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Supplementary Information

Facile and Potent Synthesis of Carbon Bridged Fullerene Dimers (HC_{60}-CR_2-$C_{60}H$ type)

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AFM Sample Preparation and Imaging. The dimer **2** was dispersed in dilute ethanol (2mg/ml) and irradiated by ultrasonic for three hours. A 5μl mixture was spotted onto a freshly cleaved mica surface, left for 30 seconds and then washed with Milli-Q water , imaging was performed on a Multimode Nanoscope □a atomic force microscopy (Digital Instruments) in tapping mode, using a fluid cell, J scanner and 200μm cantilevers with Si_3N_4 tips.

Spectroscopic Data

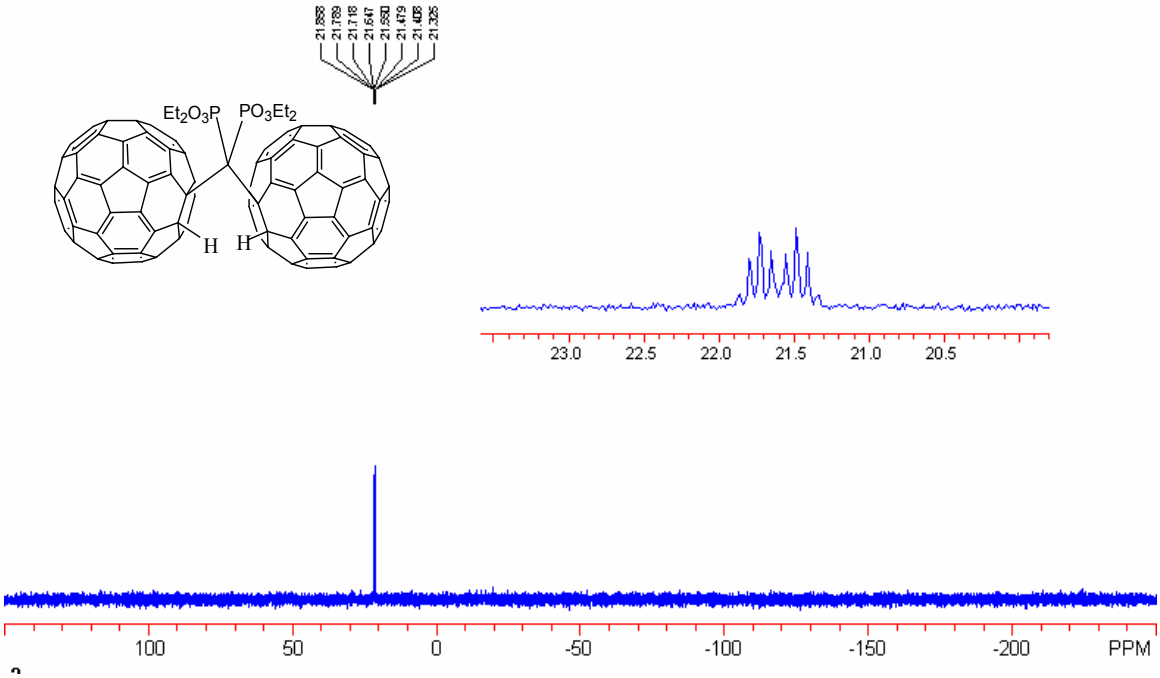
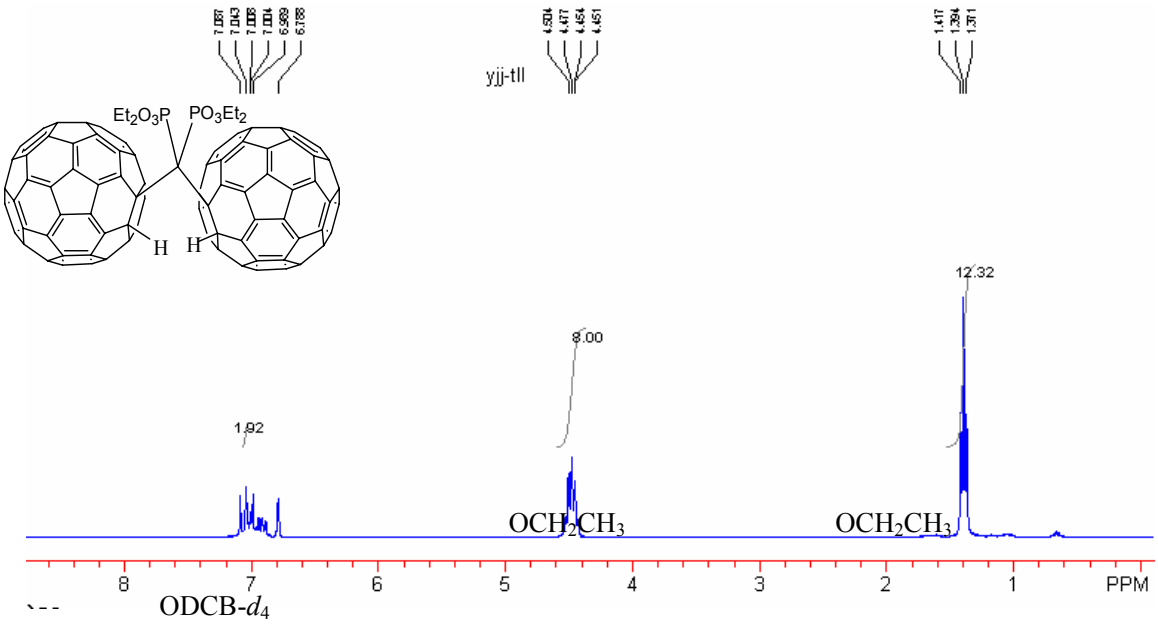


