

## Electronic Supplementary Information (ESI)

### Effect of Hydroxy Groups on X-ray-induced Decomposition of Azobenzene Derivatives

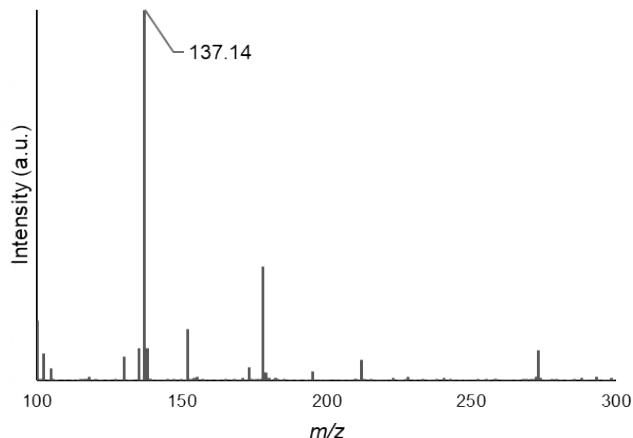
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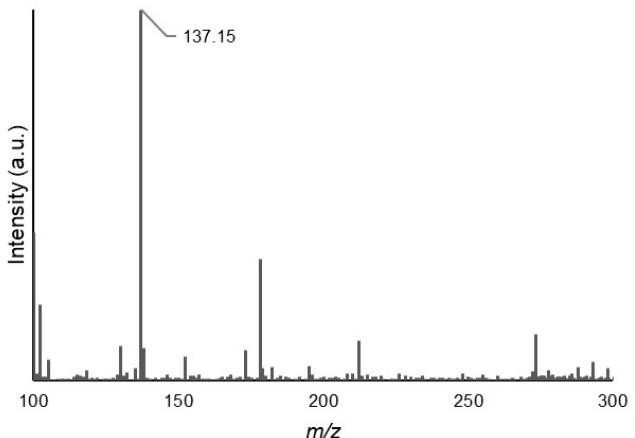
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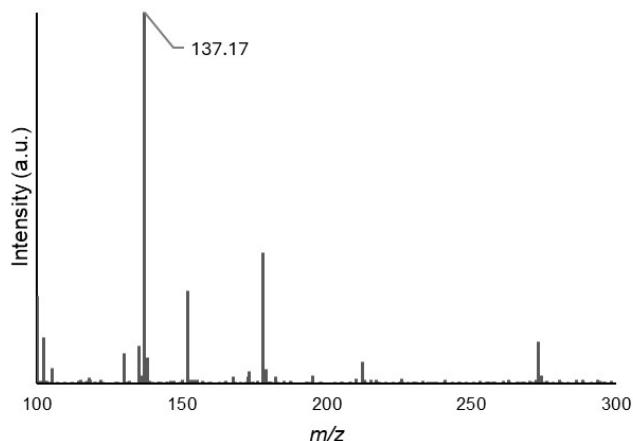
(a) 3-ABA released from AZO1



