

## Supporting Informations

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### Distribution ratios for U(VI) at different acidities:

Distribution ratio ( $D$ ) for U(VI) was also checked at different feed  $\text{HNO}_3$  concentrations (Table S1). The  $D$  value for U(VI) was found to be very low even in 6 M  $\text{HNO}_3$ .

**Table S1.** Distribution ratios for U(VI) at different acidities.

S.No.	[ $\text{HNO}_3$ ], M	$D_U$
1.	1	0.2
2.	3	0.35
3.	4	0.4
4.	6	0.6

### Synthesis of *exo*-3,6-epoxy-1,2,3,6-tetrahydrophthalic anhydride **2**

A freshly distilled furan (11 mL, 151.5 mmol) was added to a stirred solution of maleic anhydride (14.7 g, 150 mmol) in dry THF (45 mL) at room temperature. The reaction mixture was left standing for 5 days. The resulting crystals were filtered to obtain anhydride **2** (21 g, 84%). M.P. 116-118 °C.  $^1\text{H}$  NMR (200 MHz,  $\text{CDCl}_3$ ):  $\delta$  3.17 (2 H, s, COCHCHCO), 5.46 (2 H, s, CHOCH), 6.58 (2 H, s, CH=CH).

### Synthesis of *exo*-3,6-epoxy-hexahydrophthalic anhydride **7**

Palladium on charcoal (400 mg, 10% Pd) was added to a solution of unsaturated anhydride **2** (4 g, 24.0 mmol) in dry ethyl acetate (72 mL). The mixture was degassed and flushed with hydrogen gas for several times followed by stirring under hydrogen atmosphere for 24 h. The mixture was filtered through celite and the filtrate was evaporated to give the saturated anhydride **7** (3.97 g, 98%). M.P. 112 °C.  $^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ ):  $\delta$  1.57-1.62 (2 H, m,  $2 \times \text{CH}_A\text{H}_B$ ), 1.85-1.95 (2 H, m,  $2 \times \text{CH}_A\text{H}_B$ ), 3.18 (2 H, s,  $2 \times \text{CHCO}$ ), 5.03-5.05 (2 H, m, CHOCH).

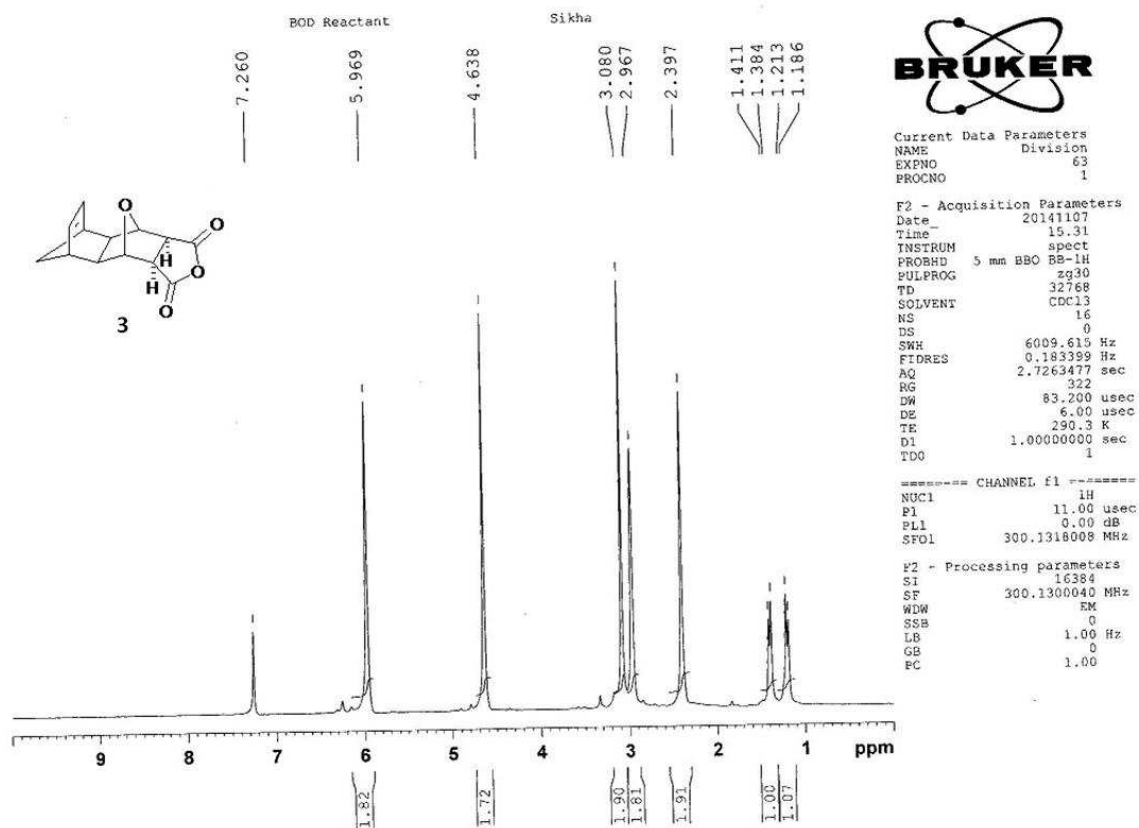
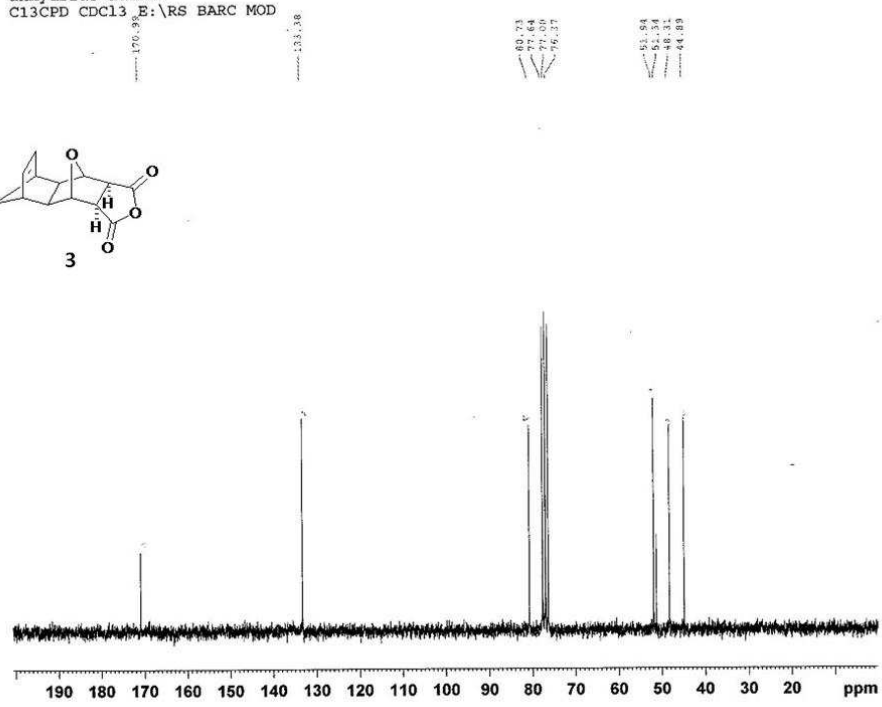
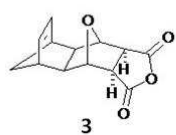