Figure S1 The ^{31}PNMR (160 MHz, ODCB-d_4) of dimer **2**.



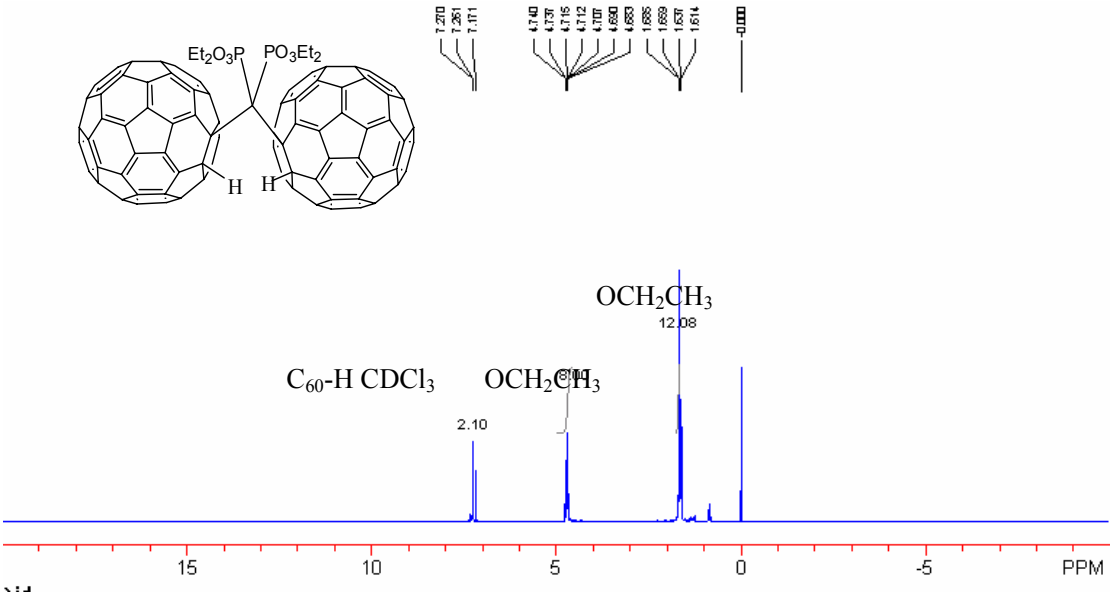


Figure S2 The ^{1}HNMR (300 MHz, ODCB-d_4) of dimer **2** (top) and the ^{1}HNMR (300 MHz, $CDCl_3$) (bottom).