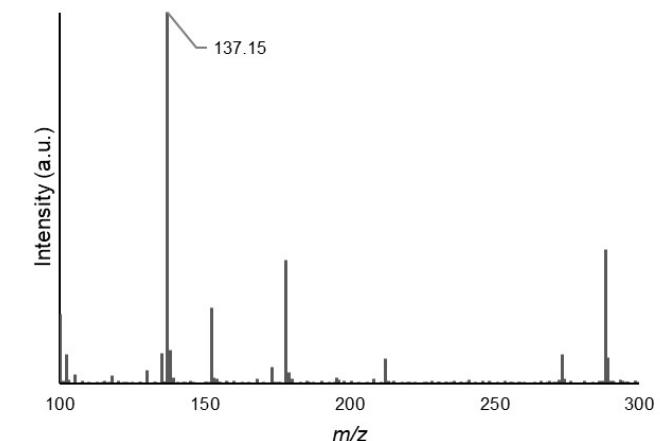
(b) 3-ABA released from AZO2



(c) 3-ABA released from AZO3

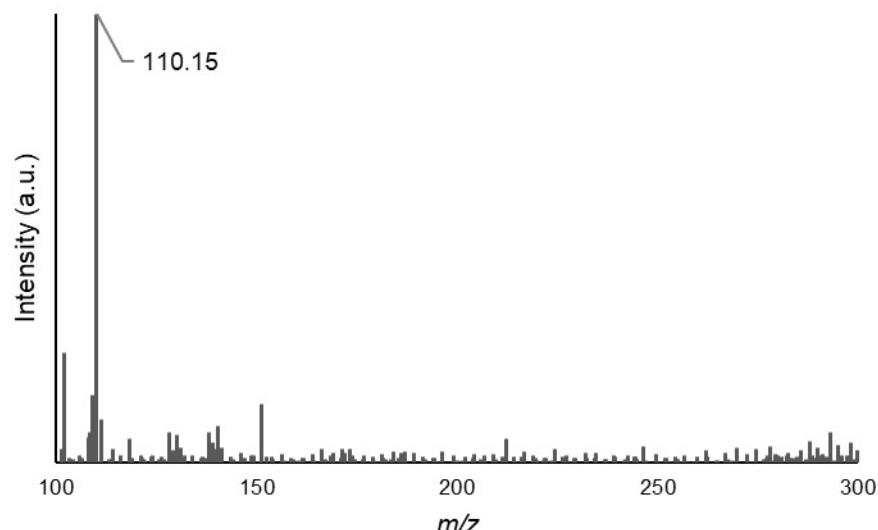


(d) 3-ABA released from AZO4

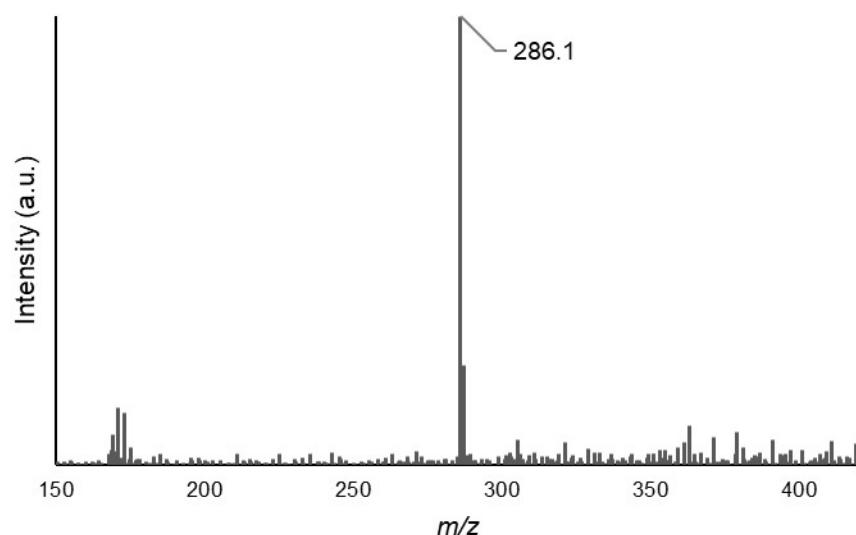


**Fig. S1** MS spectra of 3-ABA released from AZO1–4 after X-ray irradiation for (a) AZO1, (b) AZO2, (c) AZO3, and (d) AZO4. (positive scan mode)

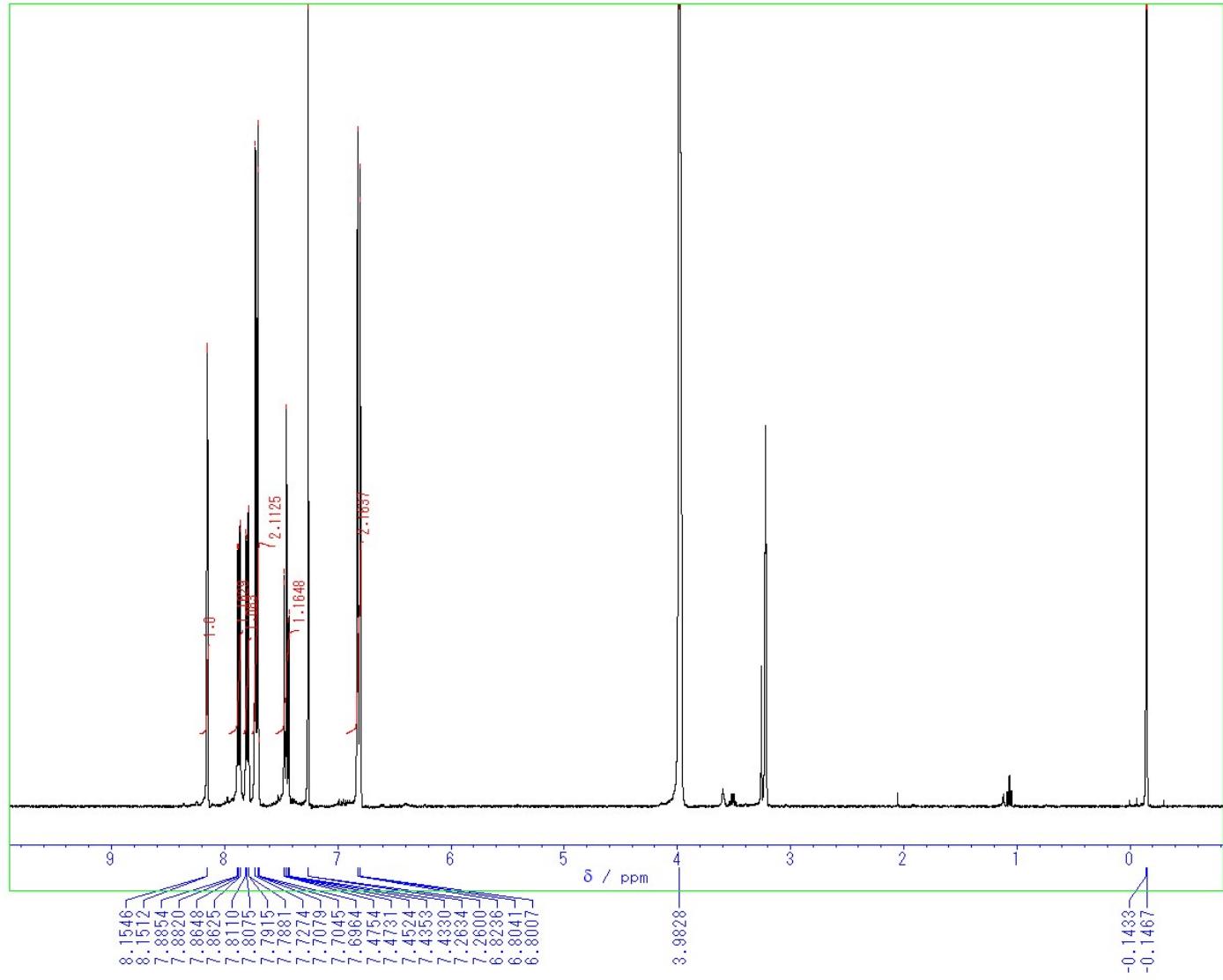
(a) Byproduct detected from AZO1 after X-ray irradiation