Fig. S1 <sup>1</sup>H NMR spectrum of D-A adduct 3.

anhydride adduct  
 C13CPD CDC13\_E:\RS BARC MOD



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PROCNO        1

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Fig. S2 <sup>13</sup>C NMR spectrum of D-A adduct 3.

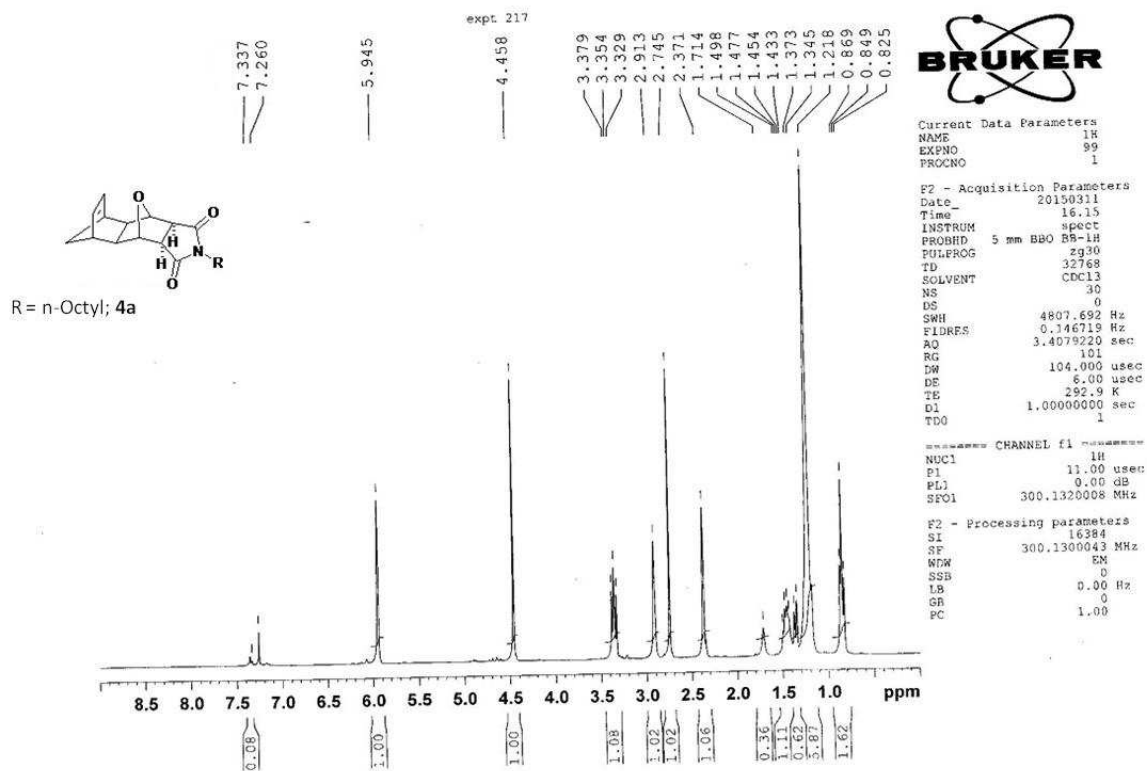
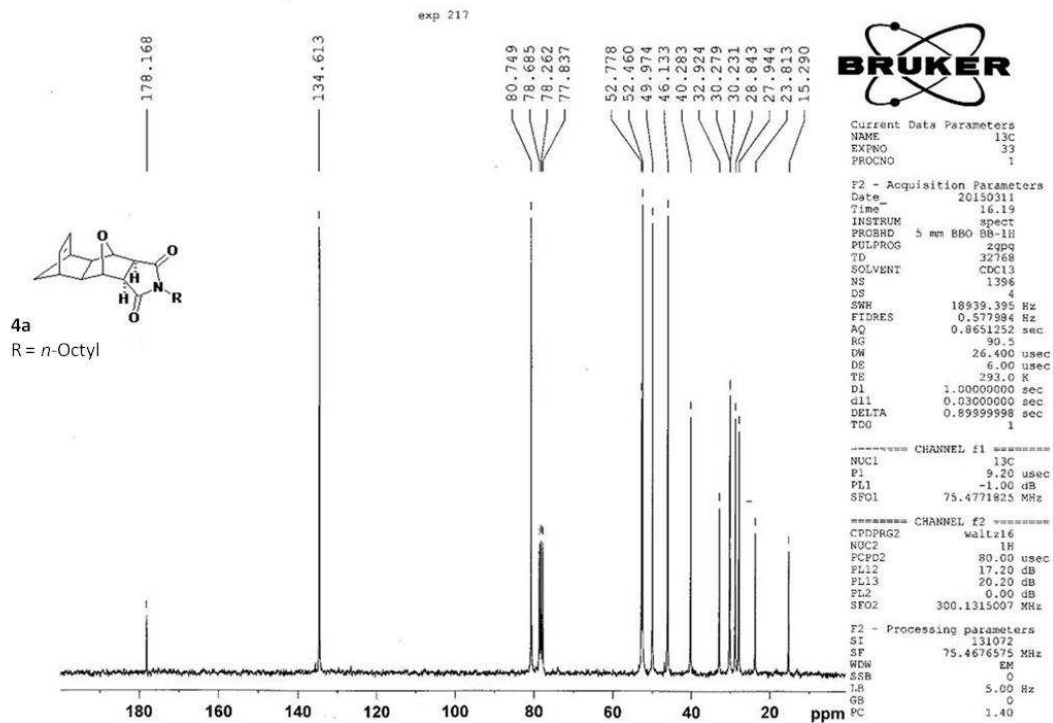
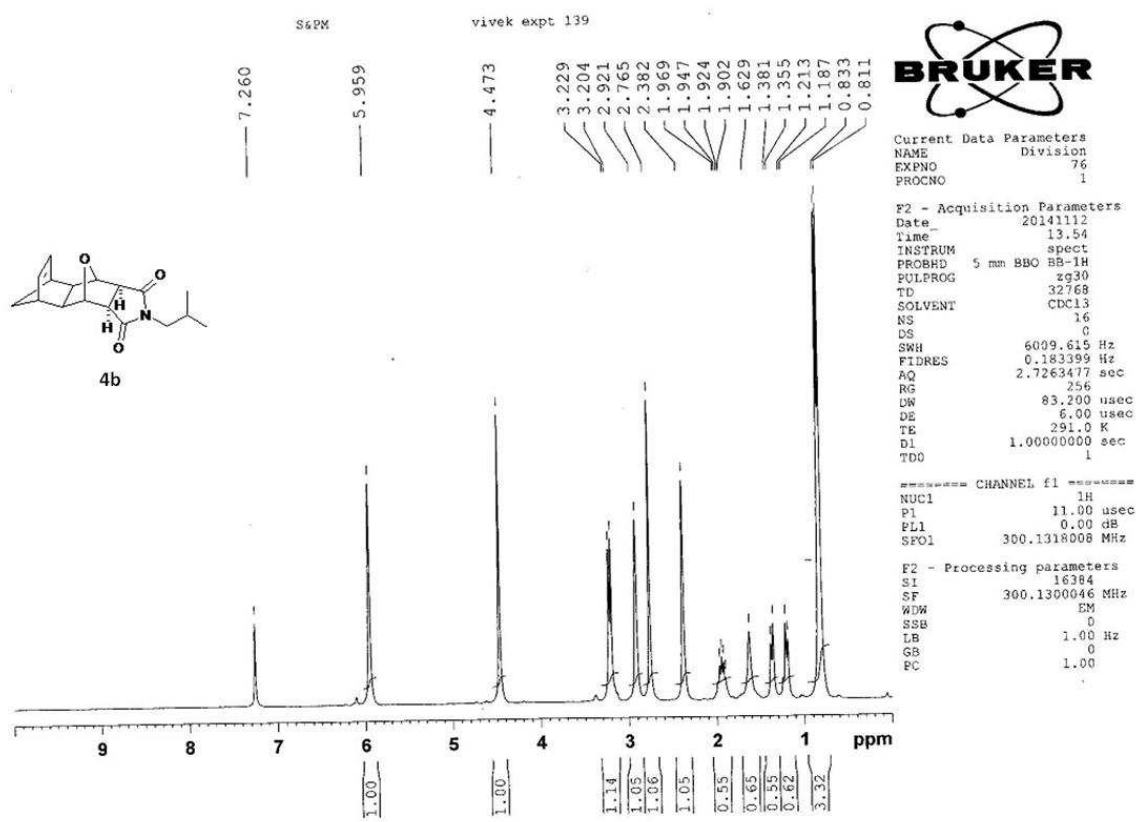


