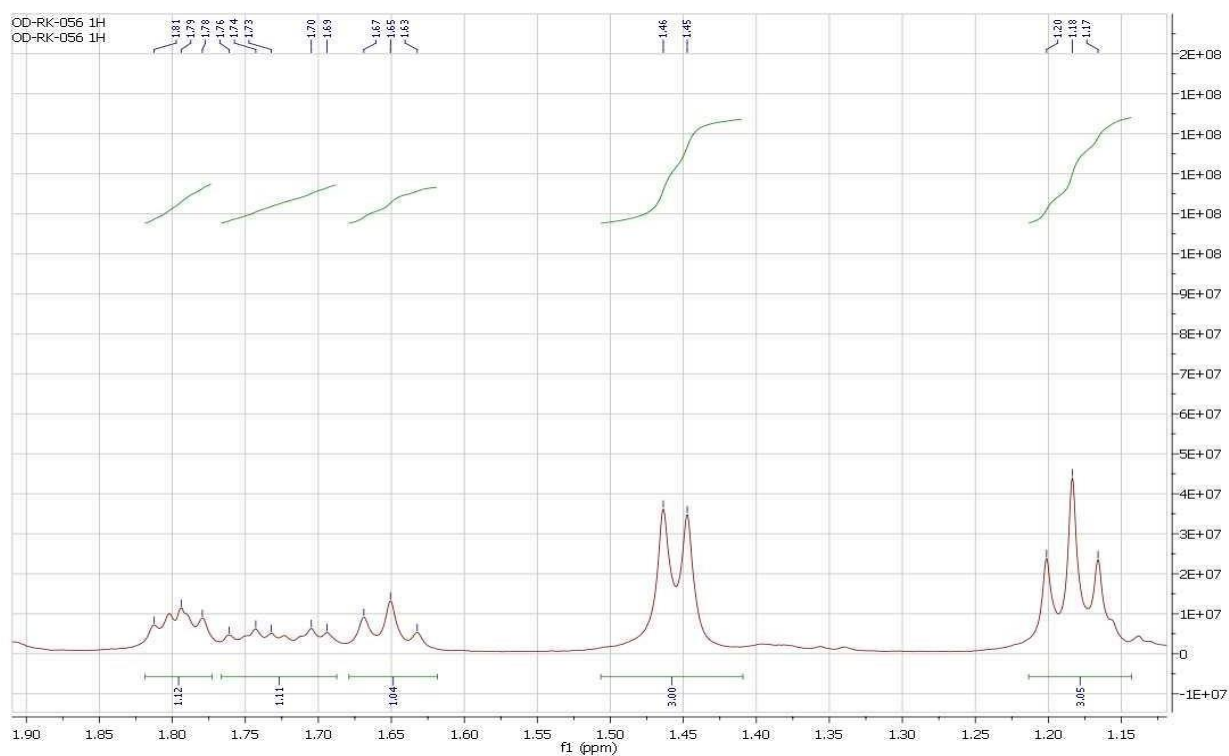


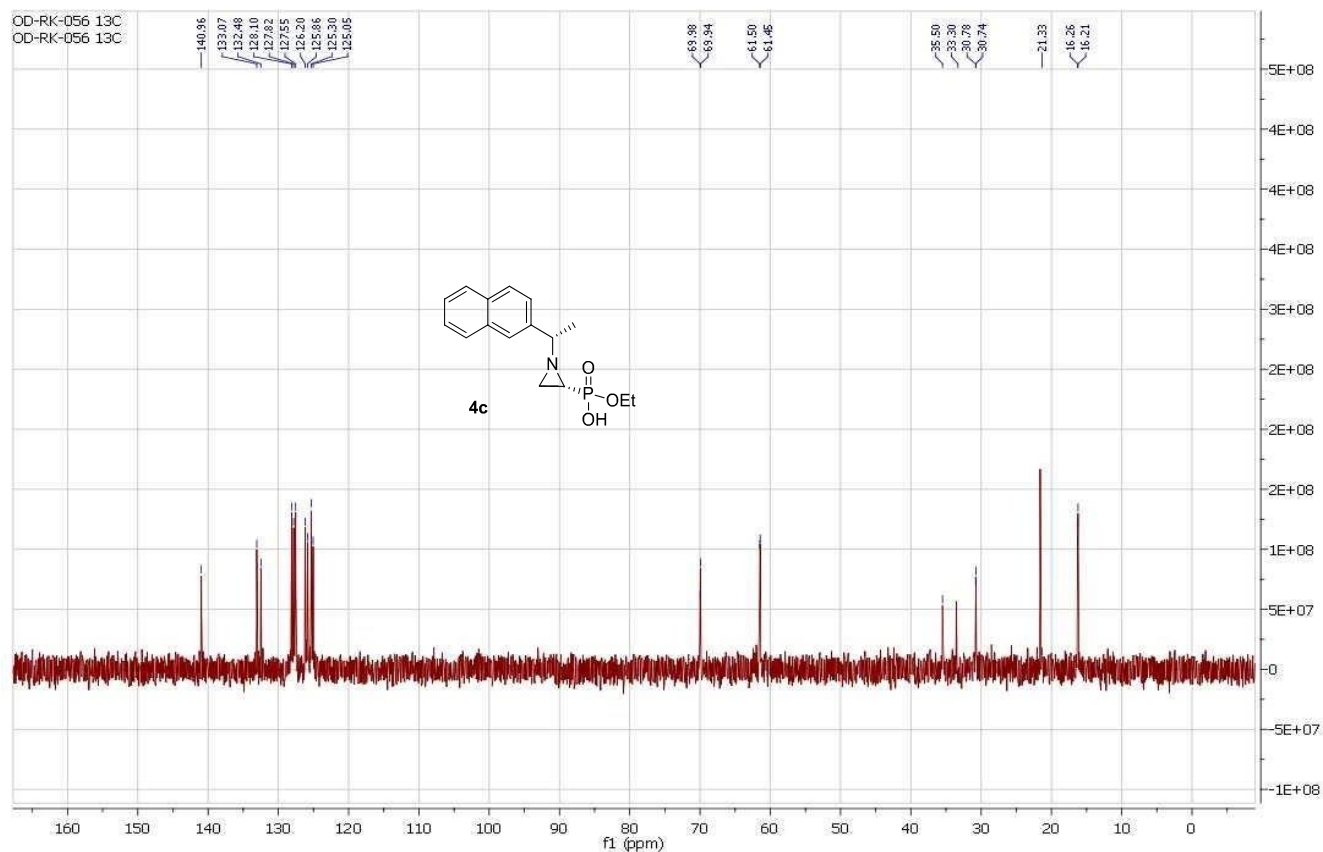
Figure S6:  $^{31}\text{P}$ -NMR spectrum of compound **4b**



**Figure S7:**  $^1\text{H-NMR}$  spectrum of compound **4c**

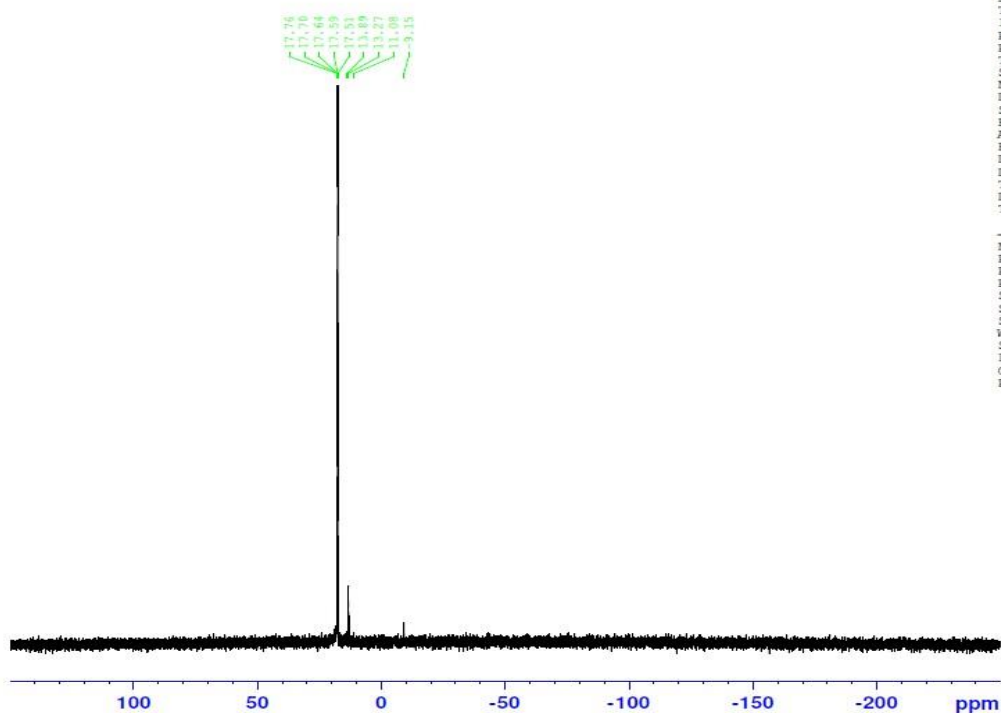


**Figure S7a:** Expanded region ( $\delta$  1.15-1.85) from  $^1\text{H-NMR}$  Spectrum of compound **4c**



**Figure S8:**  $^{13}\text{C}$ -NMR spectrum of compound **4c**

METU CENTRAL LABORATORY  
21081-OD-RK-056



```

NAME      21081-OD-RK-056
EXPNO    1
PROCNO   1
Date_    20060815
Time     17.06
INSTRUM  spect
PROBHD   5 mm PABBO BB-
PULPROG  zg30
TD       65536
SOLVENT  D2O
NS       32
DS       4
SWH      48543.688 Hz
FIDRES   0.740718 Hz
AQ       0.6750811 sec
RG       2580.3
DW       10.300 usec
DE       6.50 usec
TE       296.1 K
D1       2.00000000 sec
TDO      1

----- CHANNEL f1 -----
NUC1     31P
P1       10.00 usec
PL1      2.10 dB
PL1W     18.74068069 W
SF01     121.5009198 MHz
SI       32768
SF       121.5069950 MHz
WDW      EM
SSB      0
LB       1.00 Hz
GB       0
PC       1.40
  