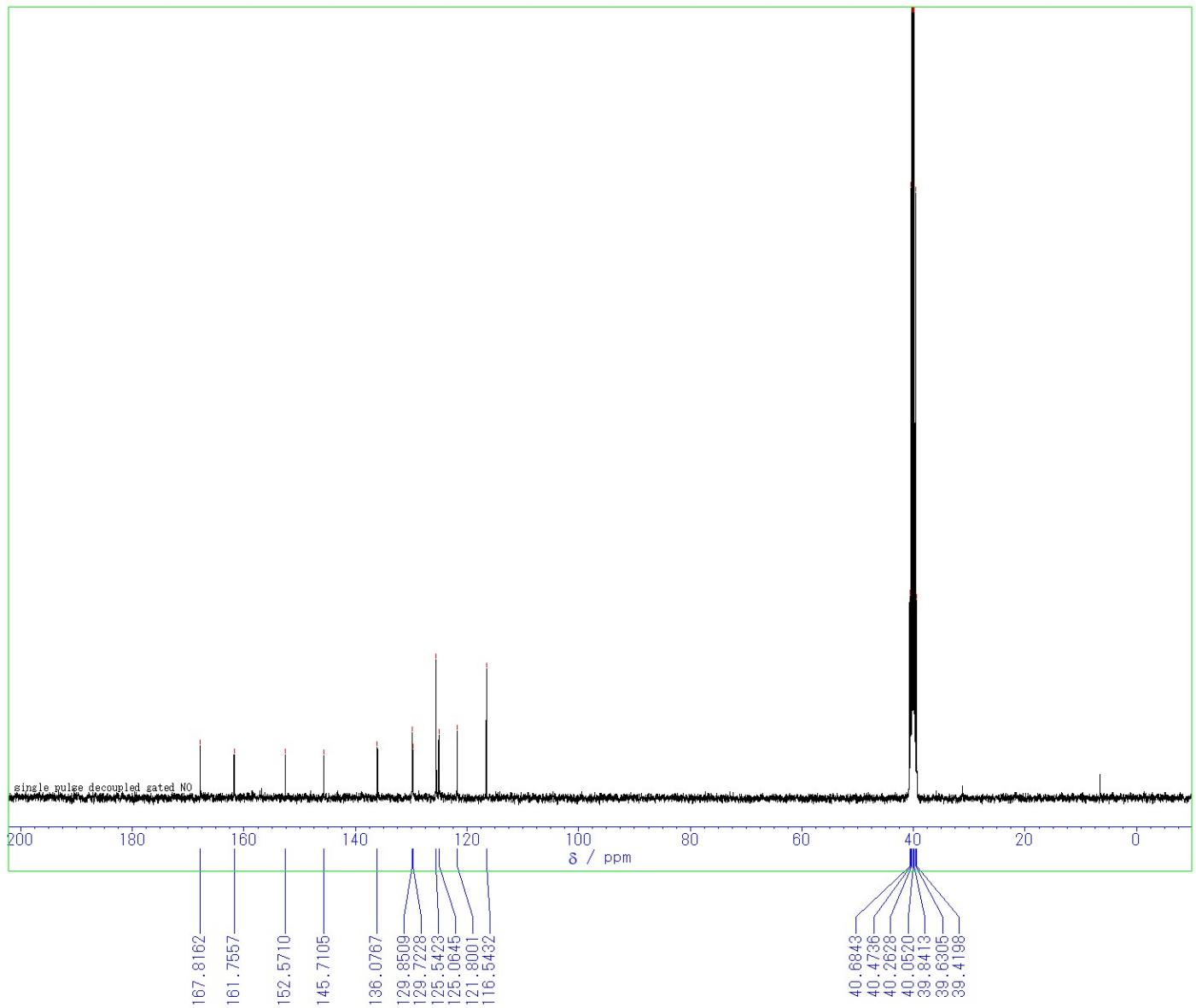
(b) Byproduct detected from AZO2 after X-ray irradiation