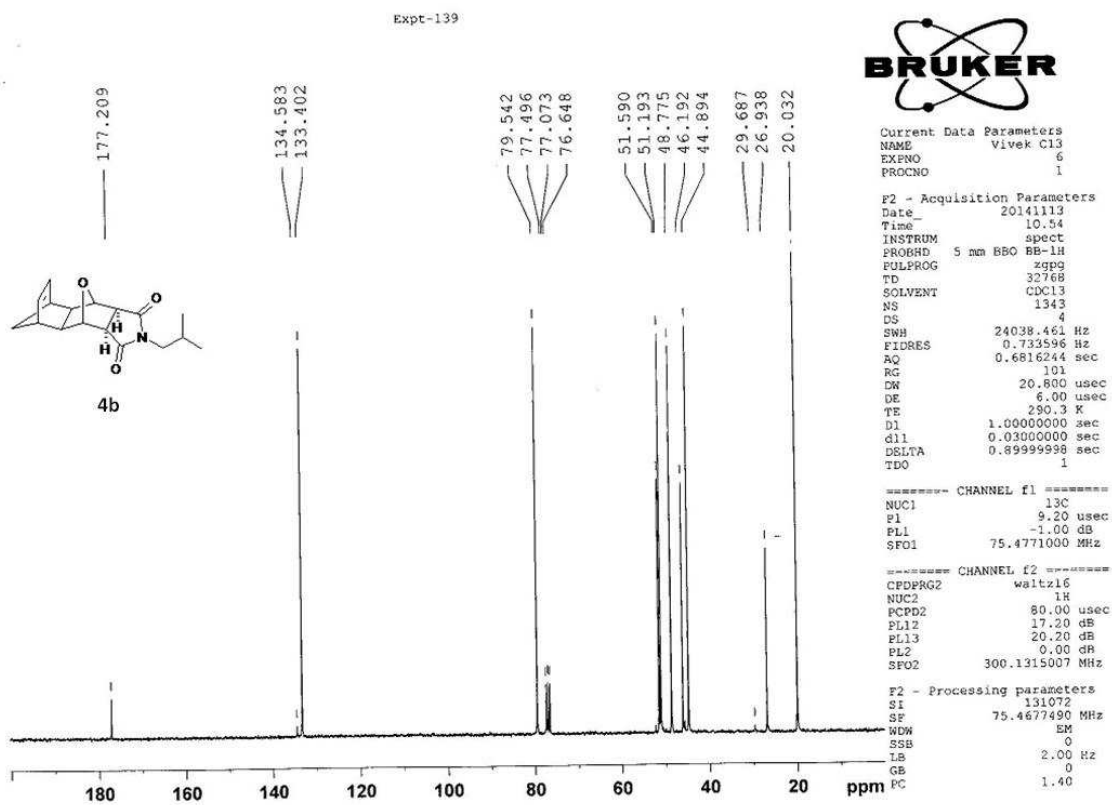
Fig. S3 <sup>1</sup>H NMR spectrum of imide 4a.



**Fig. S4**  $^{13}\text{C}$  NMR spectrum of imide **4a**. (The reported data were corrected considering  $\delta$  value of  $\text{CDCl}_3$  central line at 77.0 ppm )