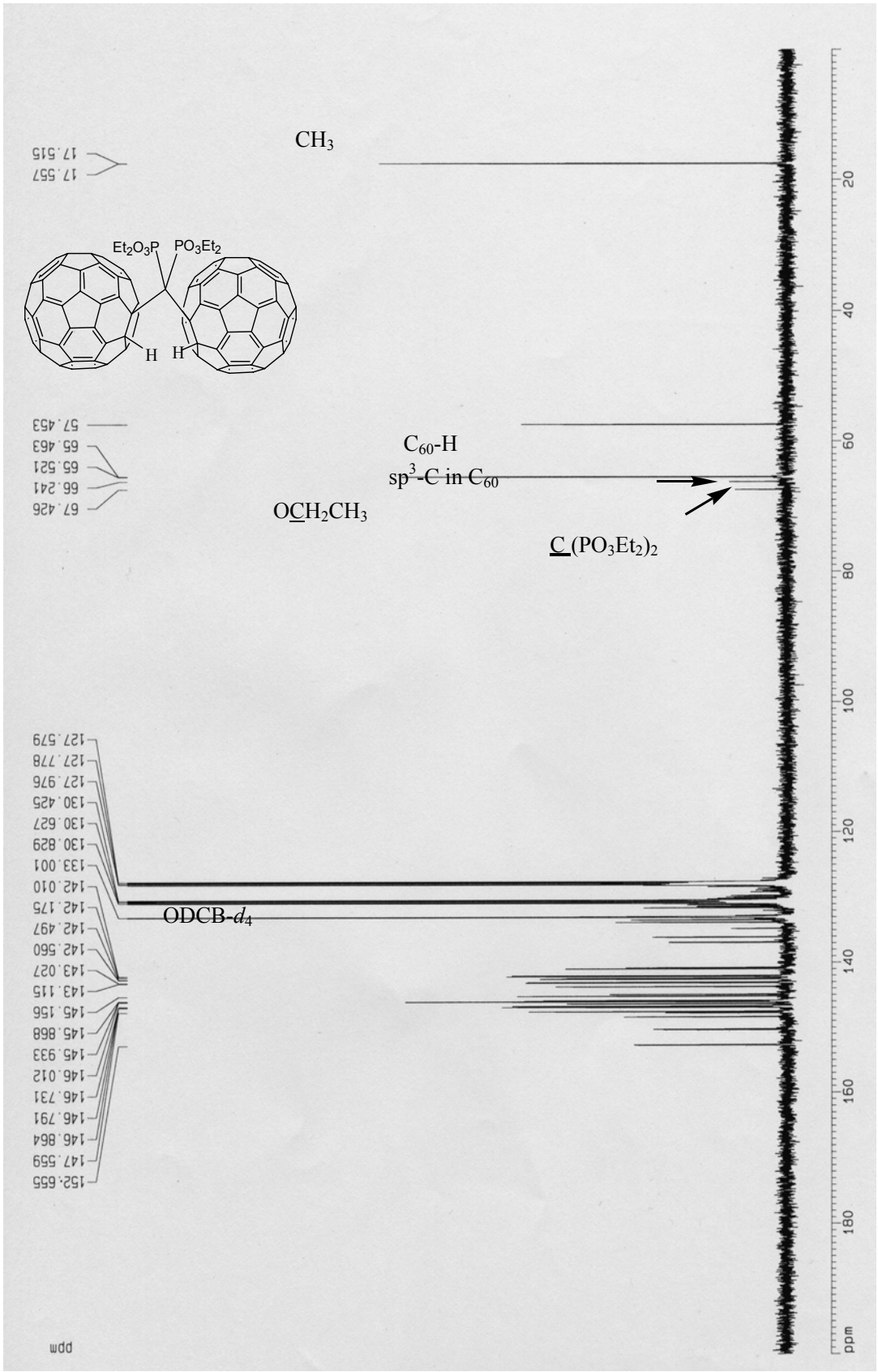


Figure S3 The ^{13}CNMR (75 MHz, $CDCl_3$) of dimer **2**.