```

**Figure S9:**  $^{31}\text{P}$ -NMR spectrum of compound **4c**

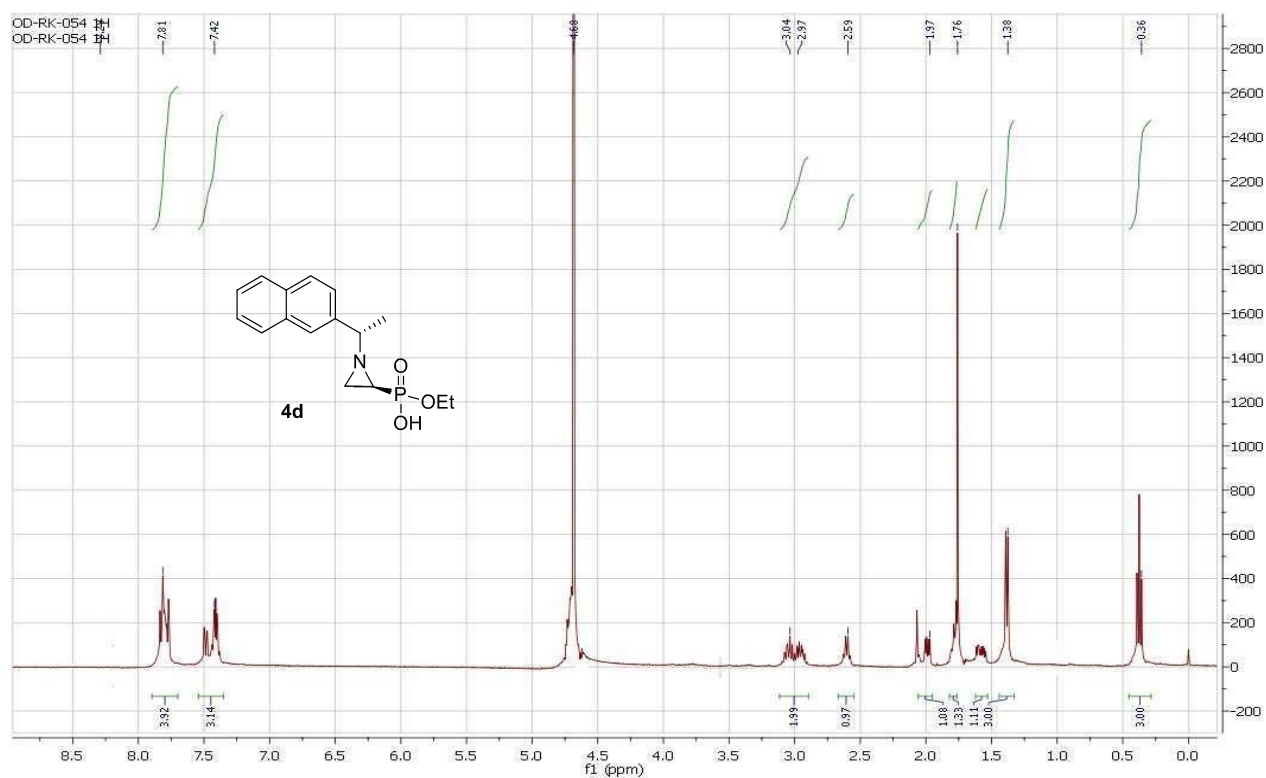


Figure S10: <sup>1</sup>H-NMR spectrum of compound 4d

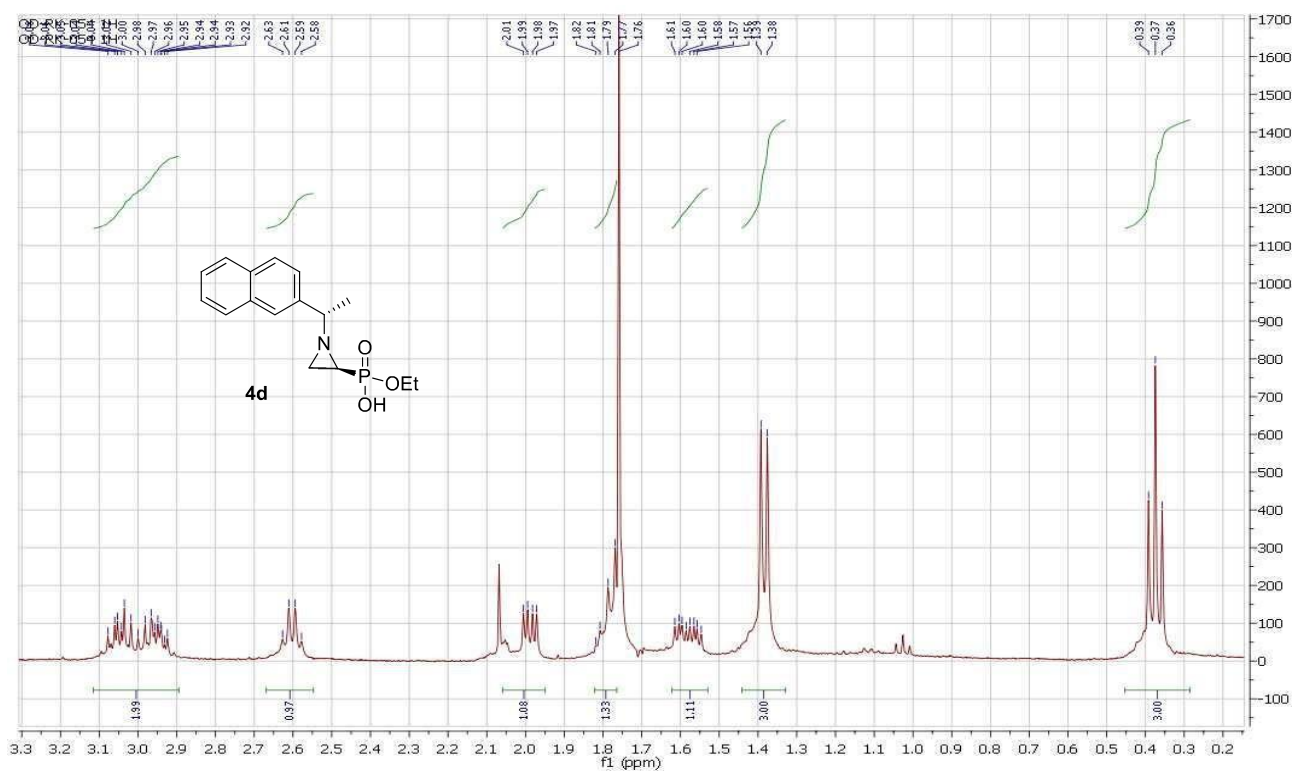


Figure S10a: Expanded region ( $\delta$  0.2-3.2) from <sup>1</sup>H-NMR Spectrum of compound 4d



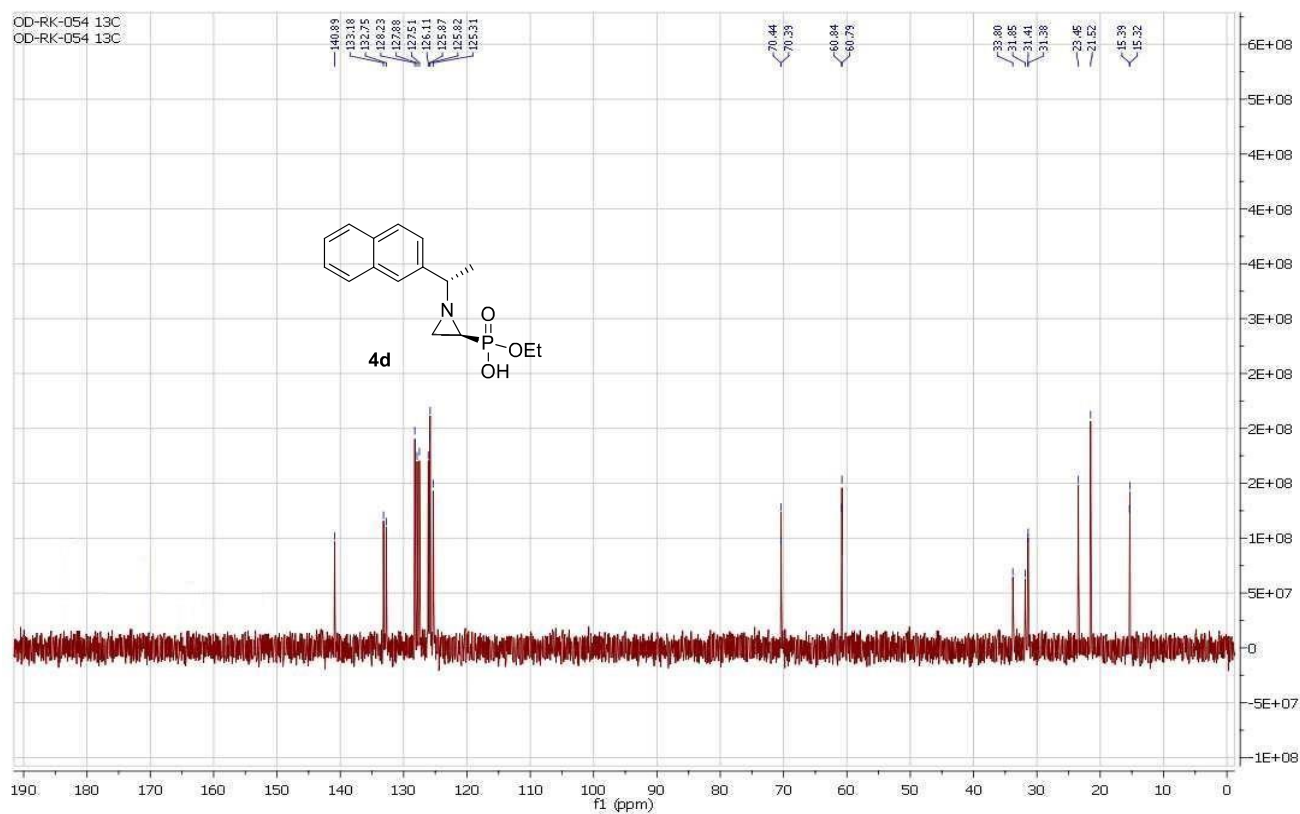


Figure S11:  $^{13}\text{C}$ -NMR spectrum of compound 4d

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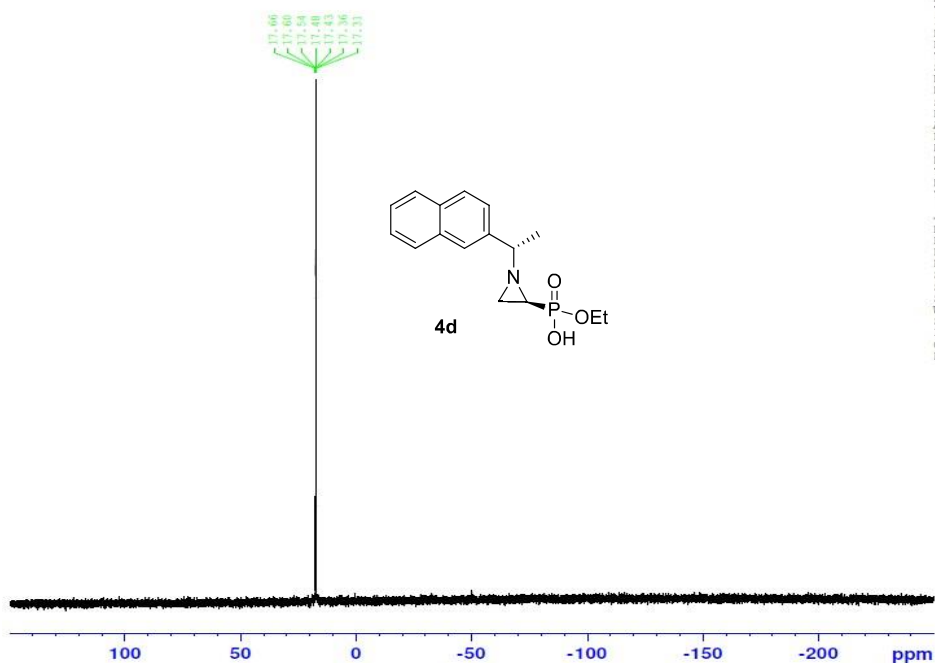