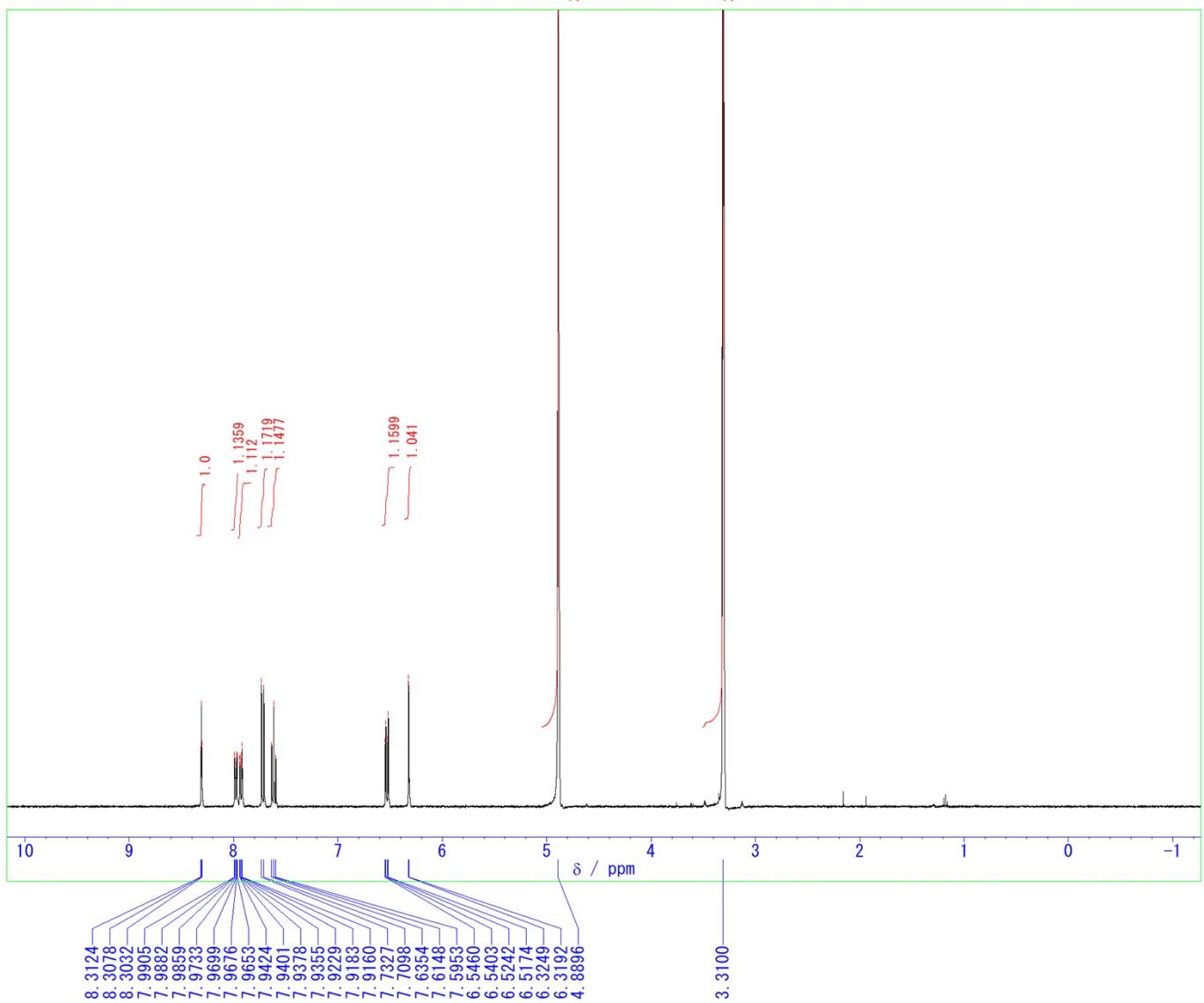
**Fig. S2** MS spectra of byproducts generated from (a) AZO1 (positive scan mode) and (b) AZO2 (negative scan mode) after X-ray irradiation.



