

SUPPORTING INFORMATION

Photochromism of Novel Chromenes Constrained to be Part of [2.2]Paracyclophane: Remarkable 'Phane' Effects on the Colored *o*-Quinonoid Intermediates

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Table S1. Crystal Data for Chromenes **CP-H**.

compound	CP-H
molecular formula	C ₃₁ H ₂₆ O
formula weight	414.52
solvent for crystallization	CHCl ₃
crystal system	Triclinic
<i>a</i> (Å)	7.8416(18)
<i>b</i> (Å)	10.779(2)
<i>c</i> (Å)	13.485(3)
<i>α</i> (deg)	95.885(4)
<i>β</i> (deg)	98.485(5)
<i>γ</i> (deg)	103.936(4)
volume (Å ³)	1082.8(4)
Temperature (K)	100 (2)
space group	<i>P</i> -1 (No. 2)
<i>Z</i>	2
reflections measured	3264
independent reflections	2907 [<i>R</i> (int) = 0.0141]
calculated density (mg/m ³)	1.271
absorption coefficient (mm ⁻¹)	0.075
<i>F</i> (000)	440
goodness-of-fit on <i>F</i> ²	1.016
final <i>R</i> indices [<i>I</i> > 2σ(<i>I</i>)]	<i>R</i> ₁ = 0.0770 , <i>wR</i> ₂ = 0.2302
<i>R</i> indices (all data)	<i>R</i> ₁ = 0.0928 , <i>wR</i> ₂ = 0.2529

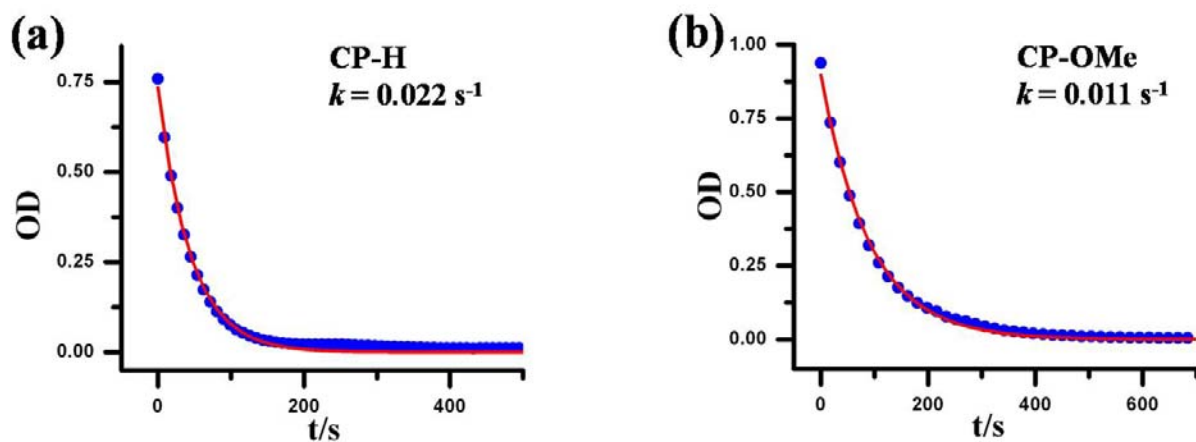


Figure S1. The decay kinetics for bleaching of the colored intermediates of **CP-H** (a) and **CP-OMe** (b) as monitored by change in the absorbance at 524 nm at 298 K.