Figure S12:  $^{31}\text{P}$ -NMR spectrum of compound 4d

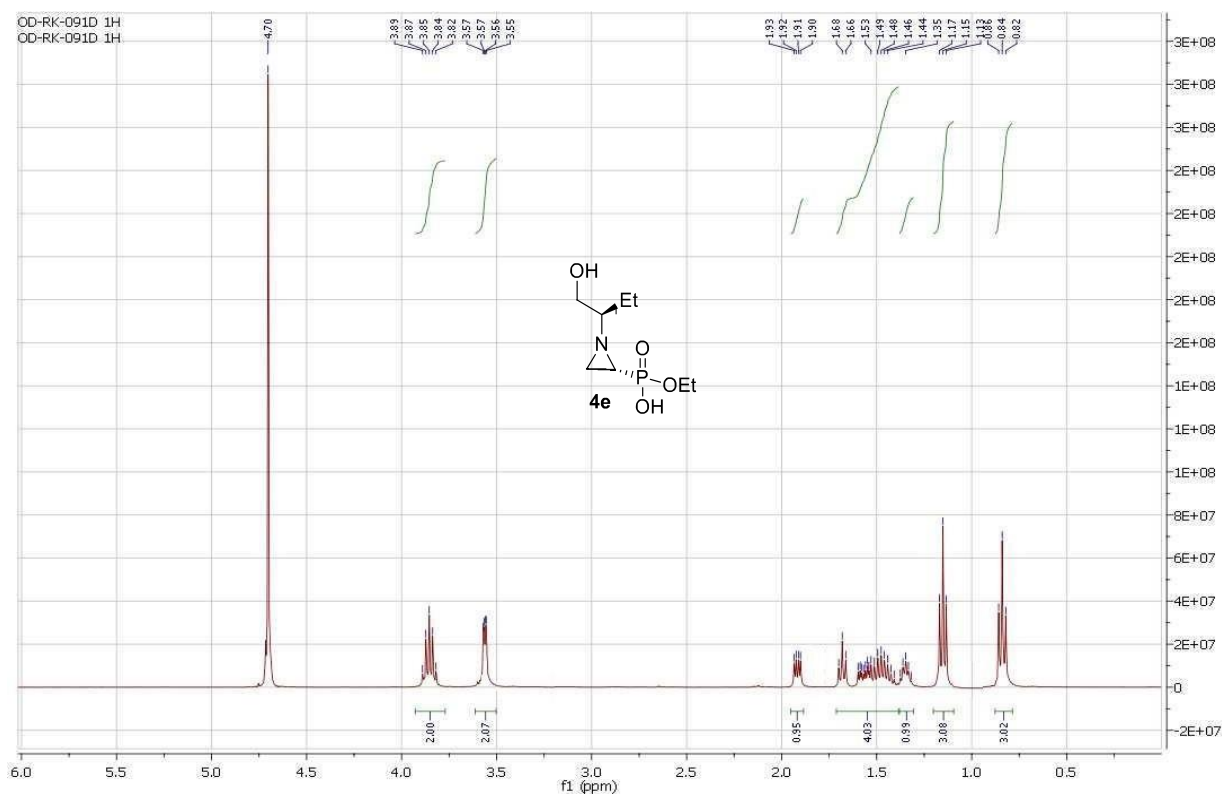


Figure S13:  $^1\text{H-NMR}$  spectrum of compound **4e**

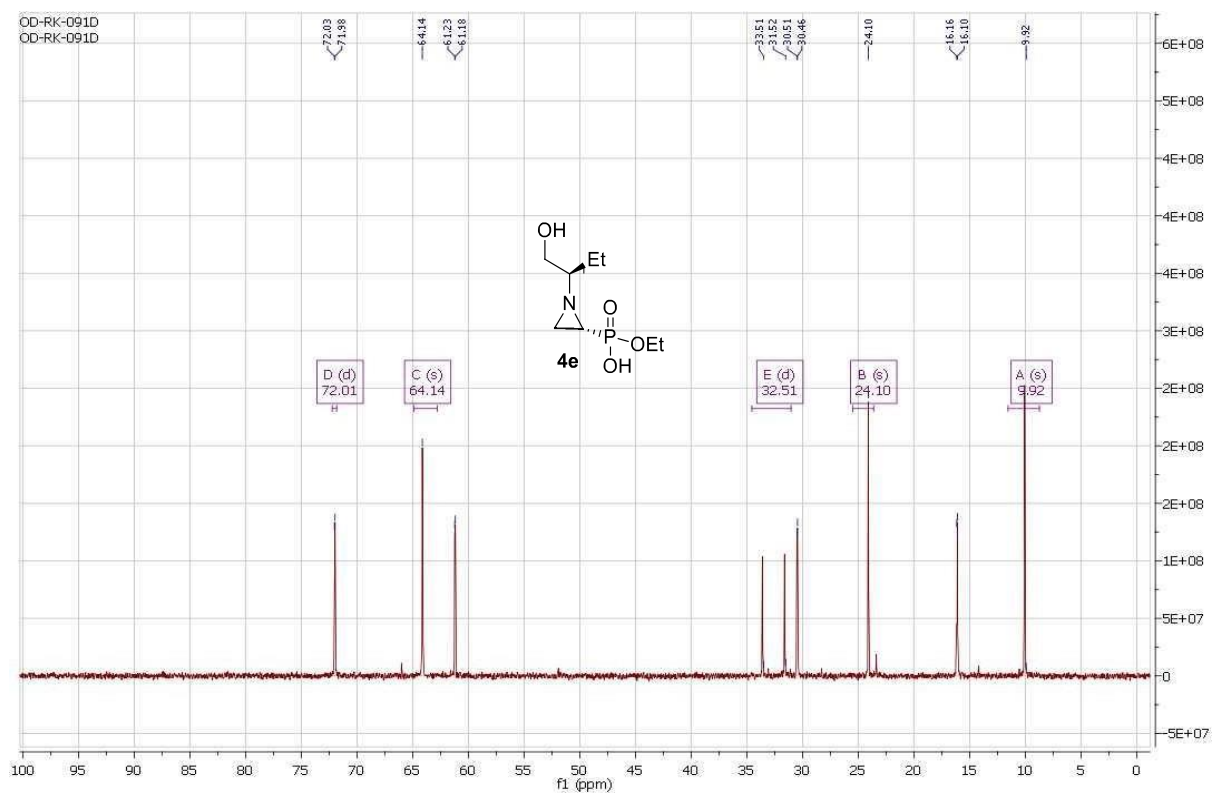
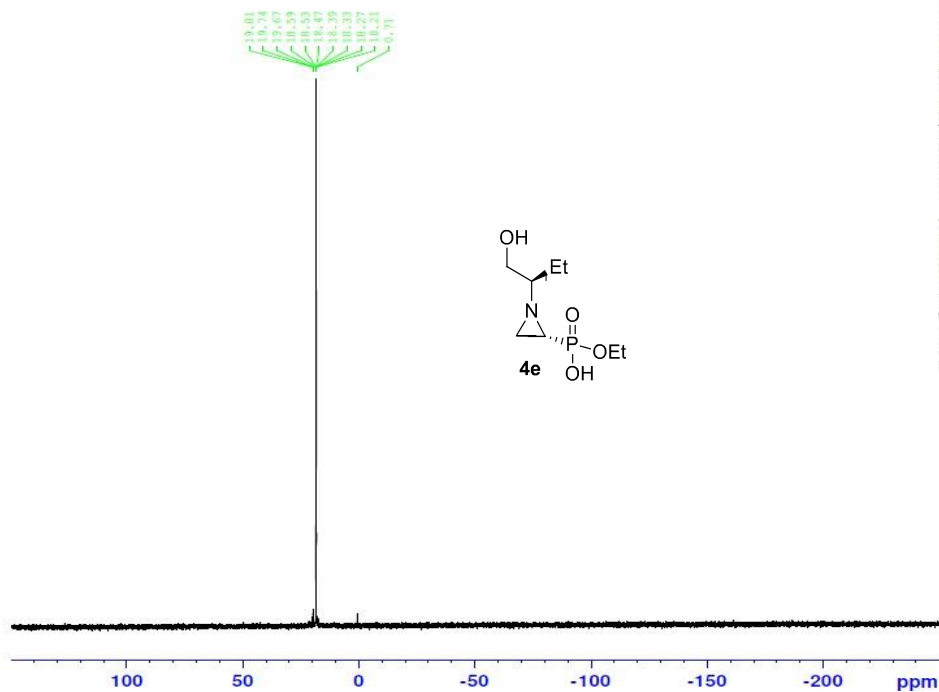


Figure S14:  $^{13}\text{C-NMR}$  spectrum of compound **4e**

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21081-OD-RK-091



```
NAME      21081-OD-RK-091
EXPNO     1
PROCNO    1
Date_     20060815
Time      16.49
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zg30
TD        65536
SOLVENT   D2O
NS        32
DS        4
SWH       48543.688 Hz
FIDRES    0.740718 Hz
AQ        0.6750811 sec
RG        2580.3
DW        10.300 usec
DE        6.50 usec
TE        295.7 K
D1        2.00000000 sec
TDO       1

----- CHANNEL f1 -----
NUC1      31P
P1        10.00 usec
PL1       2.10 dB
PL1W      18.74066069 W
SFO1      121.5009198 MHz
SI        32768
SF        121.5069950 MHz
WDW       EM
SSB       0
LB        1.00 Hz
GB        0
PC        1.40
```