**Fig. S5** <sup>1</sup>H NMR spectrum of imide **4b**.



**Fig. S6**  $^{13}\text{C}$  NMR spectrum of imide **4b**.



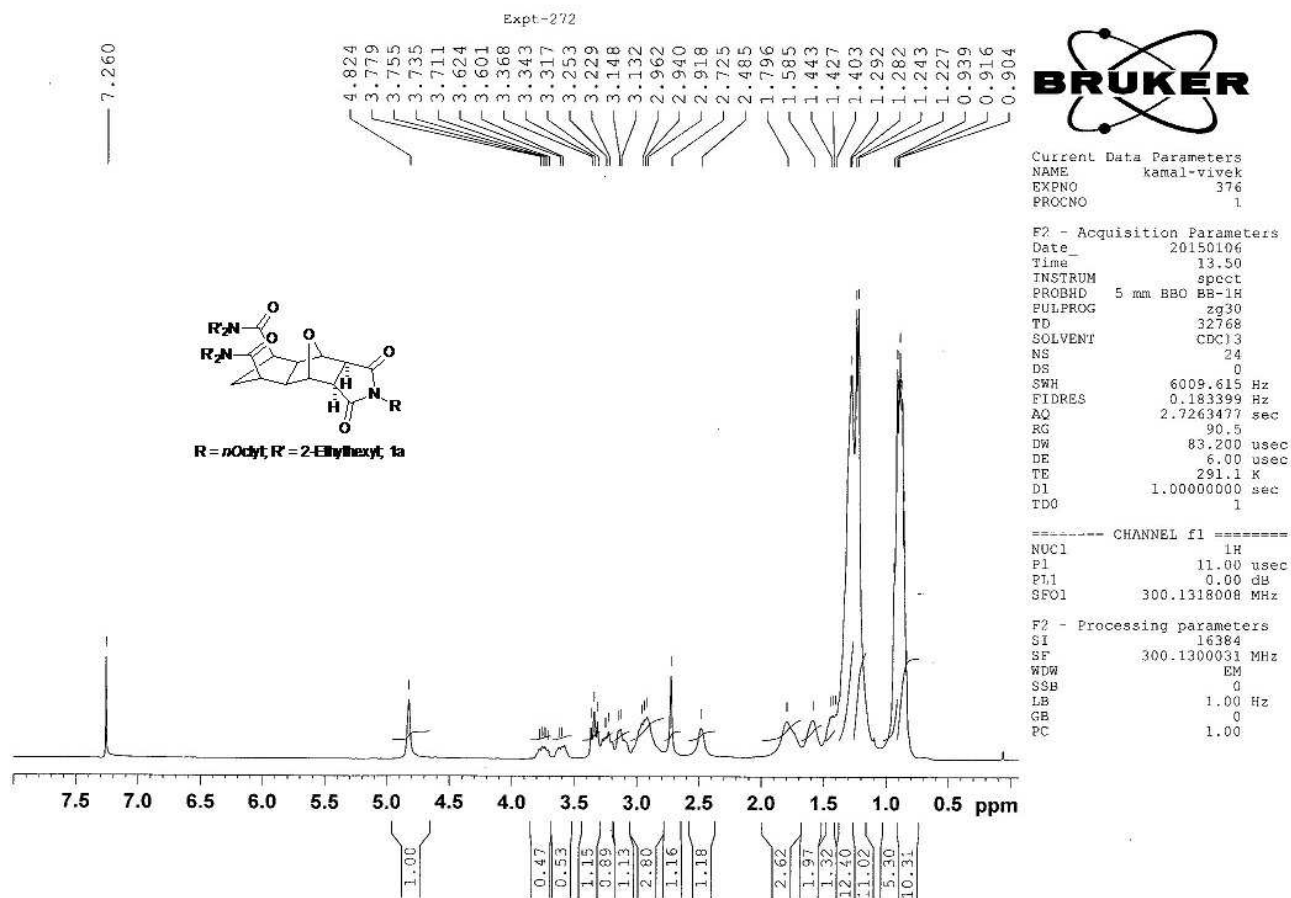
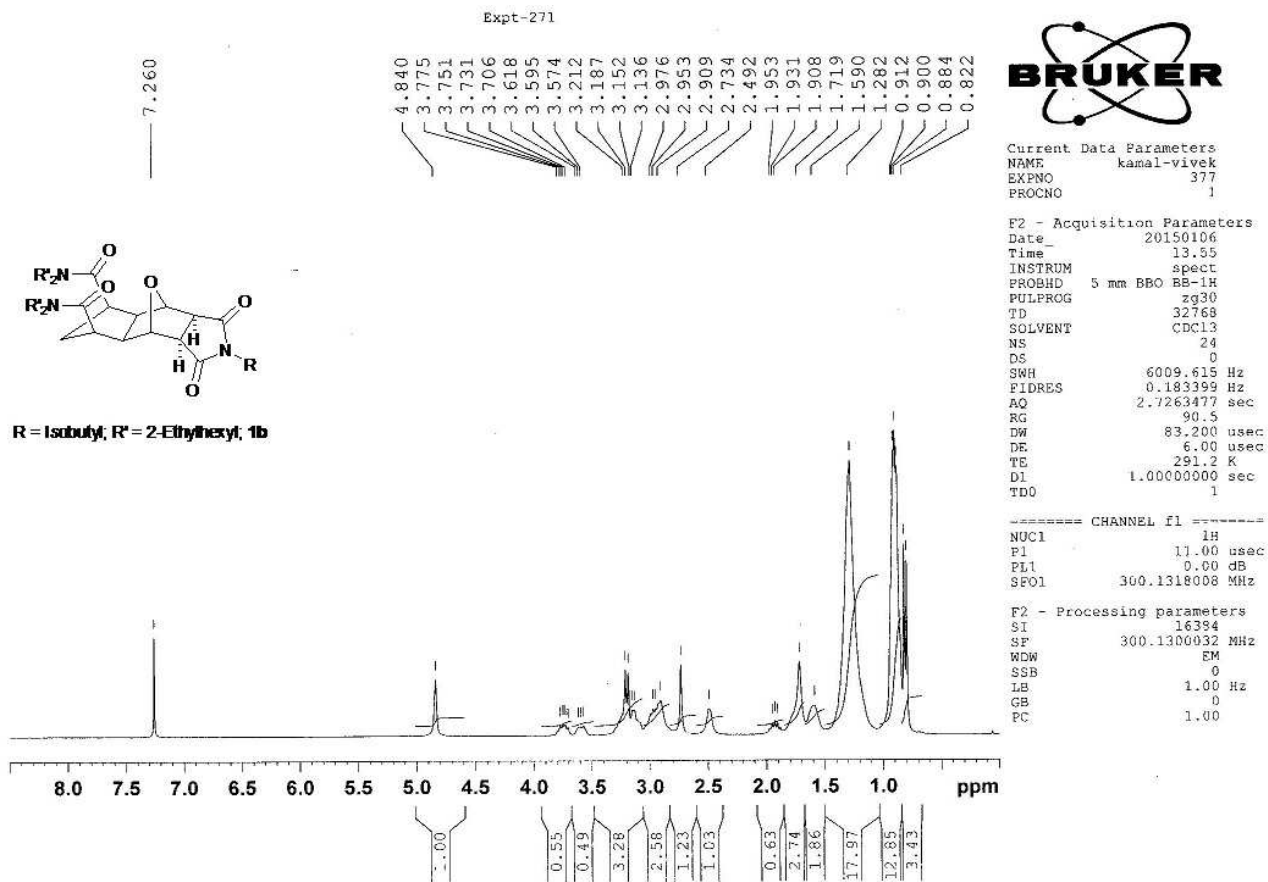