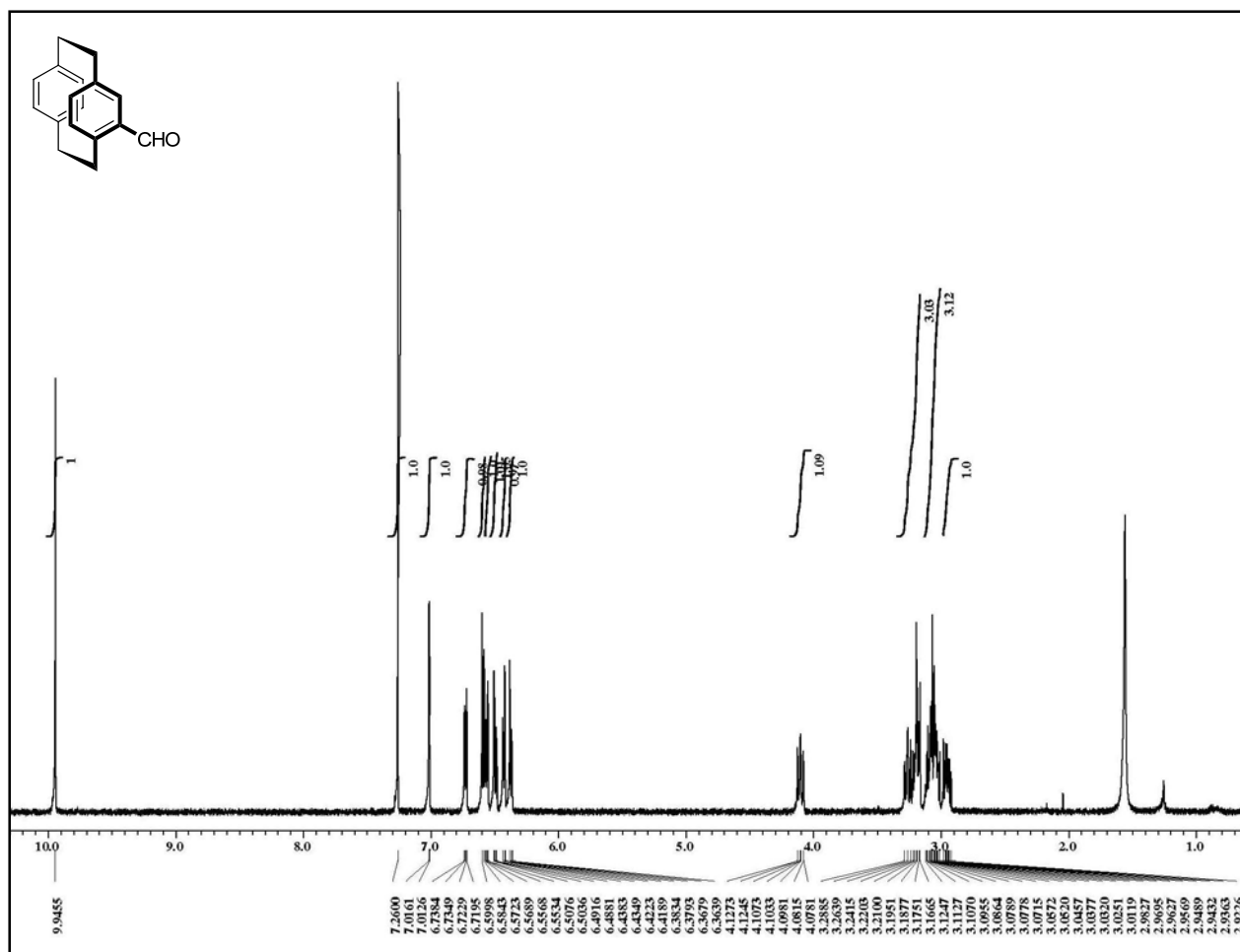


Figure S1. ¹H NMR (CDCl₃, 500 MHz) spectrum of *rac*-4-formyl[2.2]paracyclophane in CDCl₃.