Figure S15: <sup>31</sup>P-NMR spectrum of compound 4e

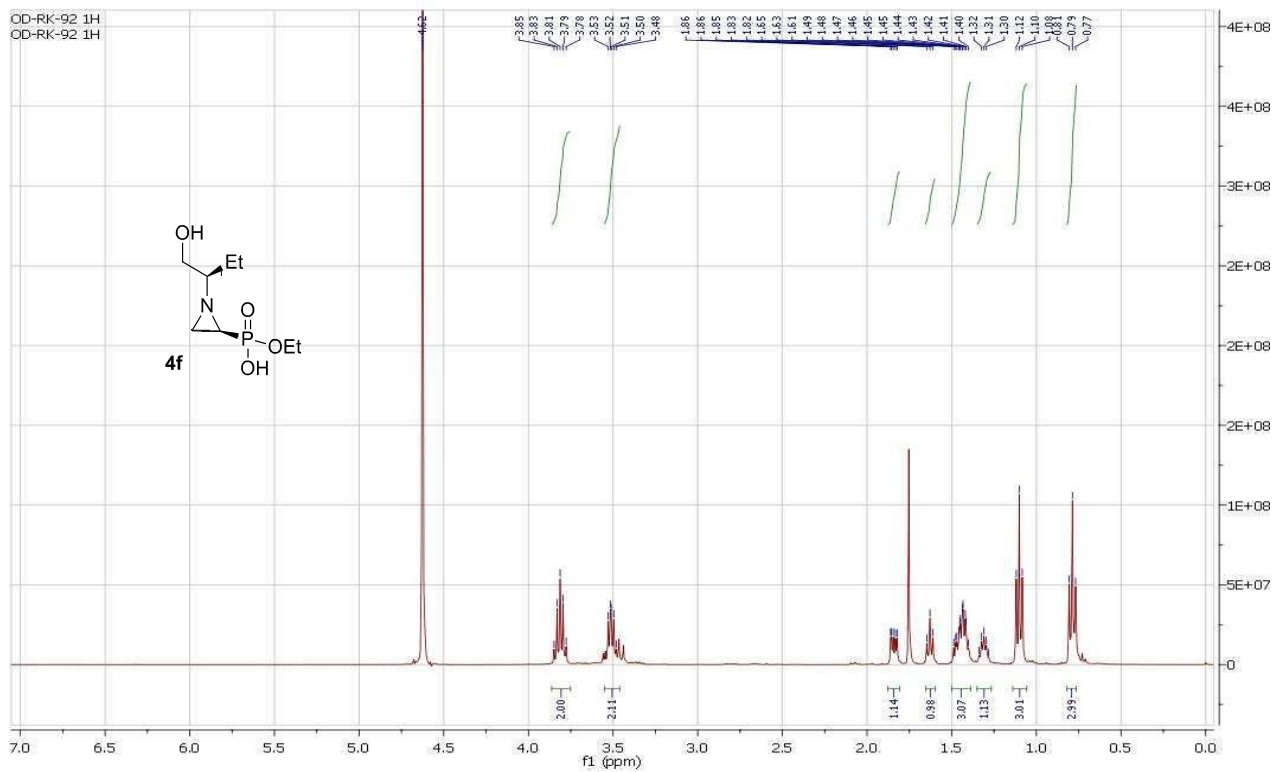


Figure S16: <sup>1</sup>H-NMR spectrum of compound 4f

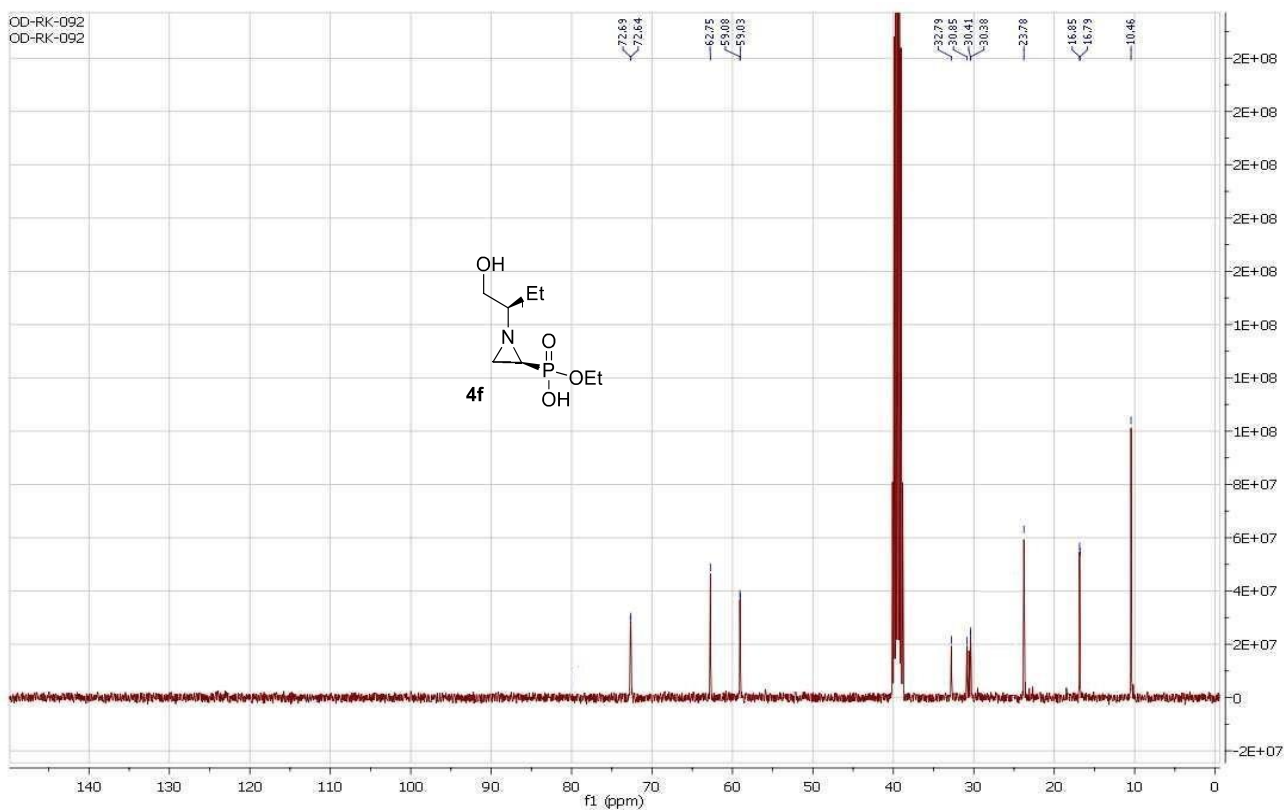


Figure S17:  $^{13}\text{C}$ -NMR spectrum of compound **4f**

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21081-OD-RK-92

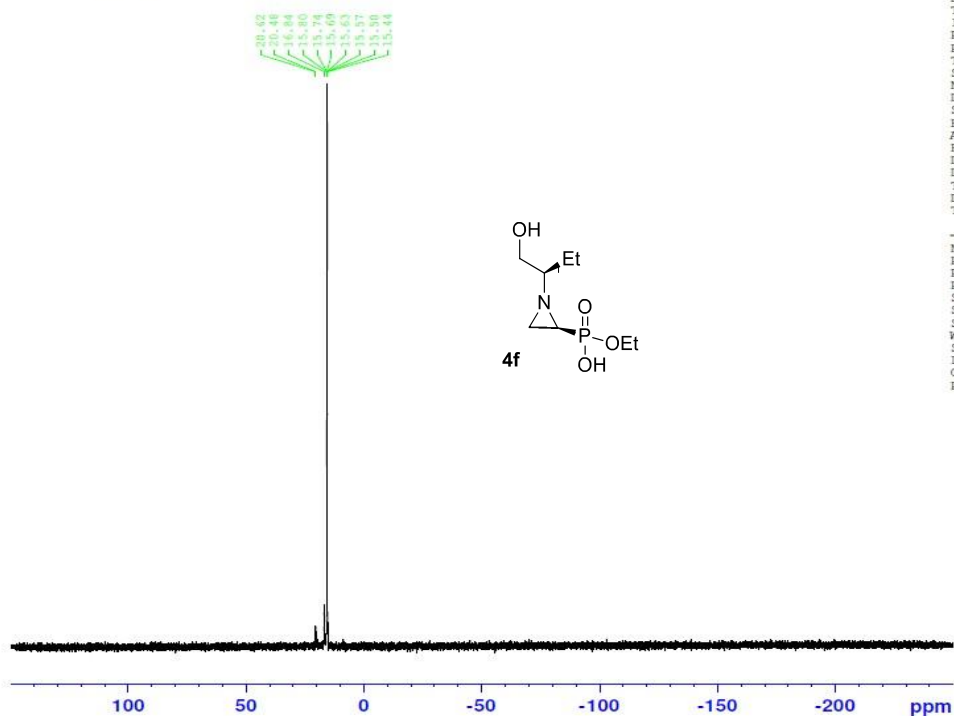
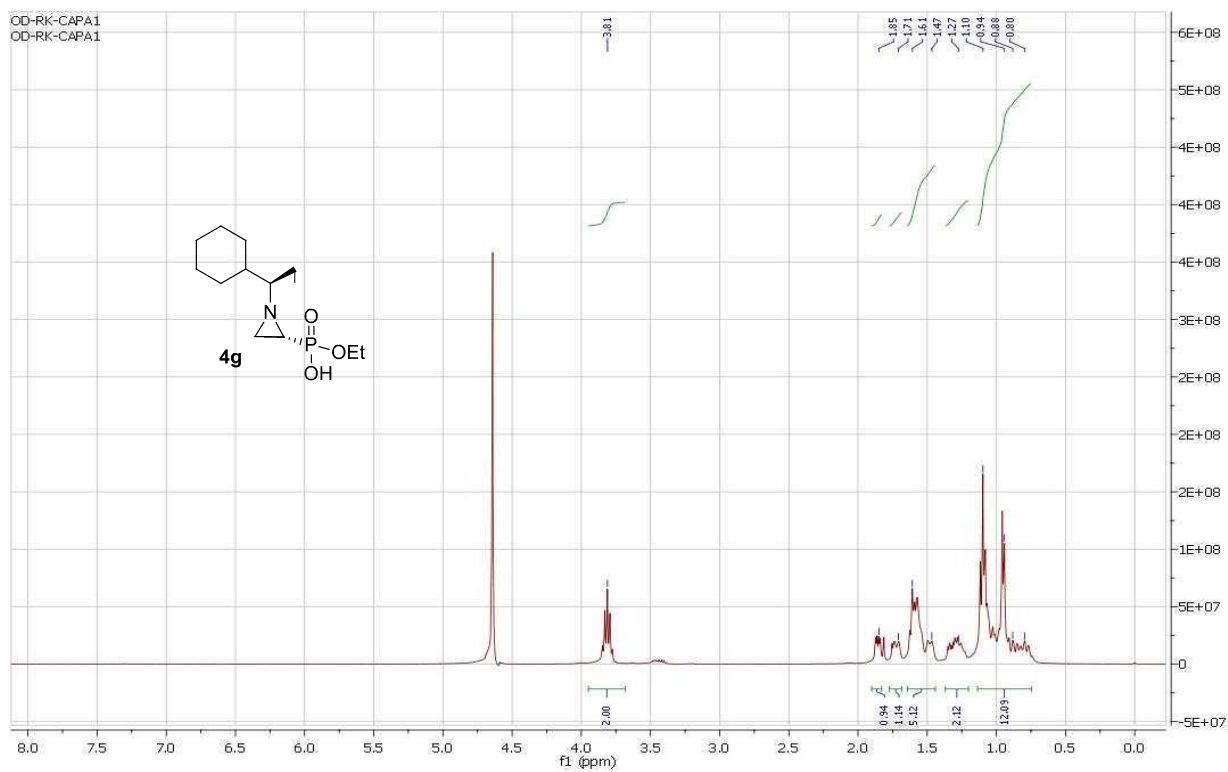
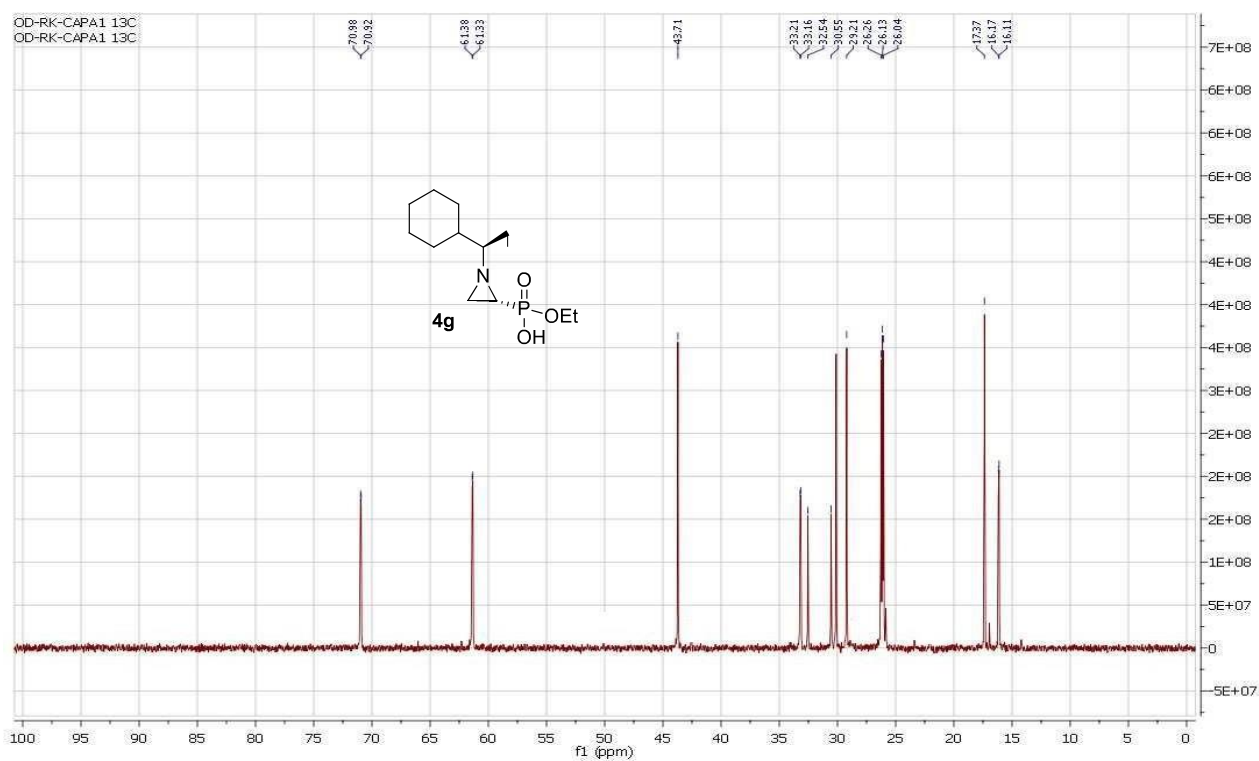