Fig. S7 <sup>1</sup>H NMR spectrum of OTDA 1a.



**Fig. S8**  $^1\text{H}$  NMR spectrum of OTDA **1b**.

imide isobutyl  
PROTON CDCl3 E:\RS BARC MOD

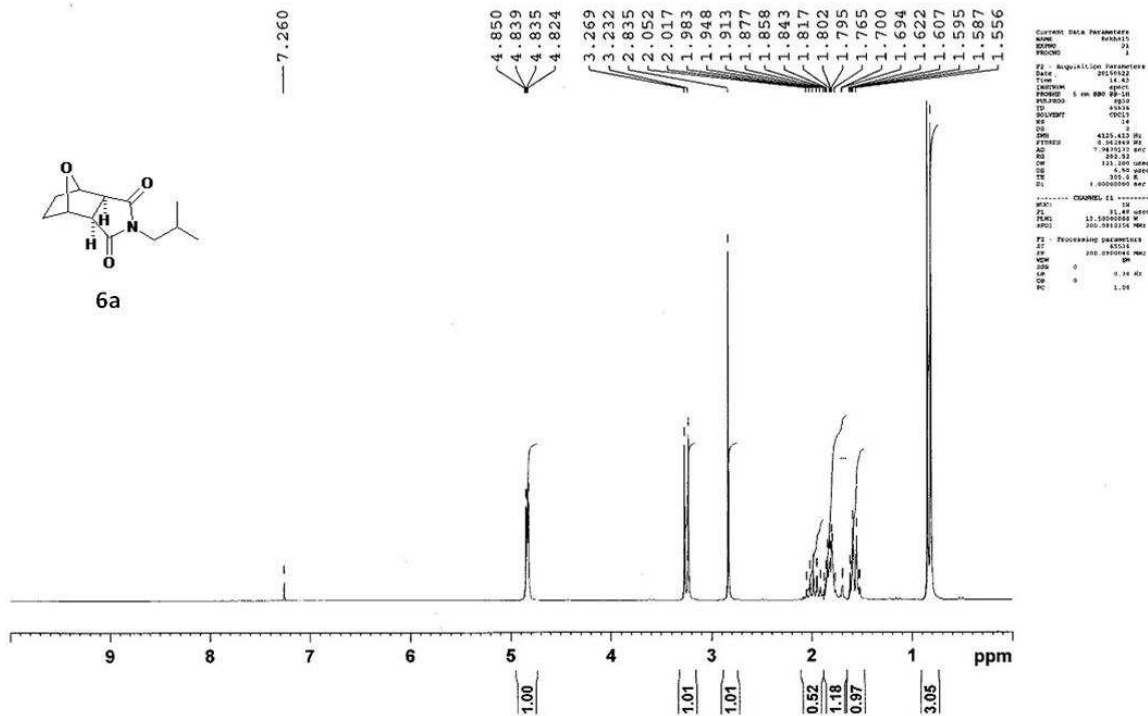


Fig. S9 <sup>1</sup>H NMR spectrum of imide 6a.