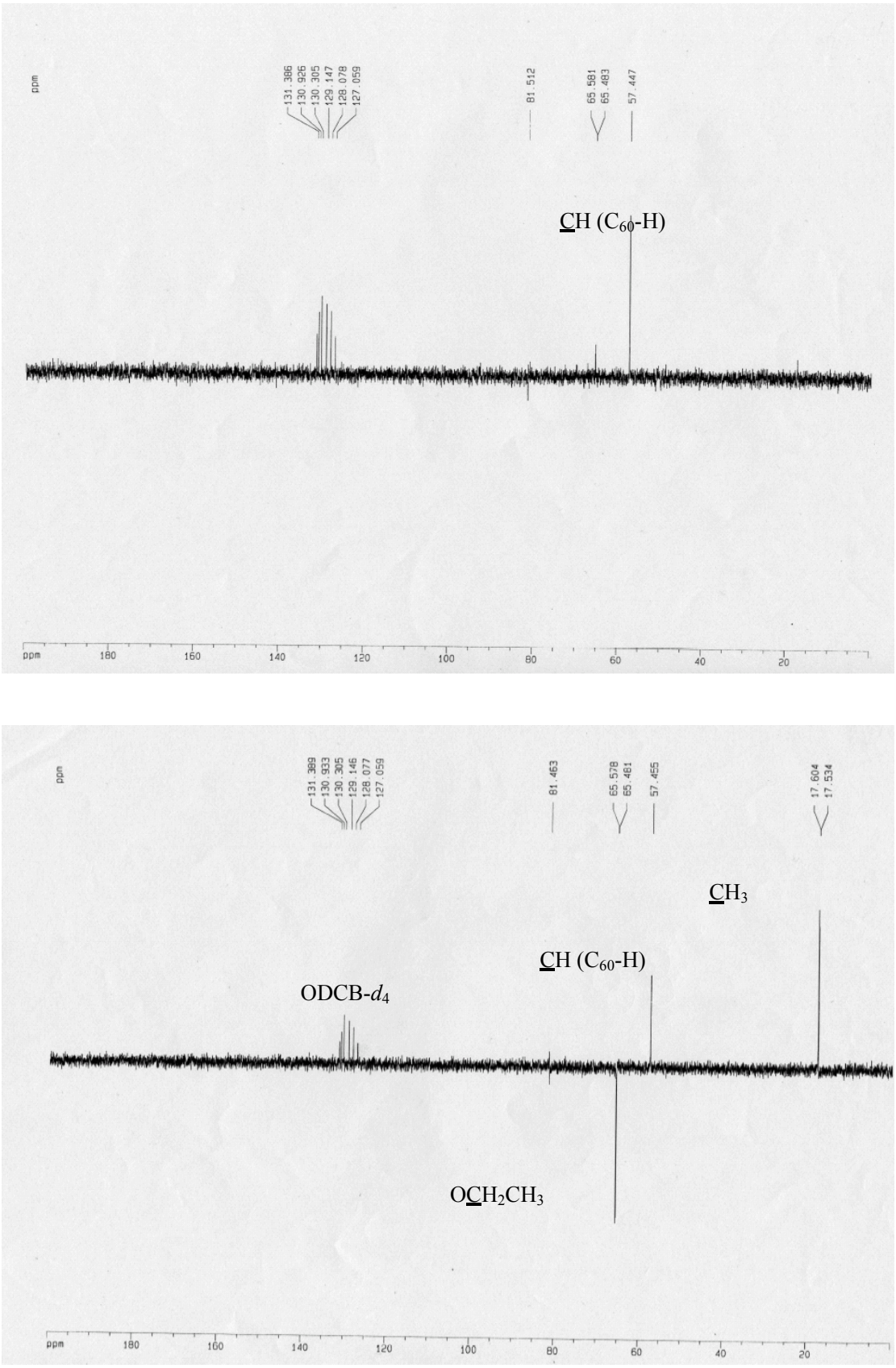


Figure S4. The DEPT (75 MHz, ODCB-d_4) of dimer **2** (top: θ=90^{o}) and (bottom: θ=135 ^{o}).