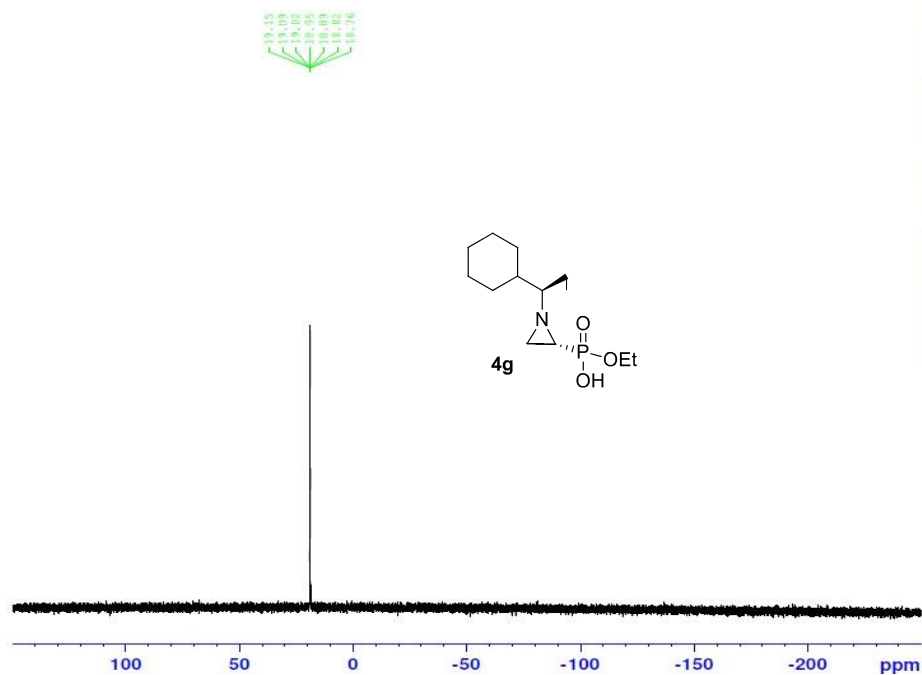
Figure S18:  $^{31}\text{P}$ -NMR spectrum of compound **4f**



**Figure S19:**  $^1\text{H}$ -NMR spectrum of compound **4g**



**Figure S20:**  $^{13}\text{C}$ -NMR spectrum of compound **4g**



```

NAME      21081-OD-RK-CAPA1
EXPNO     1
PROCNO    1
Date_     20060815
Time      17.27
INSTRUM   spect
PROBHD    5 mm PABBO BE-
PULPROG   zg30
TD         65536
SOLVENT   D2O
NS         32
DS         4
SWH        48543.688 Hz
FIDRES     0.740718 Hz
AQ         0.6750811 sec
RG         2580.3
DW         10.300 usec
DE         6.50 usec
TE         296.5 K
D1         2.0000000 sec
TDO        1
    
```

```

----- CHANNEL f1 -----
NUC1      31P
P1        10.00 usec
PL1       2.10 dB
PL1W      18.74068069 W
SF01      121.5009198 MHz
SI         32768
SF         121.5069950 MHz
WDW        EM
SSB        0
LB         1.00 Hz
GB         0
PC         1.40
    
```