imide isobutyl  
C13CPD CDCl3 E:\RS BARC MOD

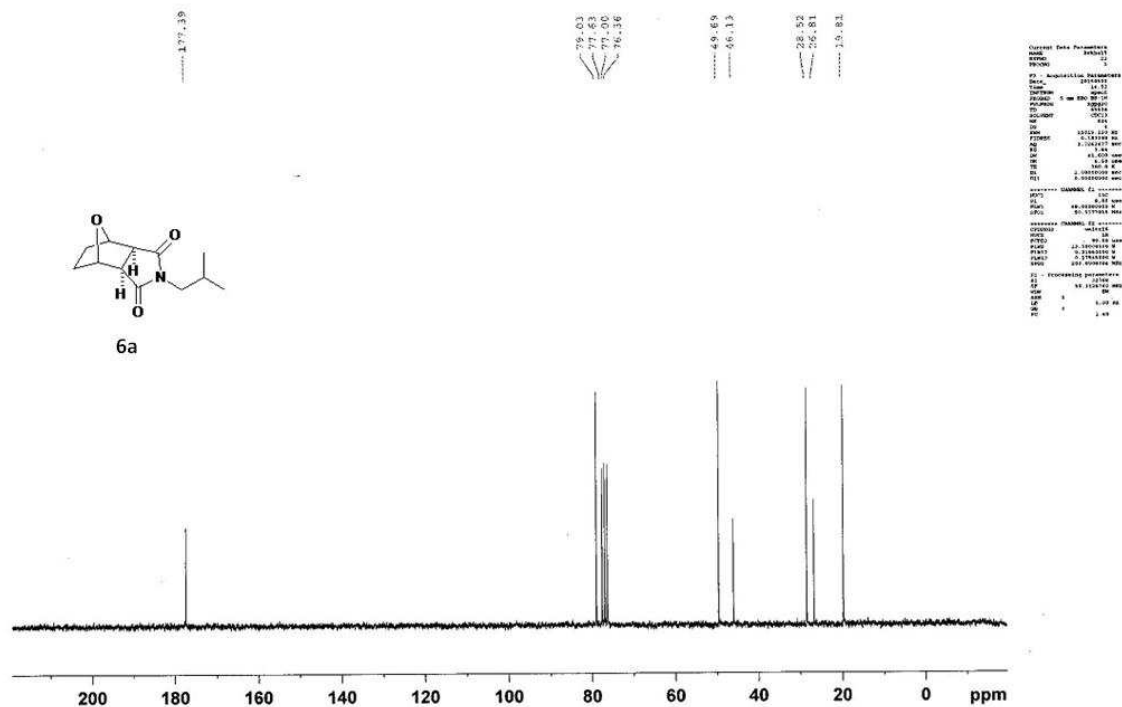
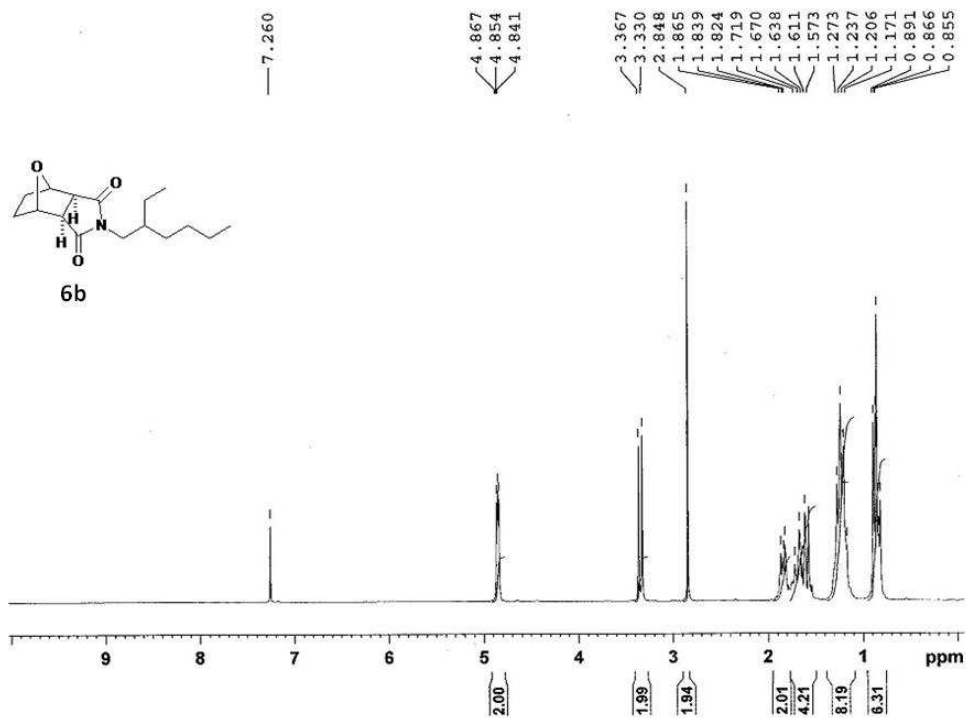


Fig. S10 <sup>13</sup>C NMR spectrum of imide 6a.

2EH-emide  
 PROTON CDCl3 E:\RC BARC MOD



**BRUKER**

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Fig. S11 <sup>1</sup>H NMR spectrum of imide **6b**.