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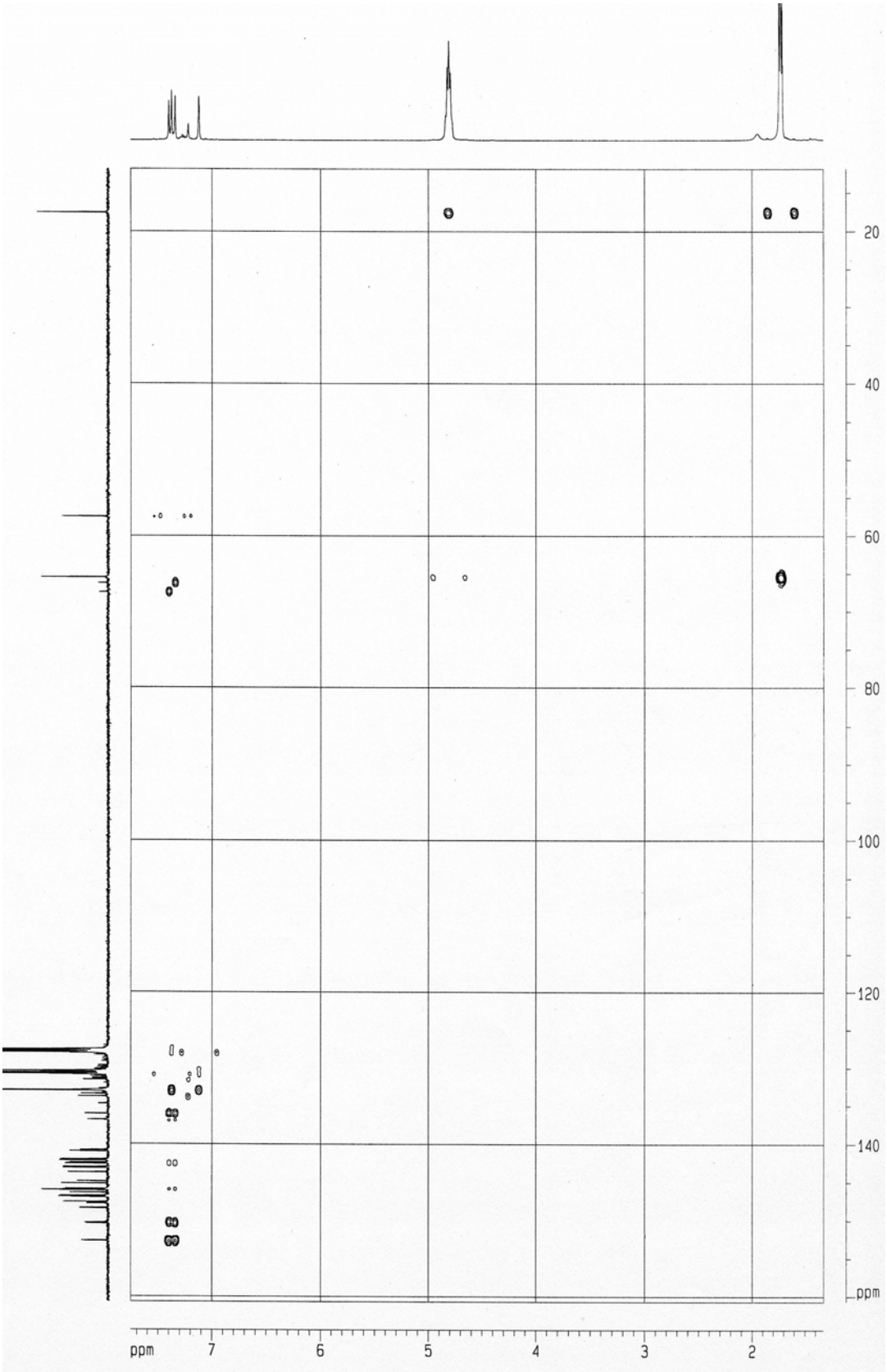

Figure S5. The HMBC (100 MHz, ODCB-d_4) of dimer **2**.