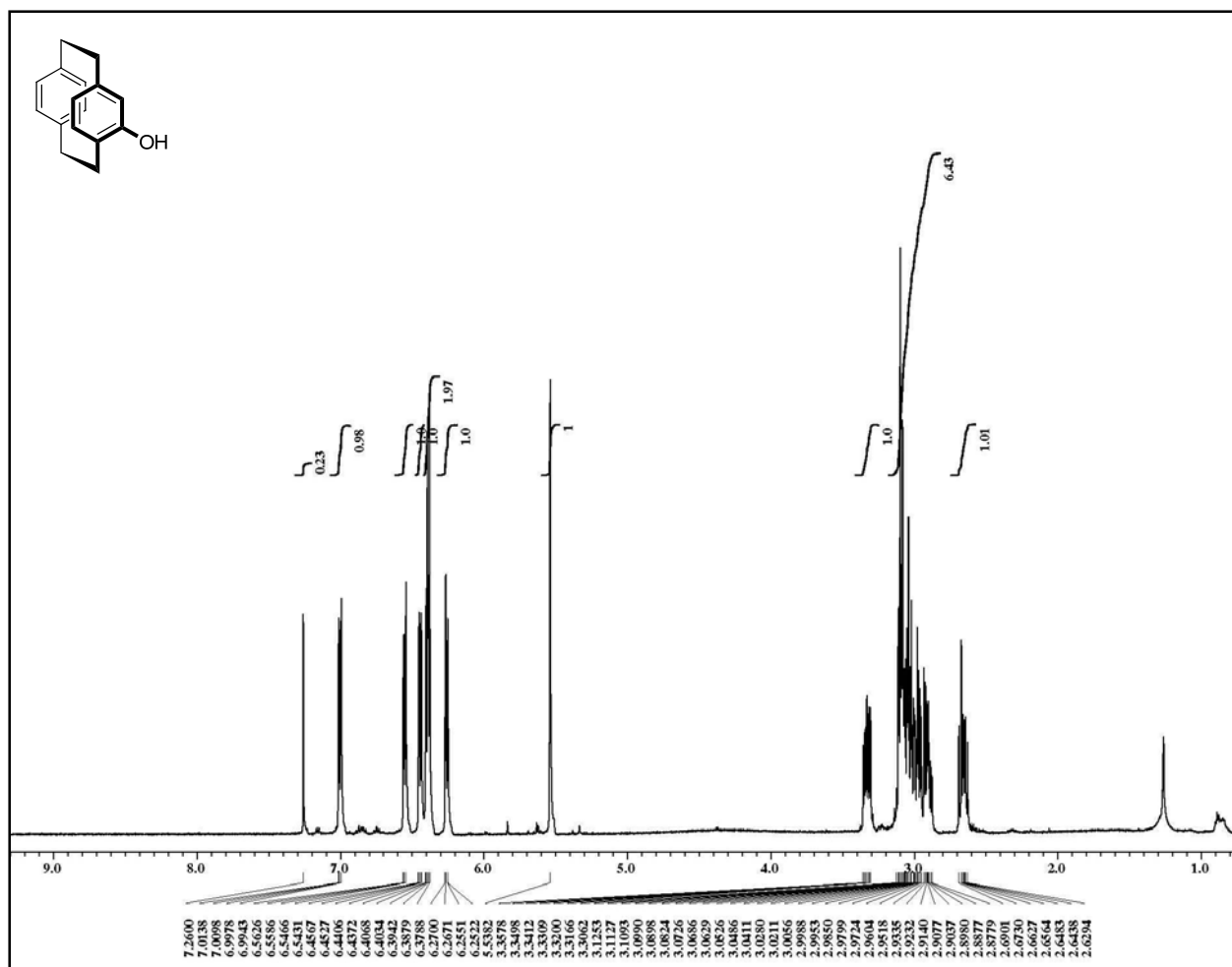


Figure S2. ¹H NMR (CDCl₃, 500 MHz) spectrum of *rac*-4-hydroxy[2.2]paracyclophane in CDCl₃.