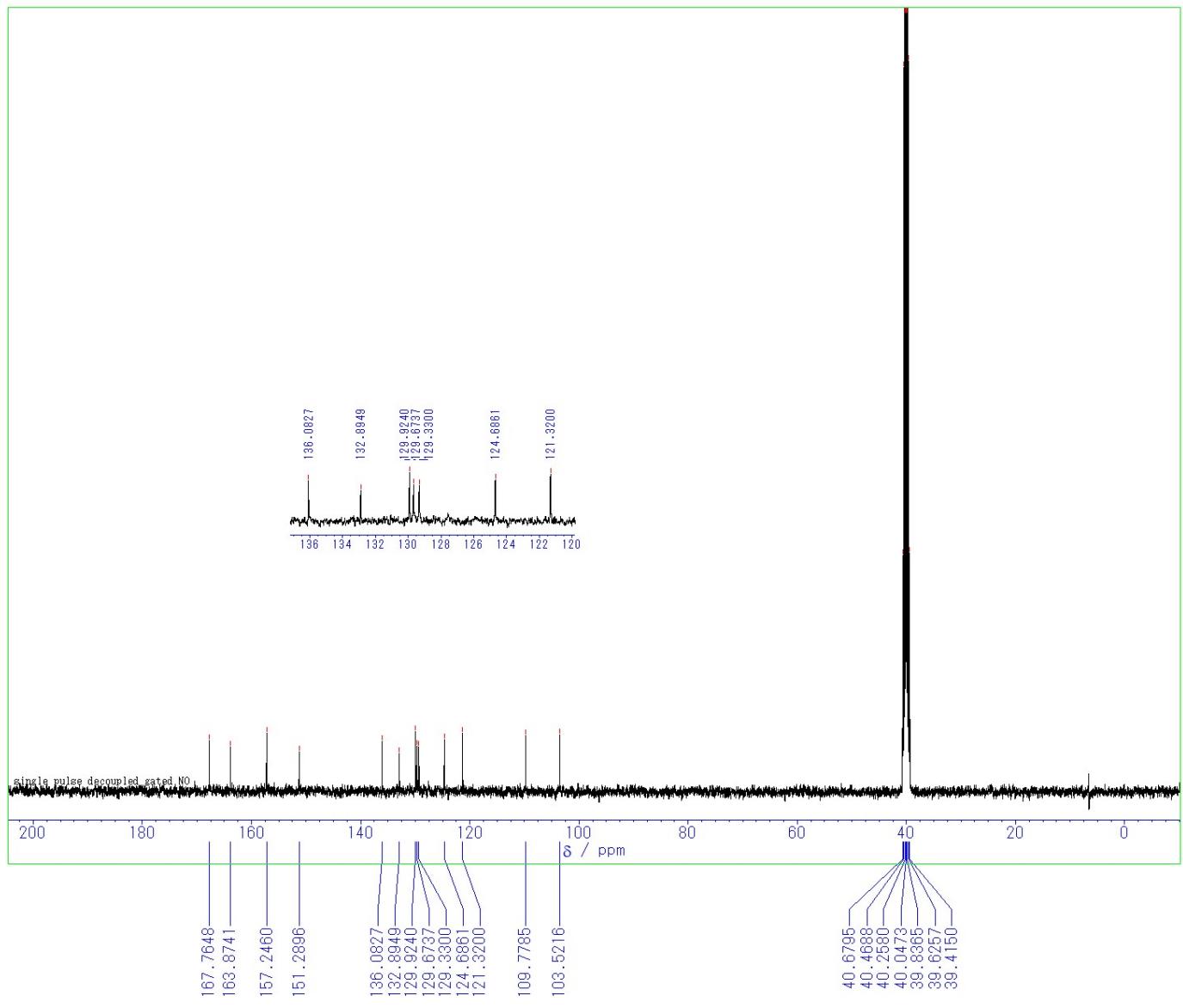
**Fig. S3**  $^1\text{H}$  spectrum of AZO1 in  $\text{CD}_3\text{OD}$  (containing  $\text{CDCl}_3$  as a cosolvent)