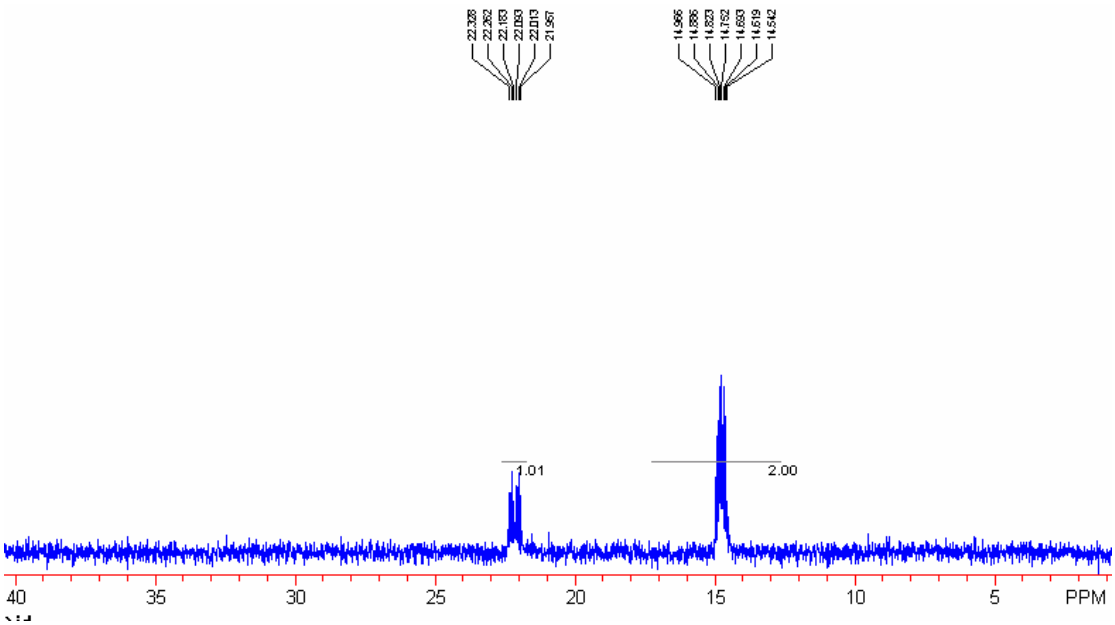

Figure S6. The ^{31}PNMR (160 MHz, $CDCl_3$) of dimer **4**.

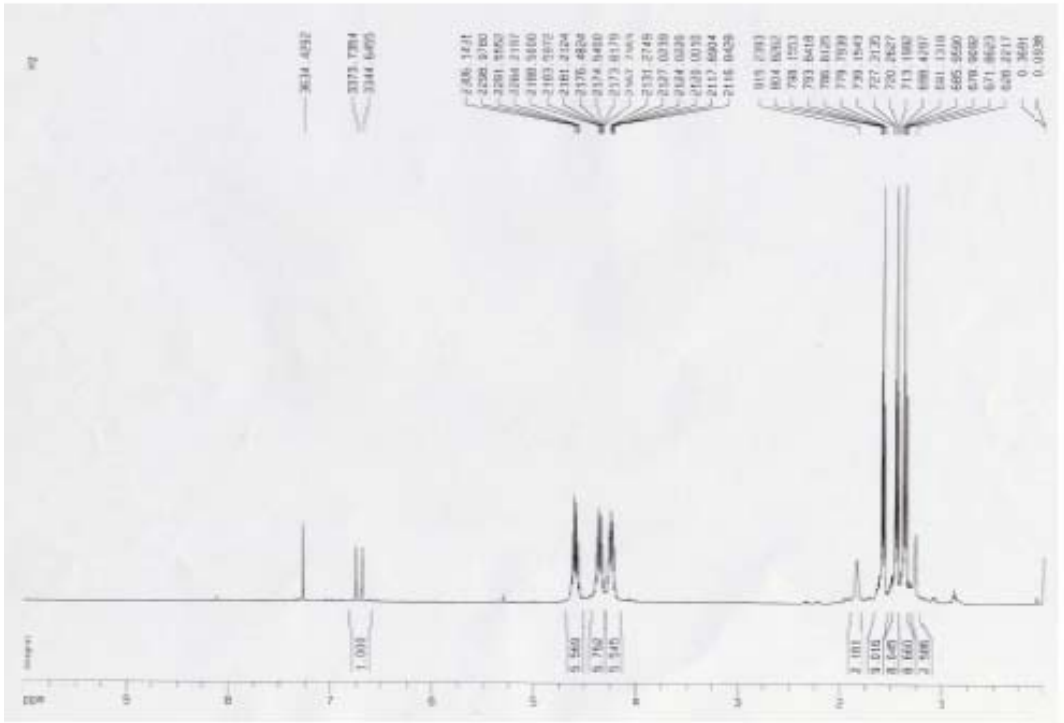

Figure S7 The ^{1}HNMR (500 MHz, $CDCl_3$) of dimer **4**.