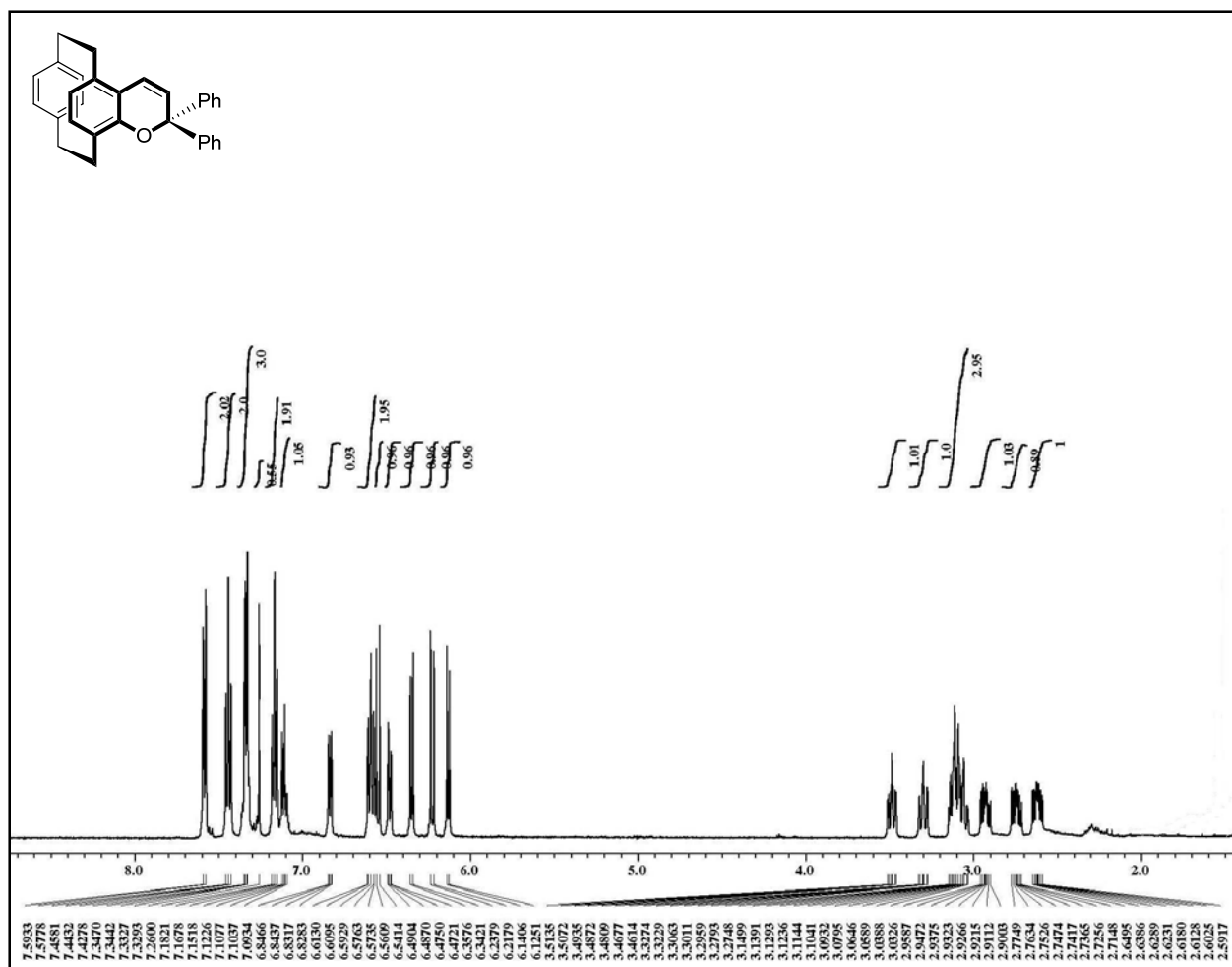


Figure S3. ¹H NMR (CDCl₃, 500 MHz) spectrum of CP-H in CDCl₃.