Figure S21: <sup>31</sup>P-NMR spectrum of compound 4g

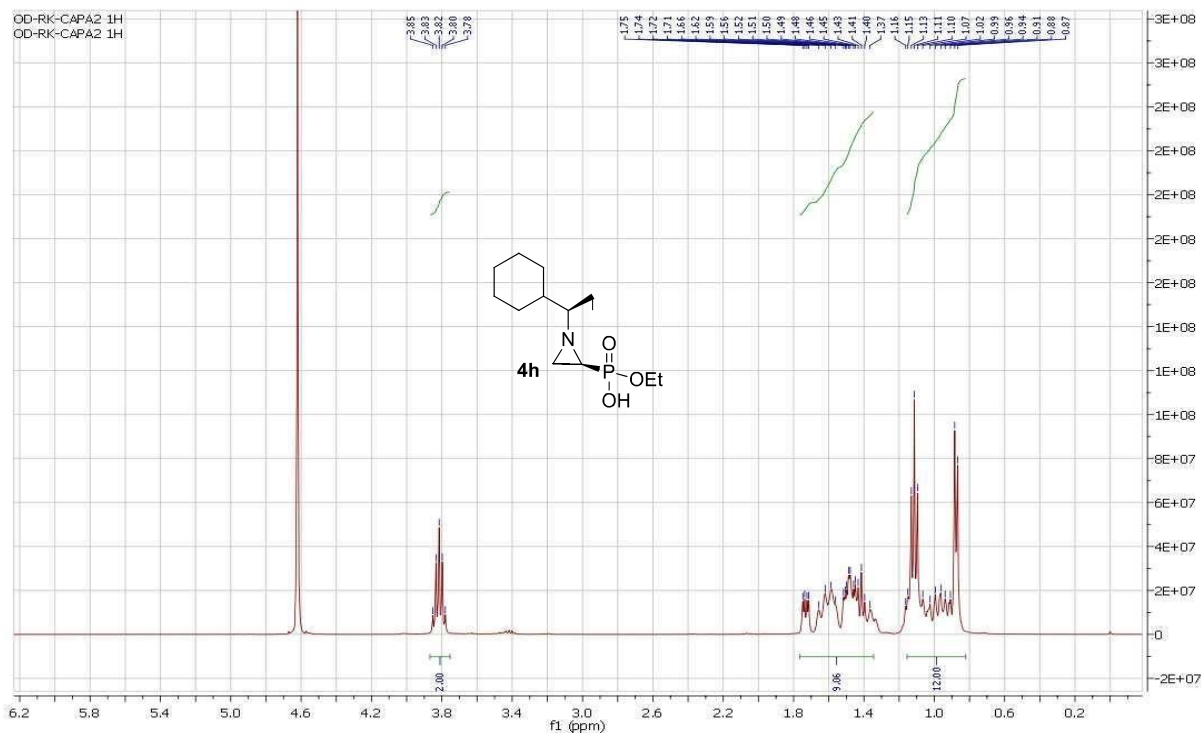


Figure S22: <sup>1</sup>H-NMR spectrum of compound 4h

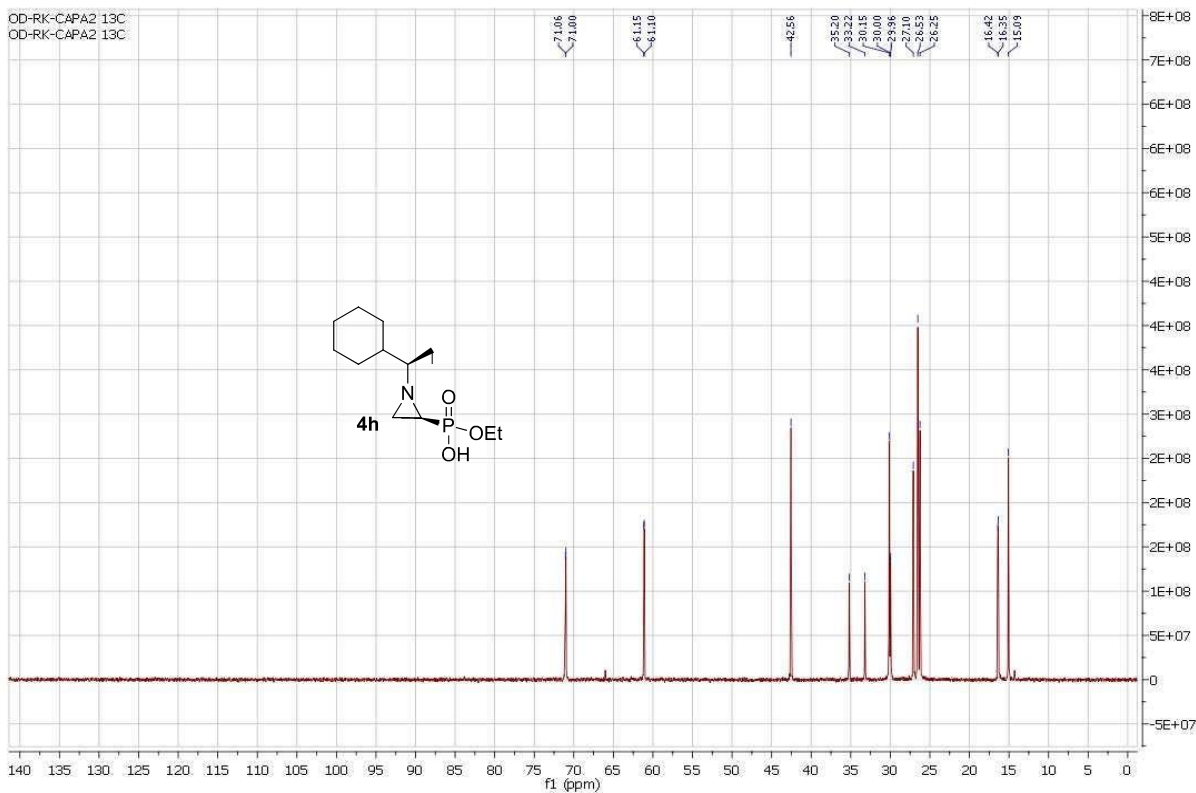


Figure S23:  $^{13}\text{C}$ -NMR spectrum of compound 4h

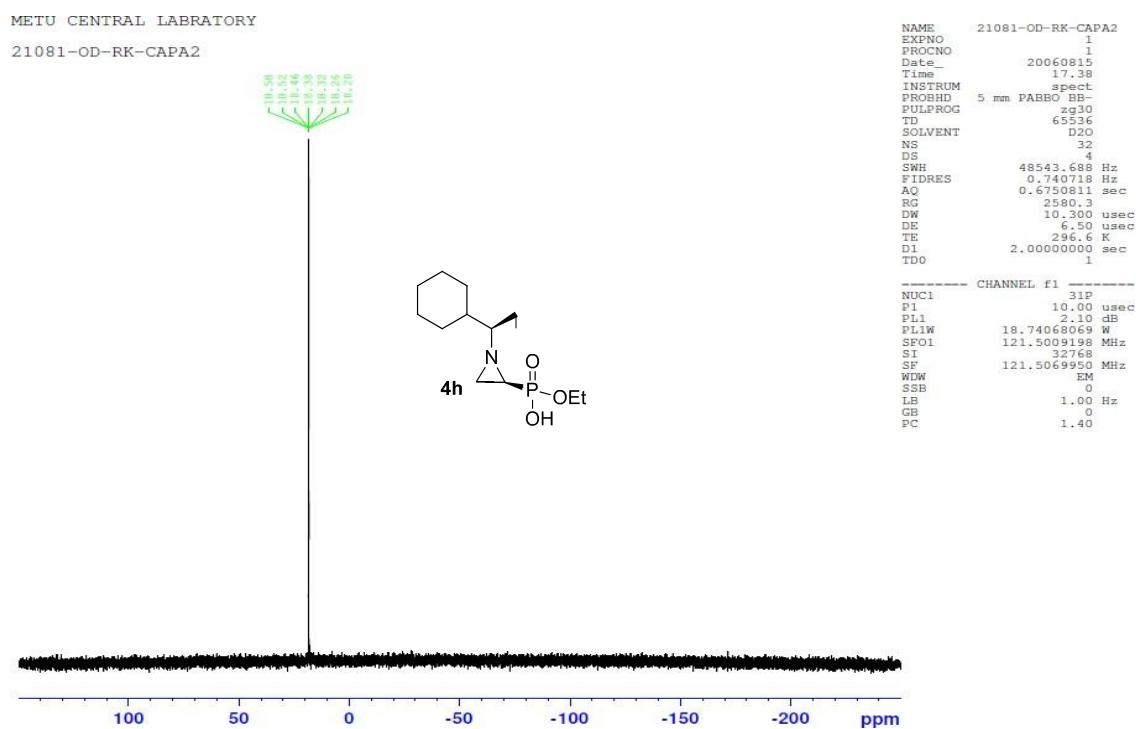


Figure S24:  $^{31}\text{P}$ -NMR spectrum of compound 4h

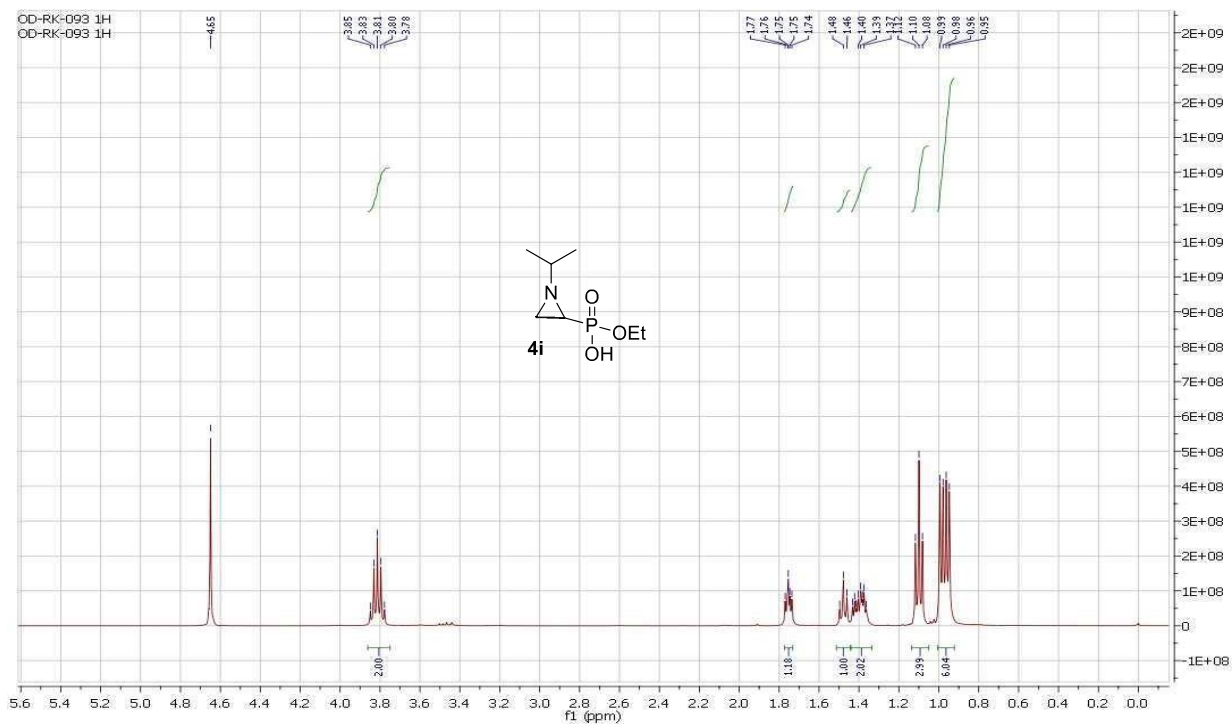


Figure S25:  $^1\text{H}$ -NMR spectrum of compound **4i**

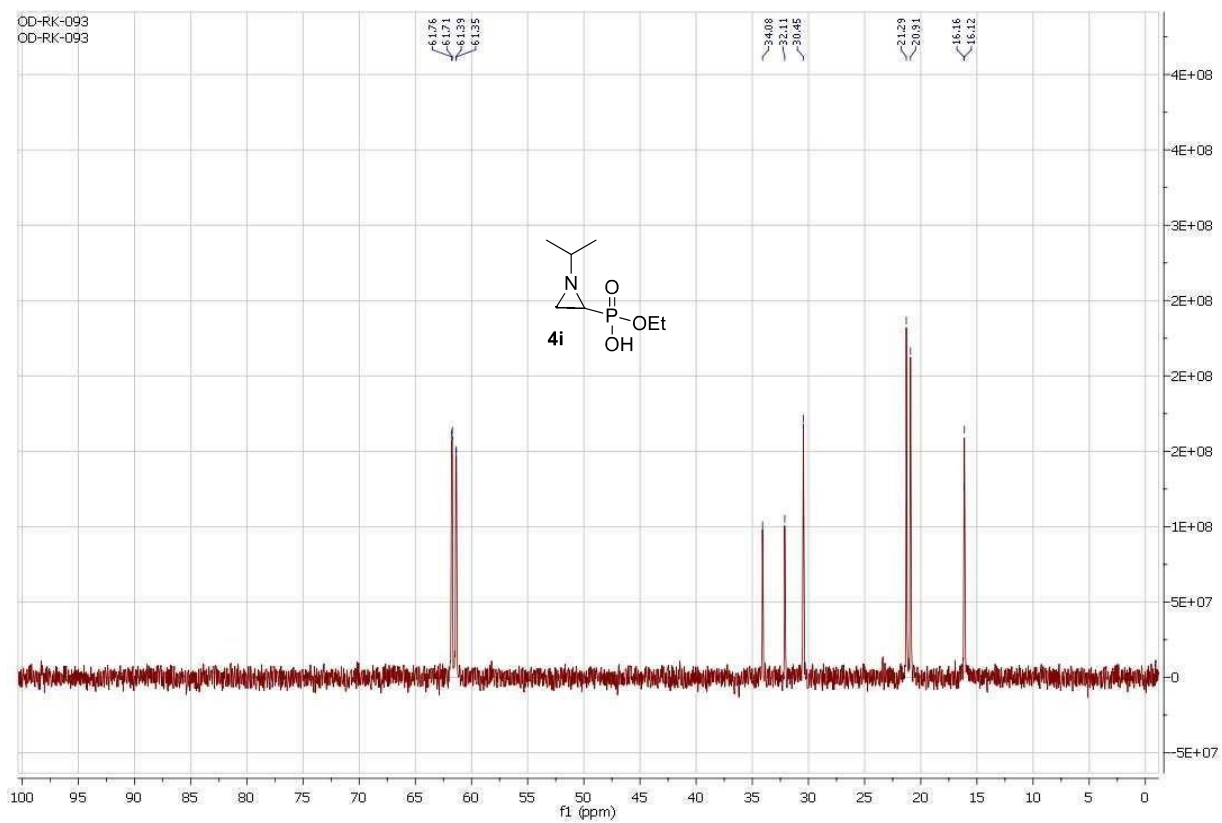
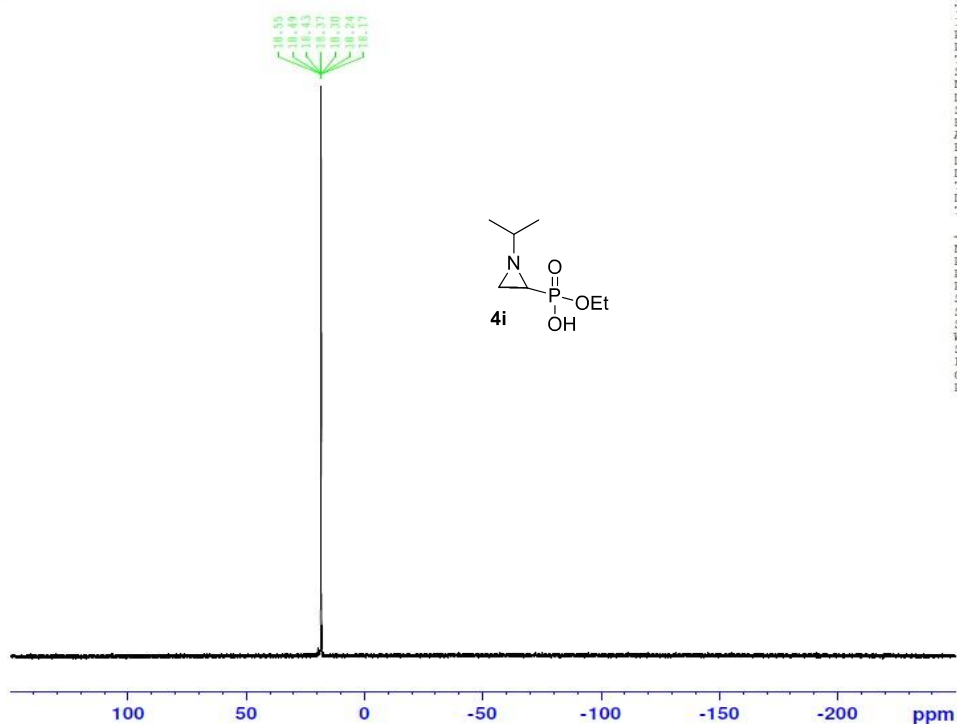


Figure S26:  $^{13}\text{C}$ -NMR spectrum of compound **4i**





```

NAME      21081-OD-RK-093
EXPNO     1
PROCNO    1
Date_     20060815
Time      17.18
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zg30
TD         65536
SOLVENT   D2O
NS         32
DS         4
SWH        48543.688 Hz
FIDRES     0.740718 Hz
AQ         0.6750811 sec
RG         2580.3
DW         10.300 usec
DE         6.50 usec
TE         296.3 K
D1         2.00000000 sec
TDO        1

----- CHANNEL f1 -----
NUC1      31P
P1         10.00 usec
PL1        2.10 dB
PL1W       18.74068069 W
SFO1      121.5009198 MHz
SI         32768
SF         121.5069950 MHz
WDW        EM
SSB         0
LB         1.00 Hz
GB         0
PC         1.40
    
```