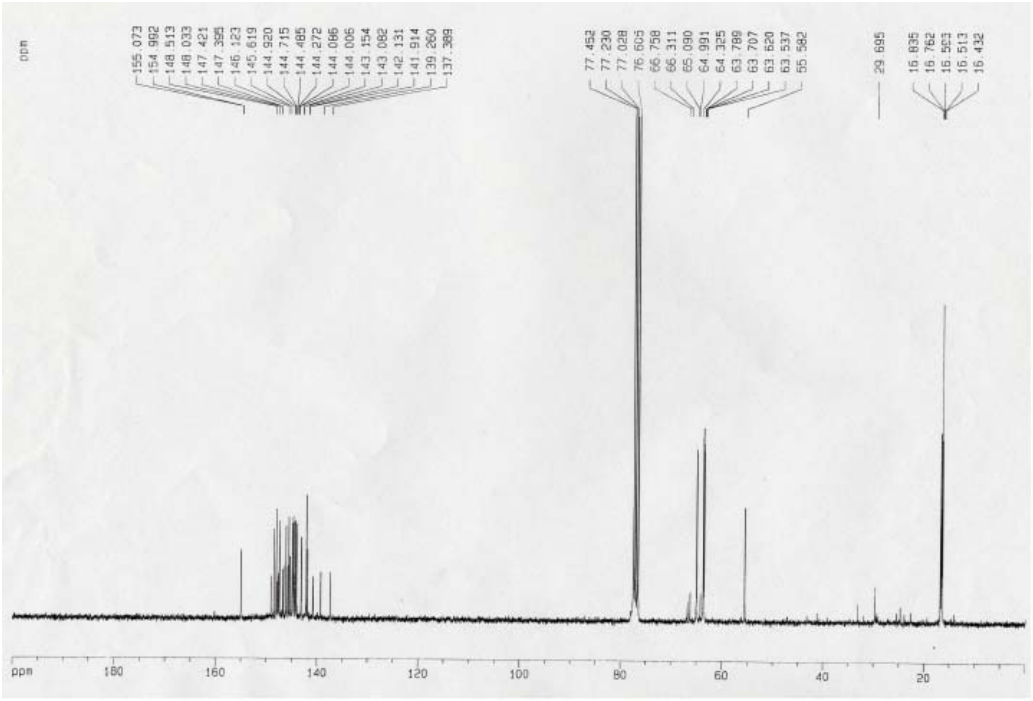

Figure S8. The ^{13}C NMR of dimer **4** (75 MHz, $CDCl_3$).