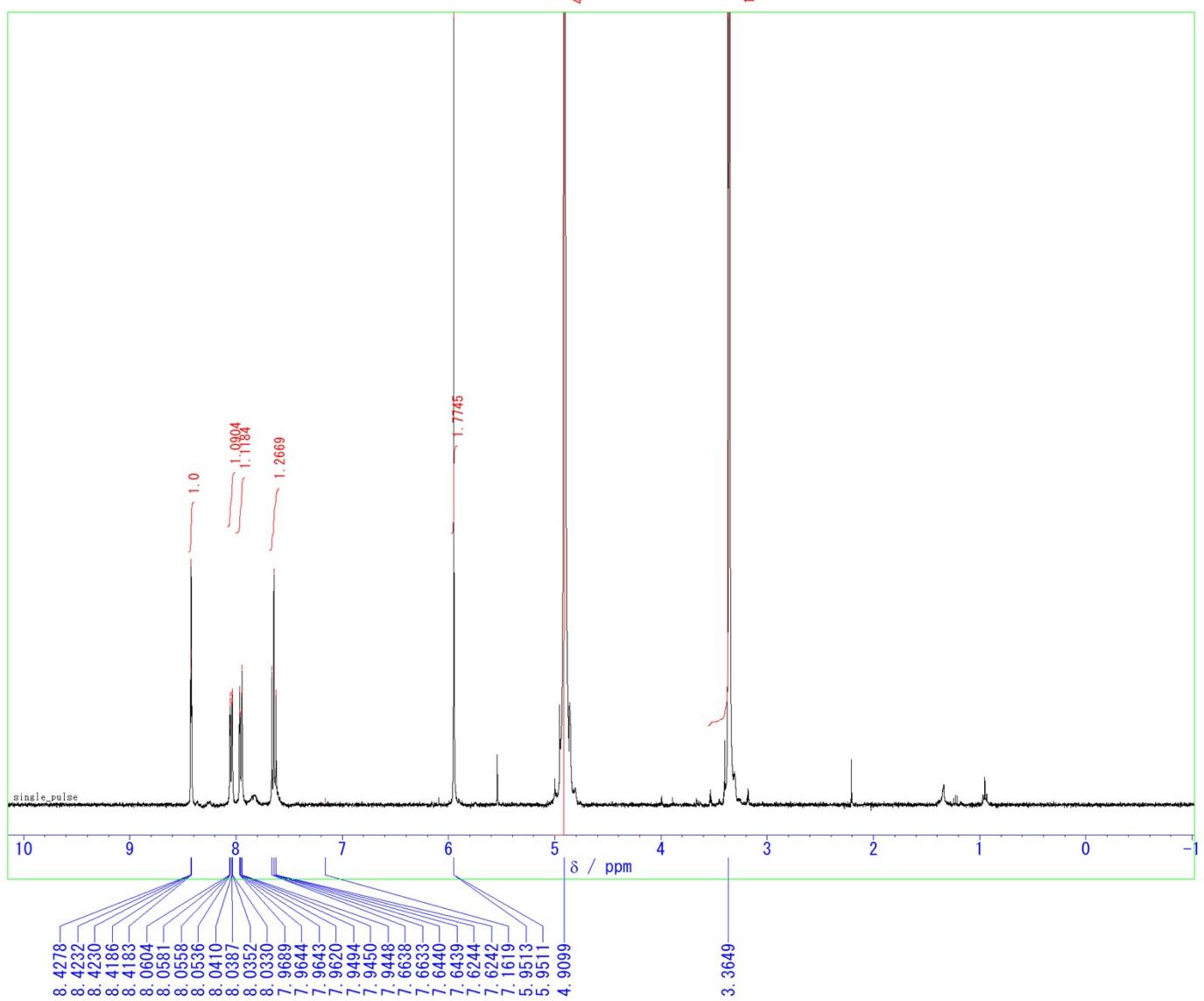
**Fig. S4**  $^{13}\text{C}$  spectrum of AZO1 in  $\text{DMSO}-d_6$



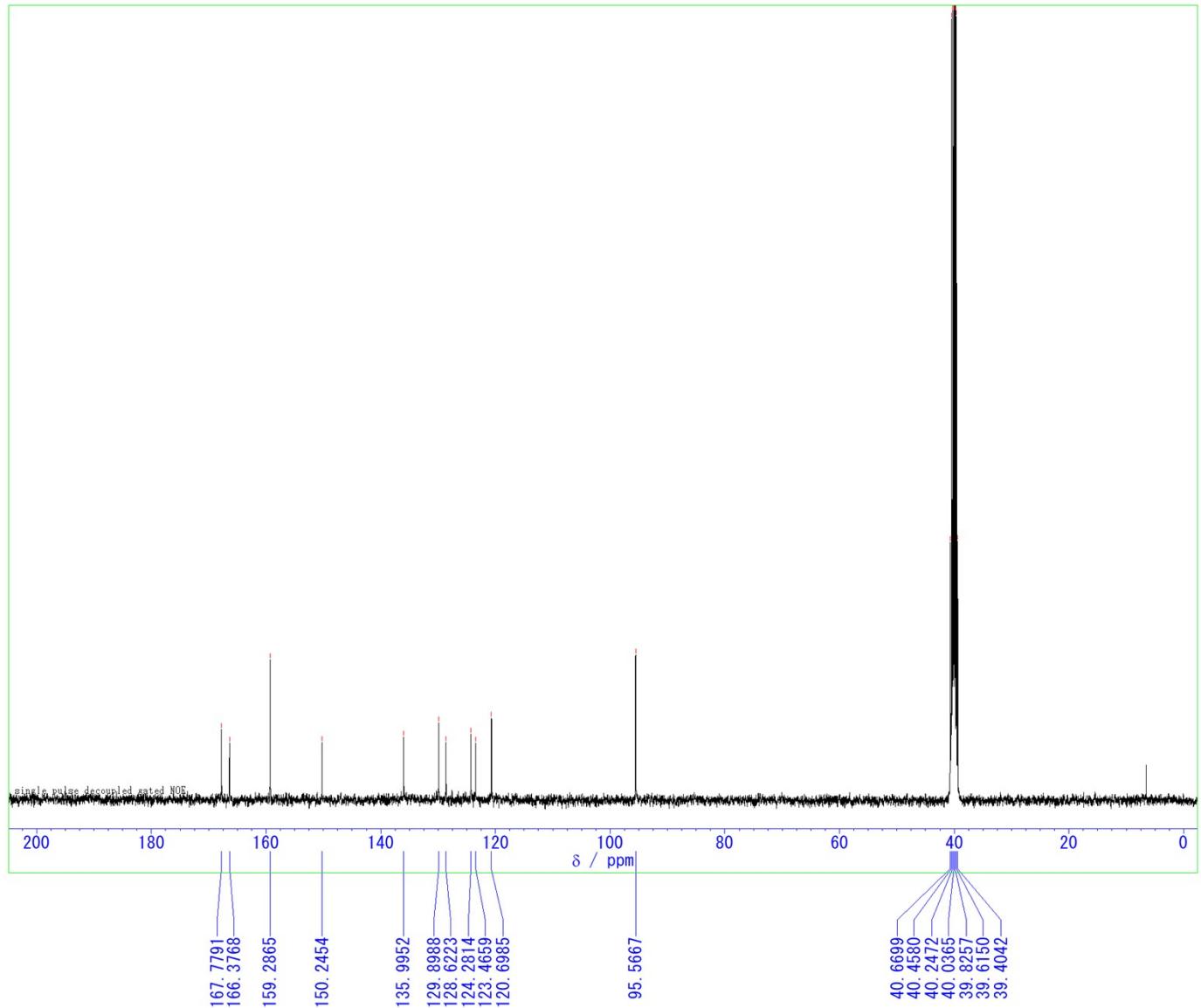
**Fig. S5**  $^1\text{H}$  spectrum of AZO<sub>2</sub> in CD<sub>3</sub>OD