Figure S27: <sup>31</sup>P-NMR spectrum of compound **4i**

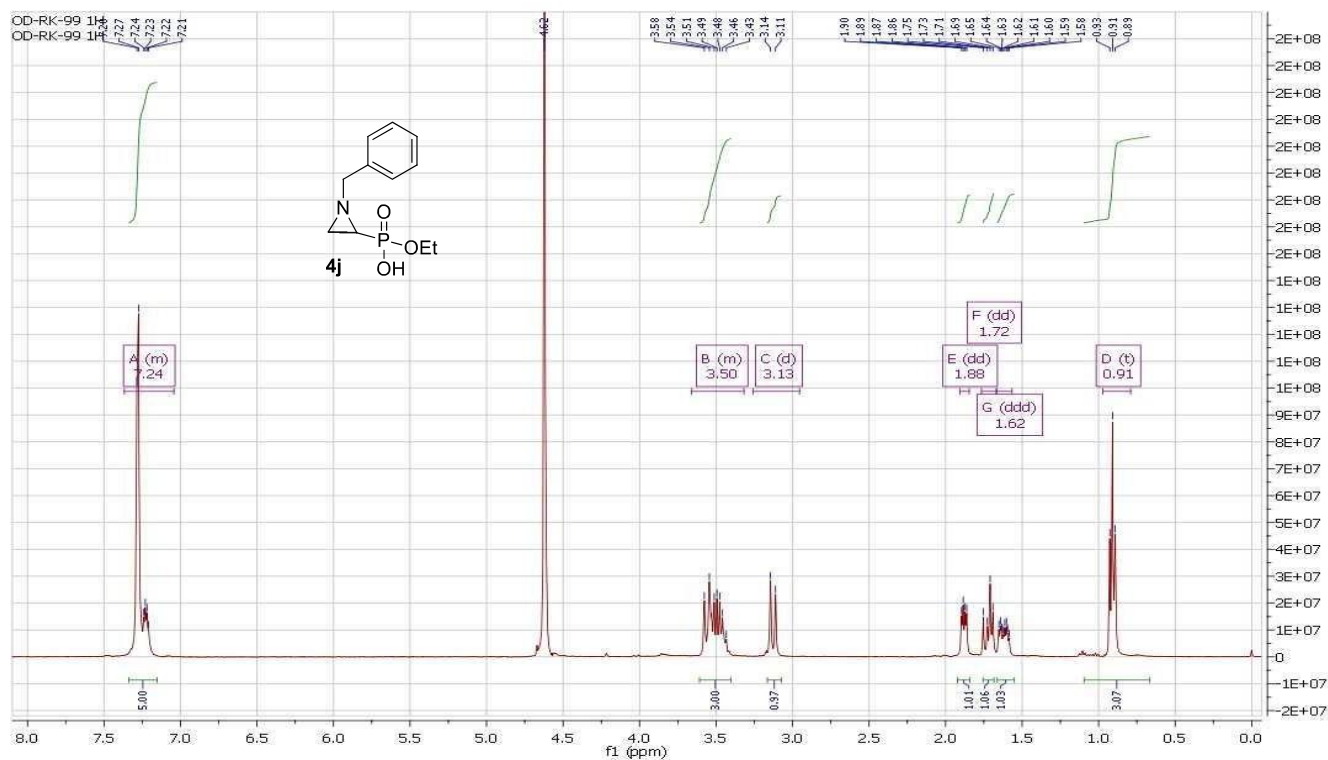


Figure S28: <sup>1</sup>H-NMR spectrum of compound **4j**

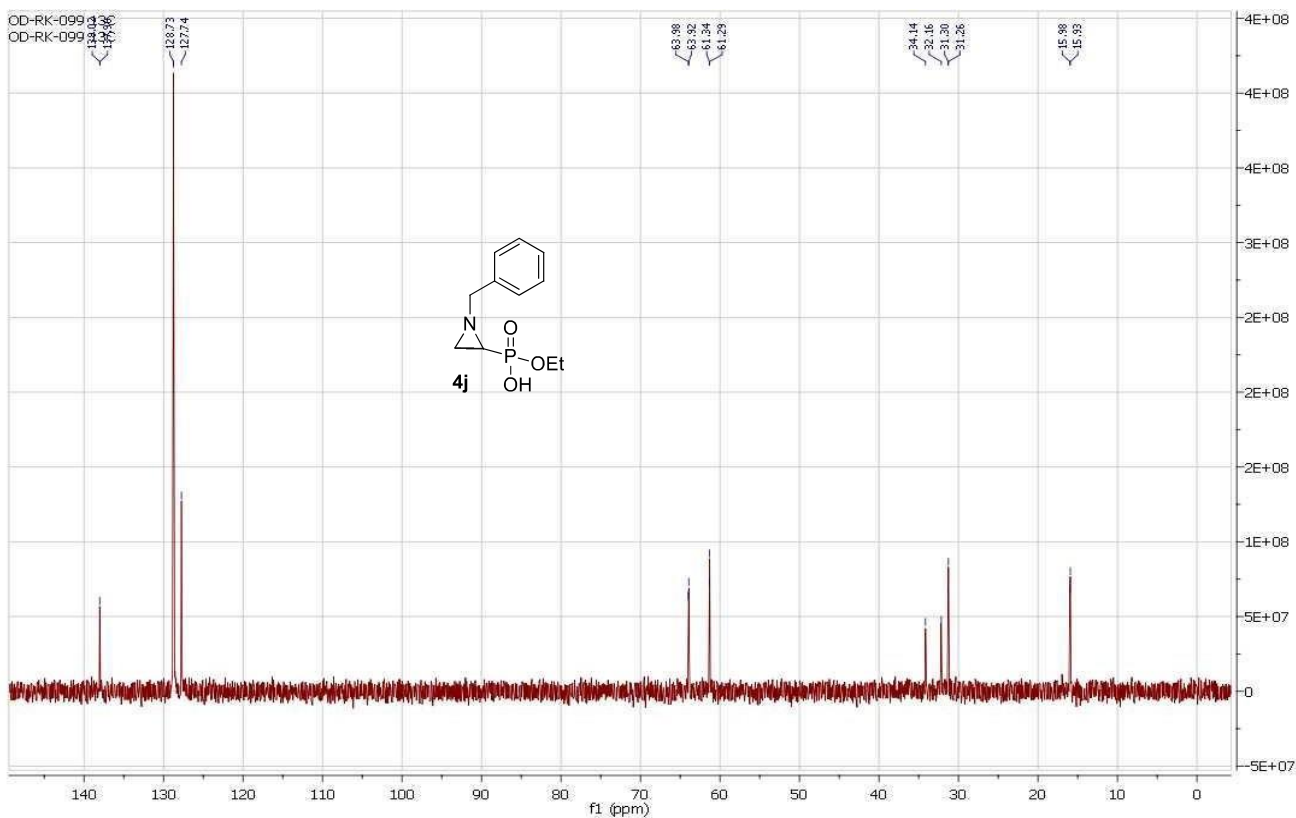


Figure S29:  $^{13}\text{C}$ -NMR spectrum of compound **4j**

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21081-OD-RK-099

18.03  
18.03  
17.97  
17.90  
17.83  
17.77  
17.71

NAME 21081-OD-RK-099  
EXPNO 1  
PROCNO 1  
Date\_ 20060915  
Time 16.08  
INSTRUM spect  
PROBHD 5 mm PABBO BB-  
PULPROG zg30  
TD 65536  
SOLVENT D2O  
NS 32  
DS 4  
SWH 48543.688 Hz  
FIDRES 0.740718 Hz  
AQ 0.6750811 sec  
RG 4096  
DW 10.300 usec  
DE 6.50 usec  
TE 294.8 K  
D1 2.0000000 sec  
TDO 1

----- CHANNEL f1 -----  
NUC1 31P  
P1 10.00 usec  
PL1 2.10 dB  
PL1W 18.74068069 W  
SF01 121.5009198 MHz  
SI 32768  
SF 121.5069950 MHz  
WDW EM  
SSB 0  
LB 1.00 Hz  
GB 0  
PC 1.40

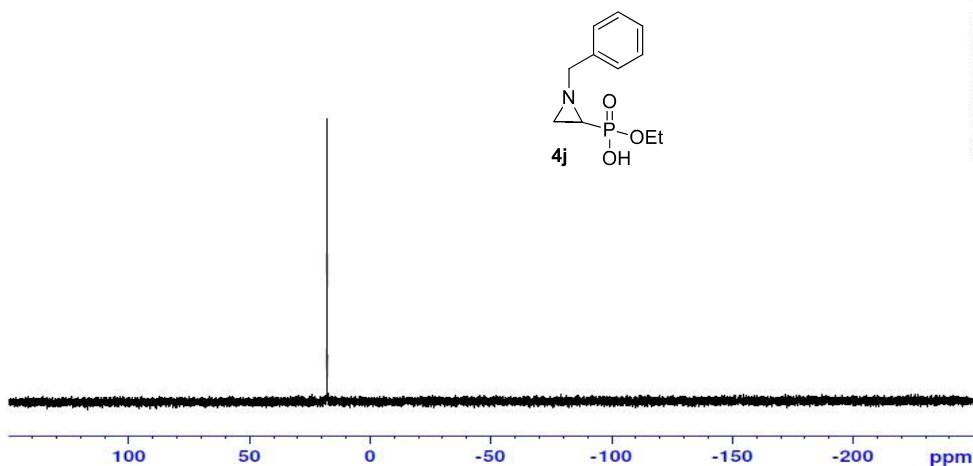
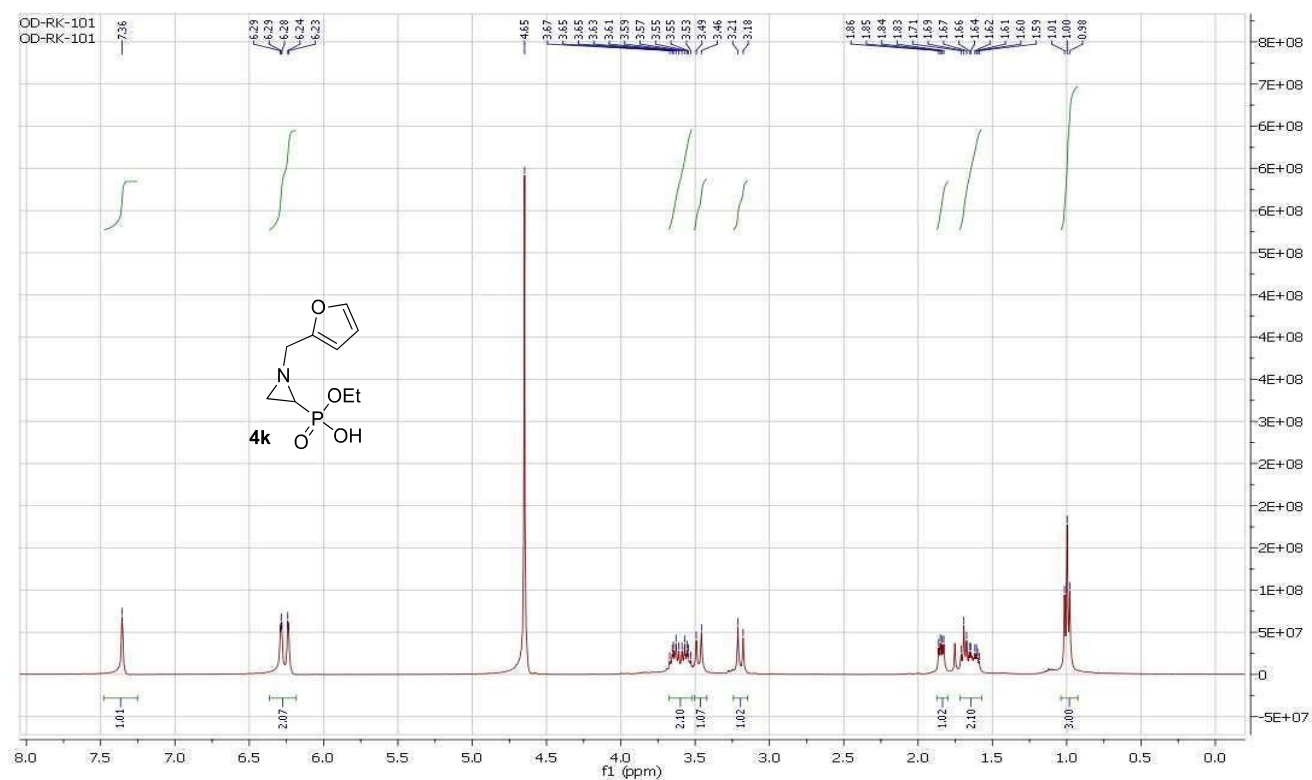
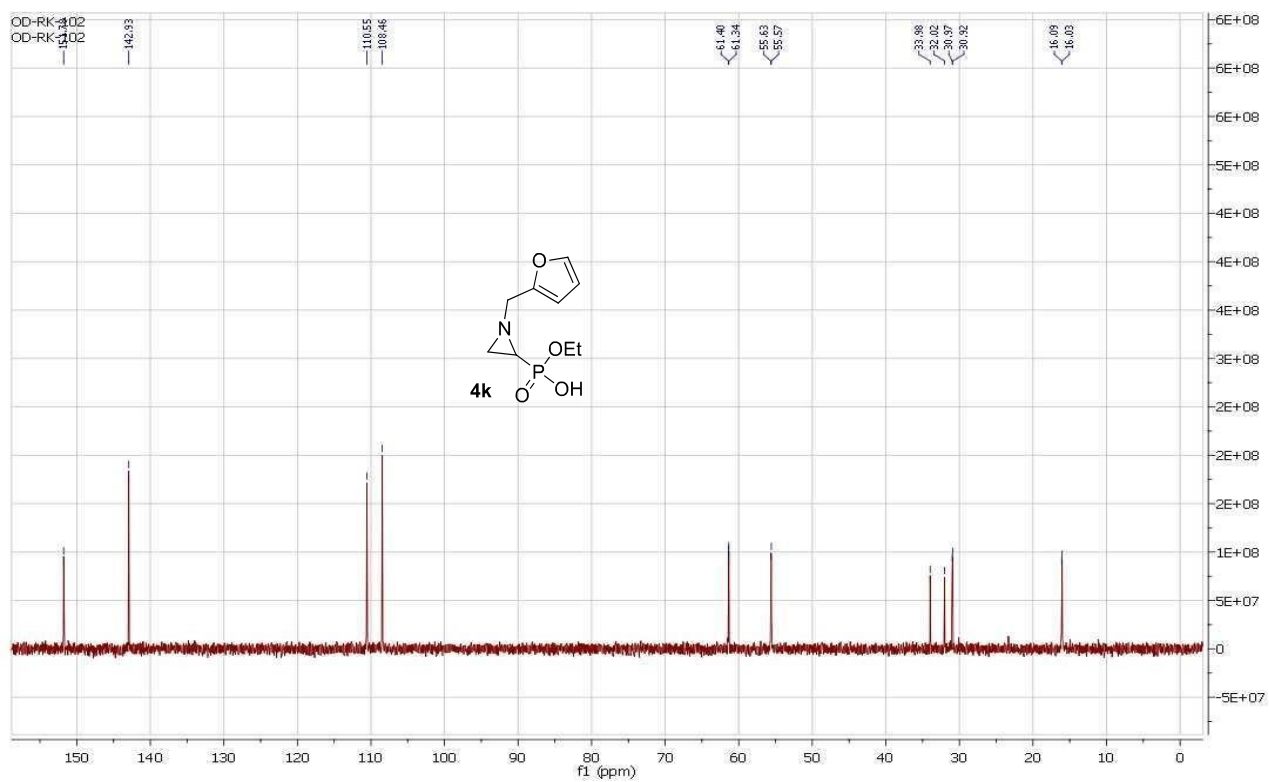