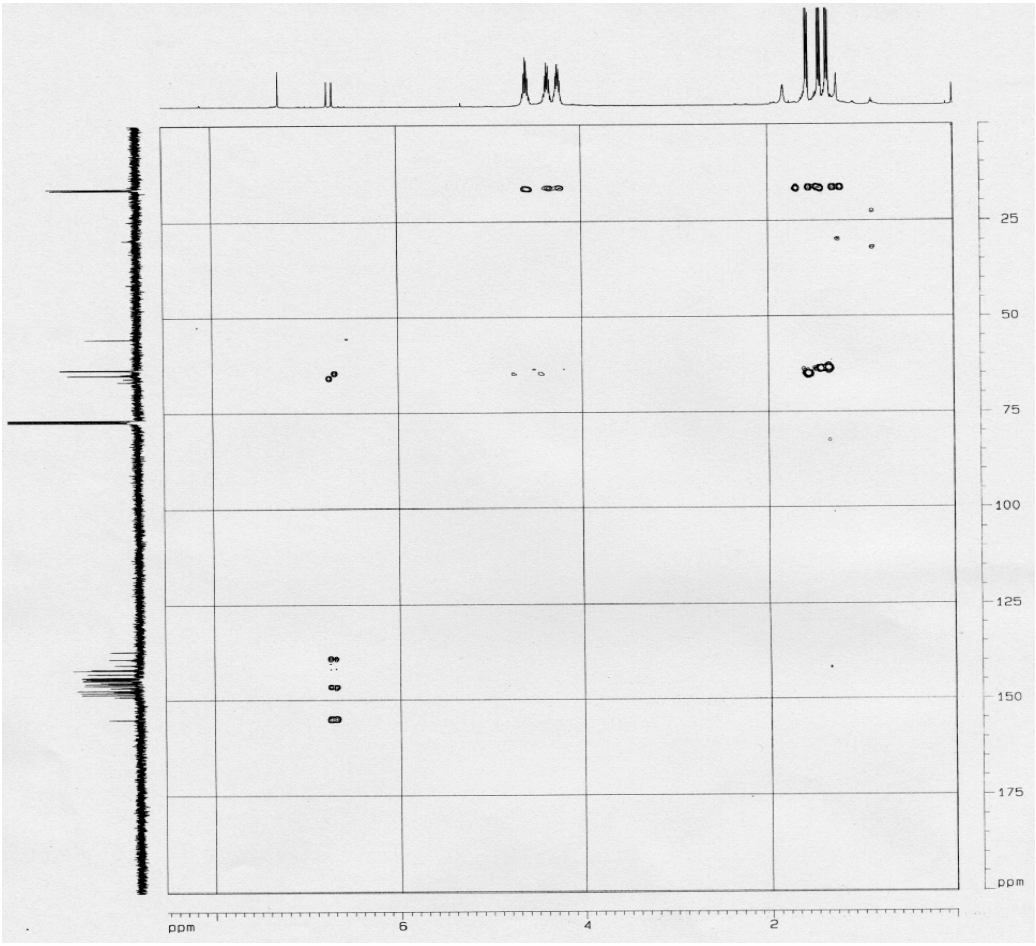

Figure S9. The HMBC (125 MHz, $CDCl_3$) of dimer **4**.

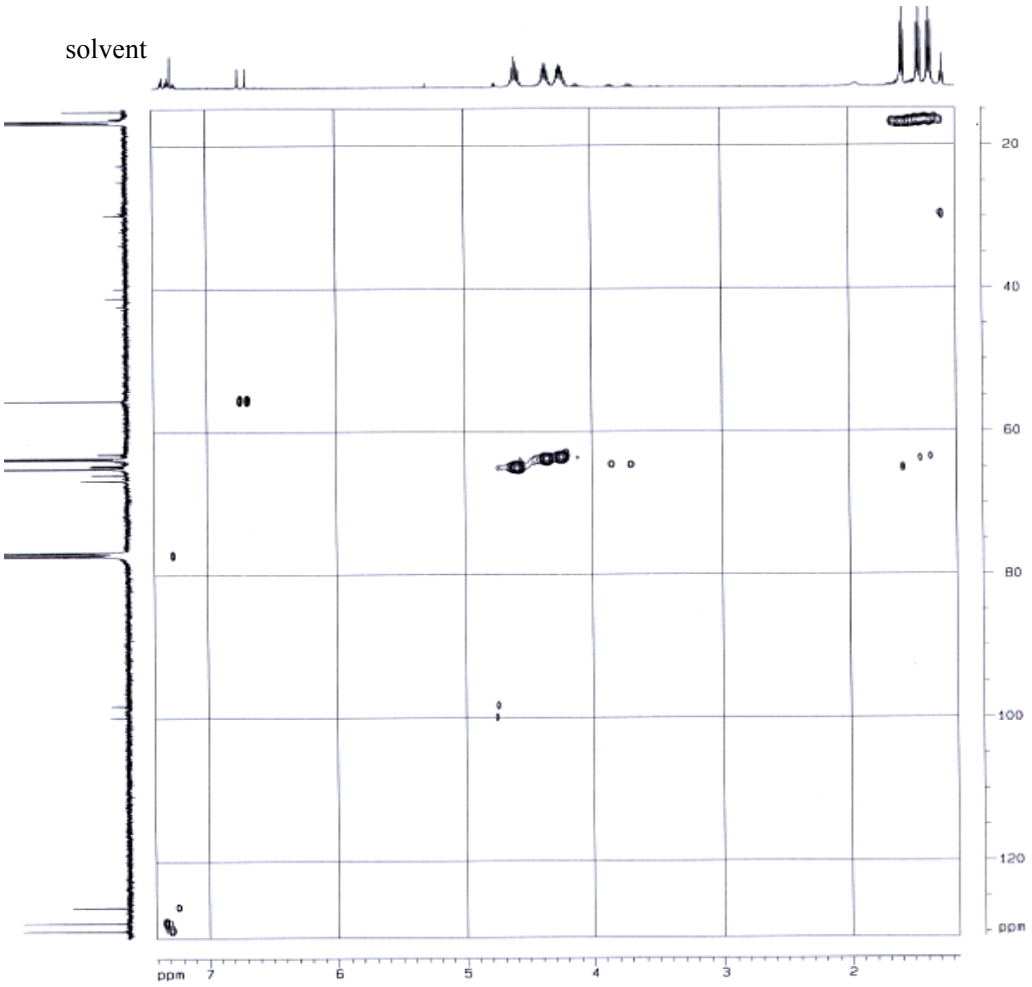

Figure S10. The HMQC (125 MHz, $CDCl_3$) of dimer **4**.