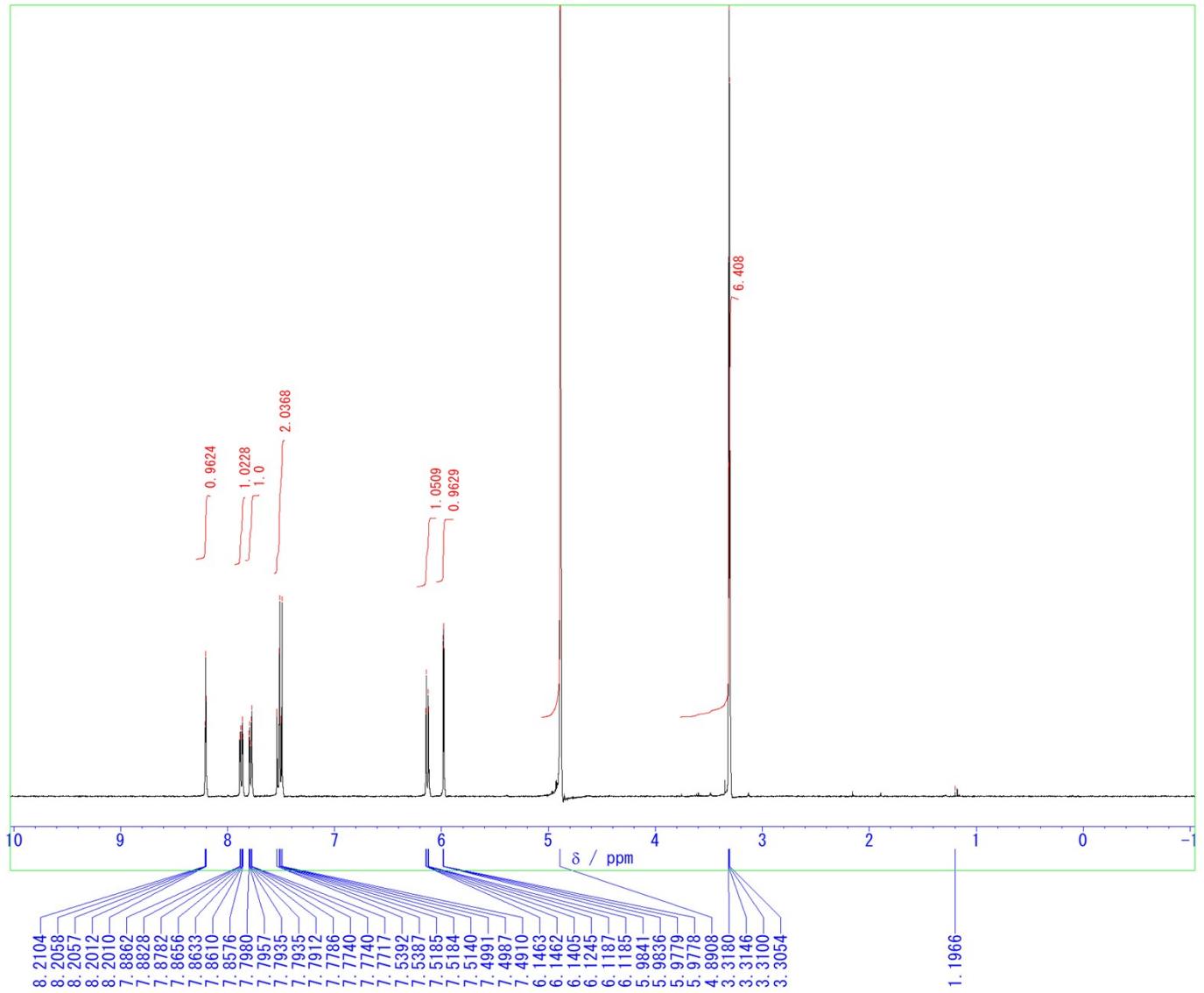
**Fig. S6**  $^{13}\text{C}$  spectrum of AZO<sub>2</sub> in  $\text{DMSO}-d_6$