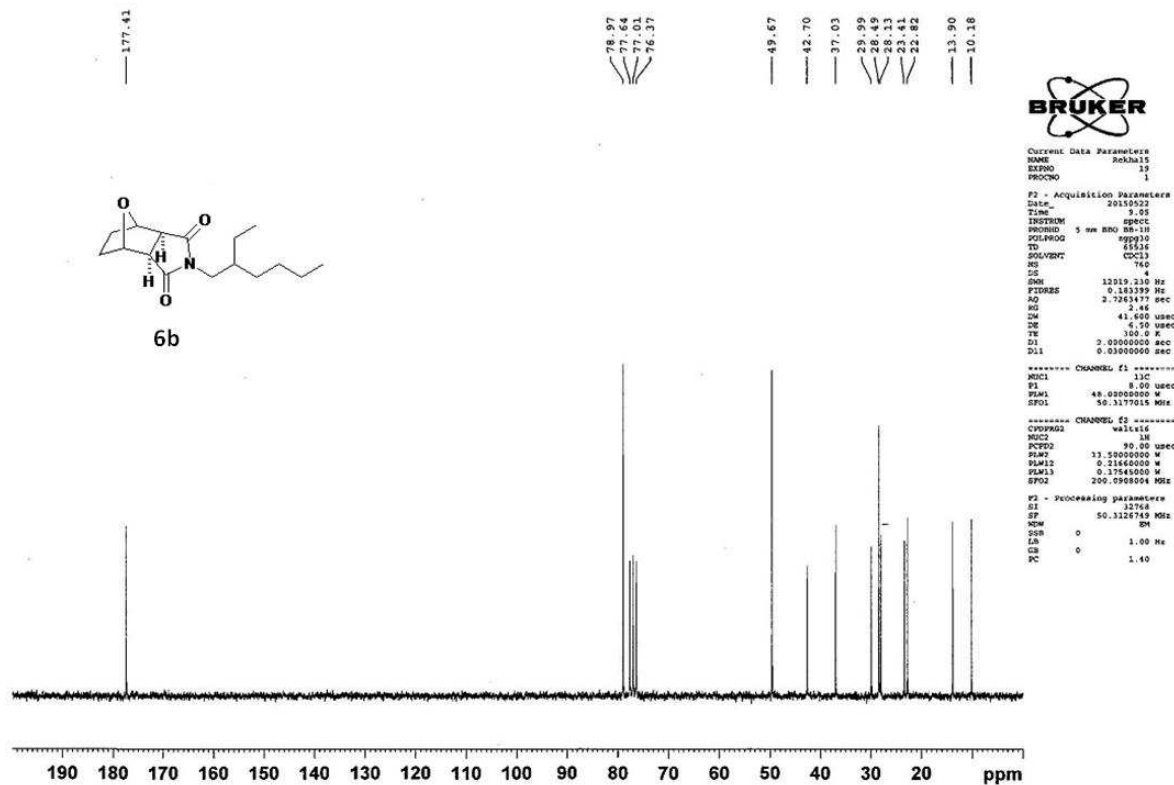


Fig. S12  $^{13}\text{C}$  NMR spectrum of imide **6b**.

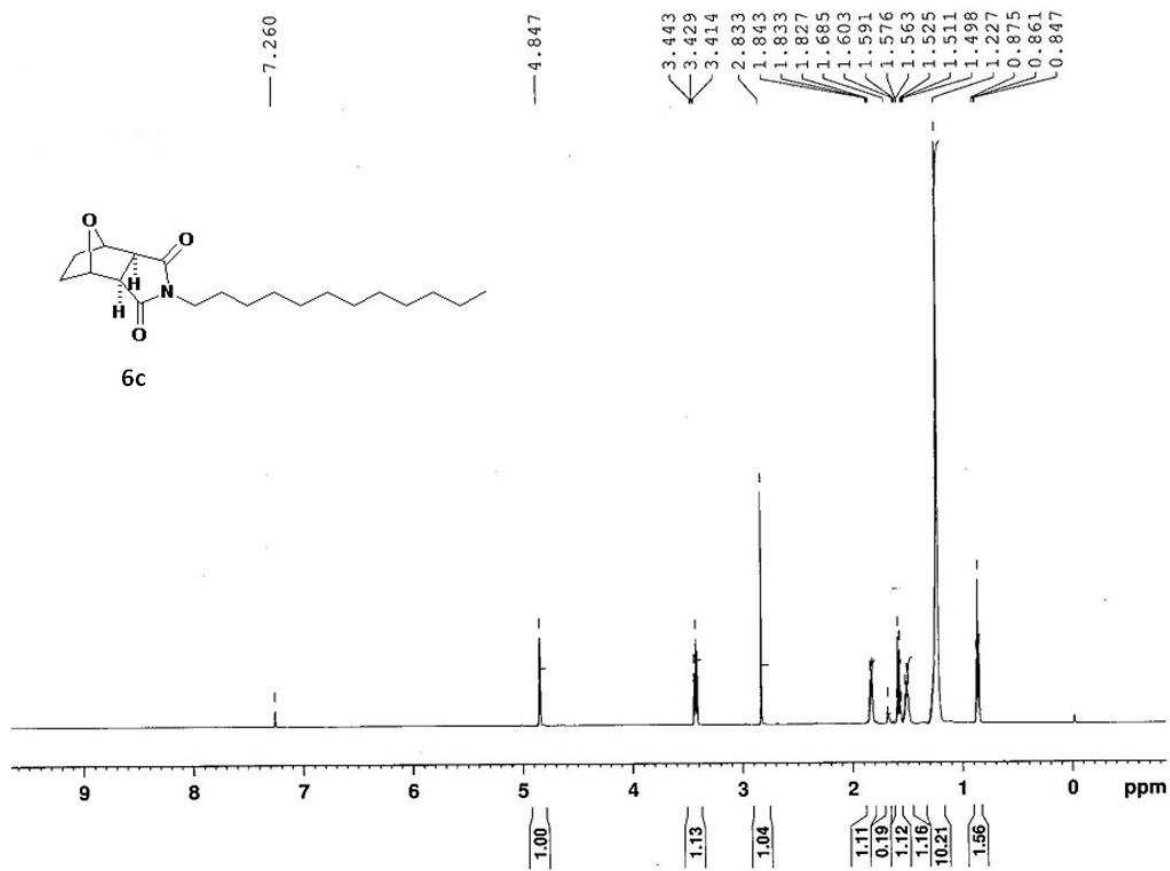


Fig. S13  $^1\text{H}$  NMR spectrum of imide **6c**.