Figure S30:  $^{31}\text{P}$ -NMR spectrum of compound **4j**



**Figure S31: <sup>1</sup>H-NMR spectrum of compound 4k**



**Figure S32: <sup>13</sup>C-NMR spectrum of compound 4k**

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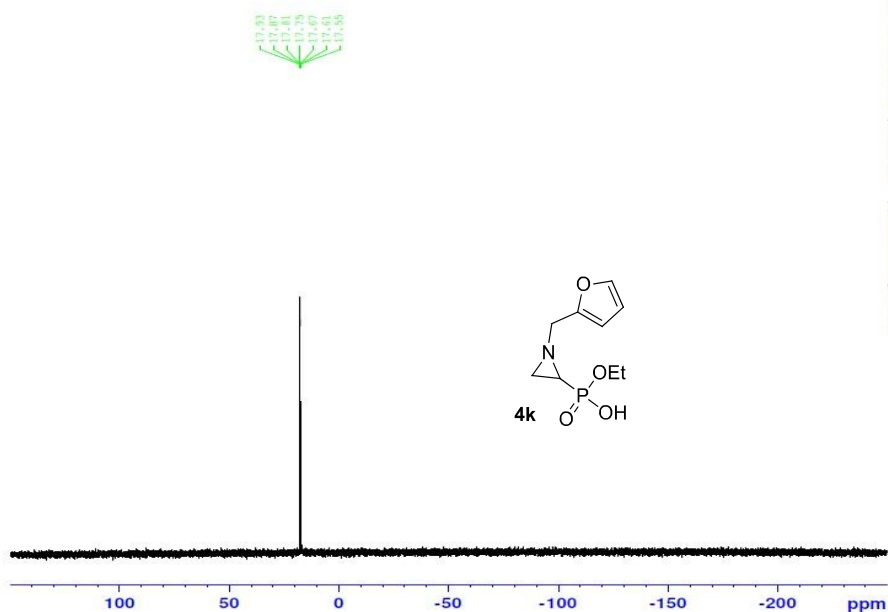


Figure S33: <sup>31</sup>P-NMR spectrum of compound 4k

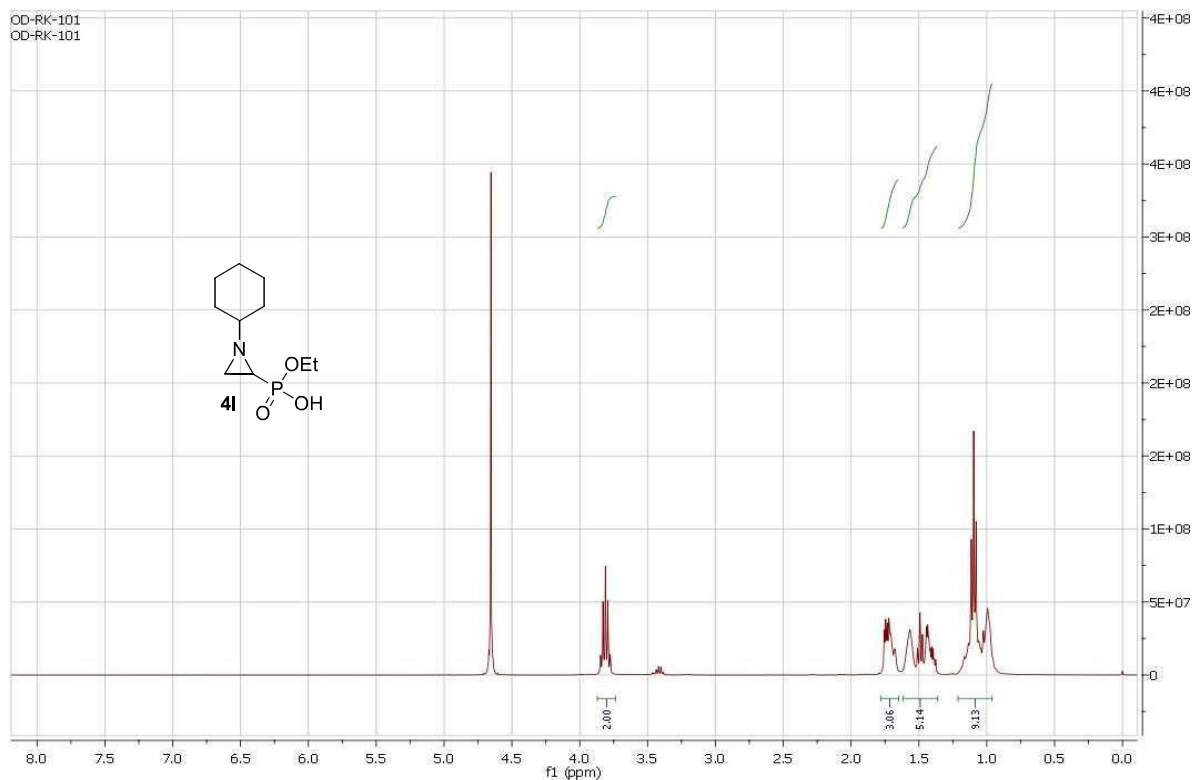


Figure S34: <sup>1</sup>H-NMR spectrum of compound 4l

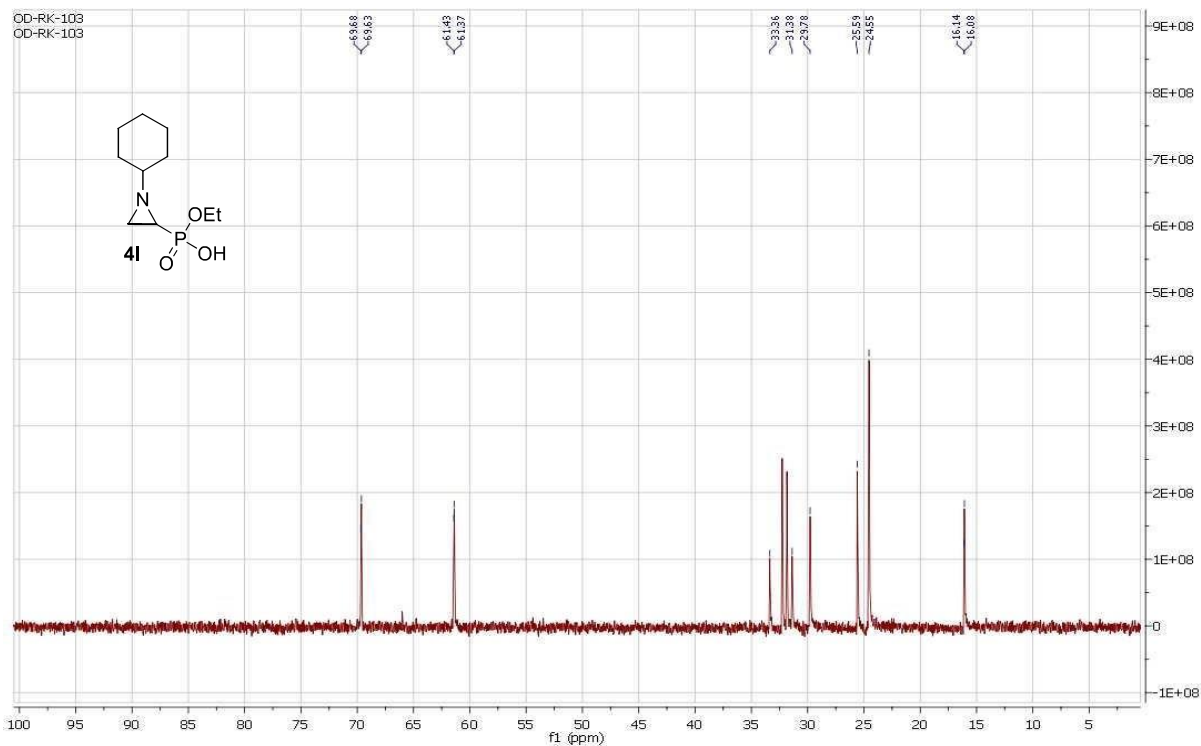
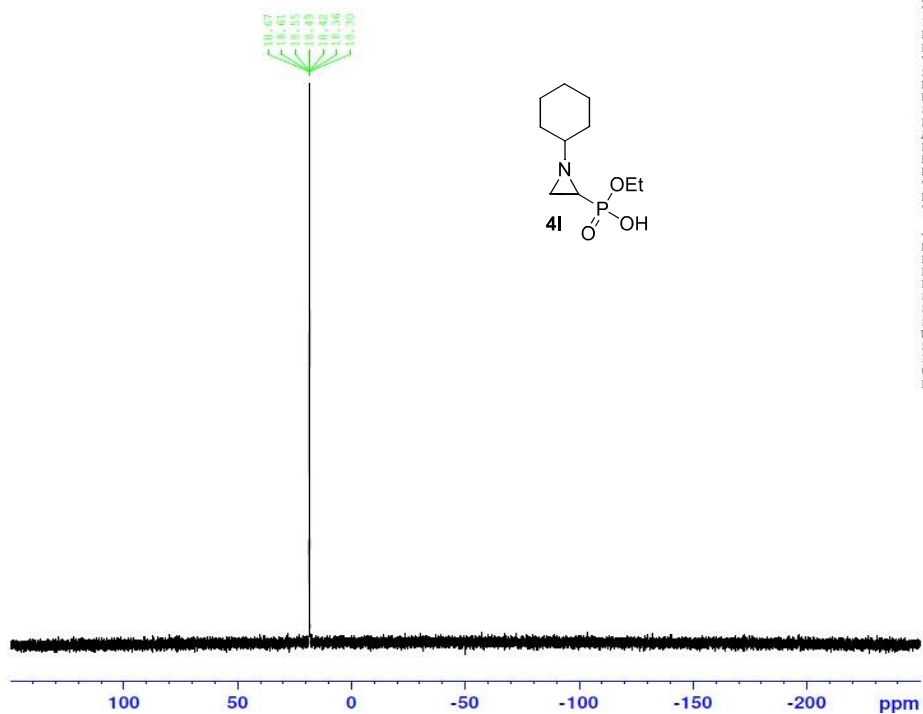


Figure S35:  $^{13}\text{C}$ -NMR spectrum of compound 4l

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21081-OD-RK-103



```

NAME      21081-OD-RK-103
EXPNO    1
PROCNO   1
Date_    20060815
Time     16.58
INSTRUM  spect
PROBHD   5 mm PABBO BB-
PULPROG  zg30
TD       65536
SOLVENT  D2O
NS       32
DS       4
SWH      48543.688 Hz
FIDRES   0.740718 Hz
AQ       0.6750811 sec
RG       2580.3
DW       10.300 usec
DE       6.50 usec
TE       295.9 K
D1       2.0000000 sec
TDO      1

----- CHANNEL f1 -----
NUC1     31P
P1       10.00 usec
PL1      2.10 dB
PL1W     18.74068069 W
SFO1     121.5009198 MHz
SI       32768
SF       121.5069950 MHz
WDW      EM
SSB      0
LB       1.00 Hz
GB       0
PC       1.40

```

Figure S36:  $^{31}\text{P}$ -NMR spectrum of compound 4l