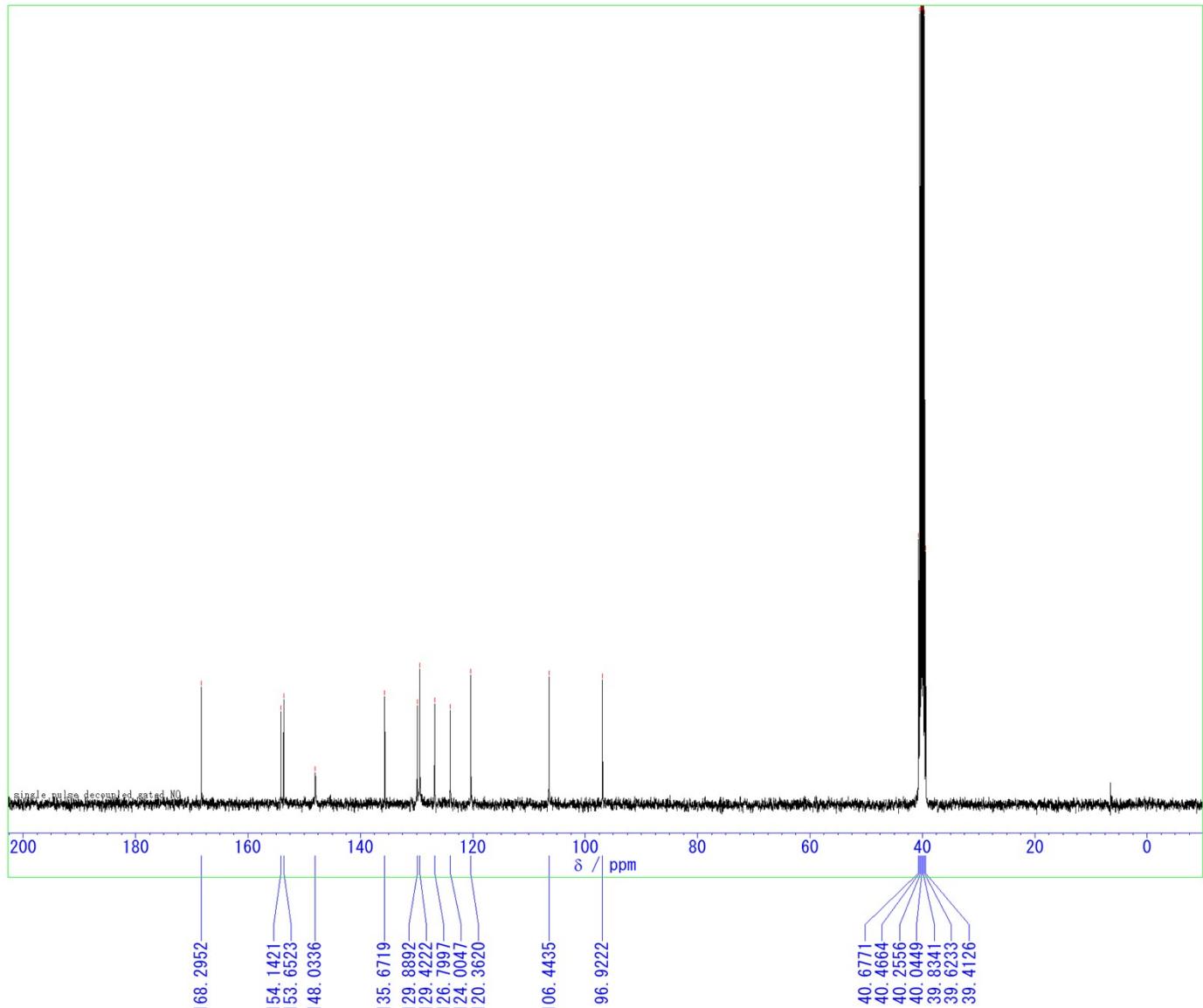
**Fig. S7**  $^1\text{H}$  spectrum of AZO<sub>3</sub> in CD<sub>3</sub>OD



**Fig. S8** $^{13}\text{C}$  spectrum of AZO<sub>3</sub> in DMSO- $d_6$



**Fig. S9**<sup>1</sup>H spectrum of AZO4 in CD<sub>3</sub>OD



**Fig. S10**  $^{13}\text{C}$  spectrum of AZO<sub>4</sub> in DMSO-*d*<sub>6</sub>