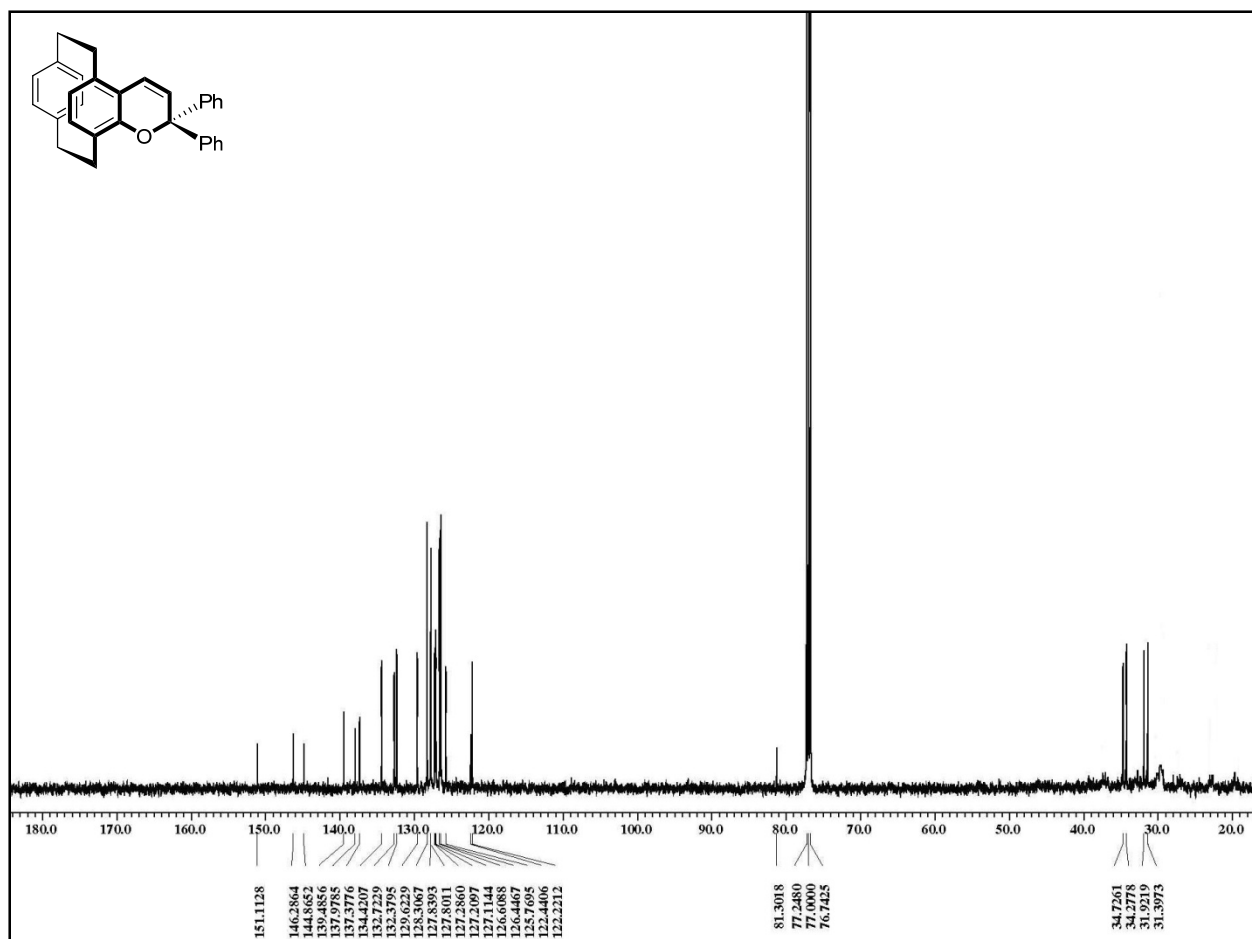


Figure S4. ¹³C NMR (CDCl₃, 125 MHz) spectrum of cyclophanochromene **CP-H** in CDCl₃.

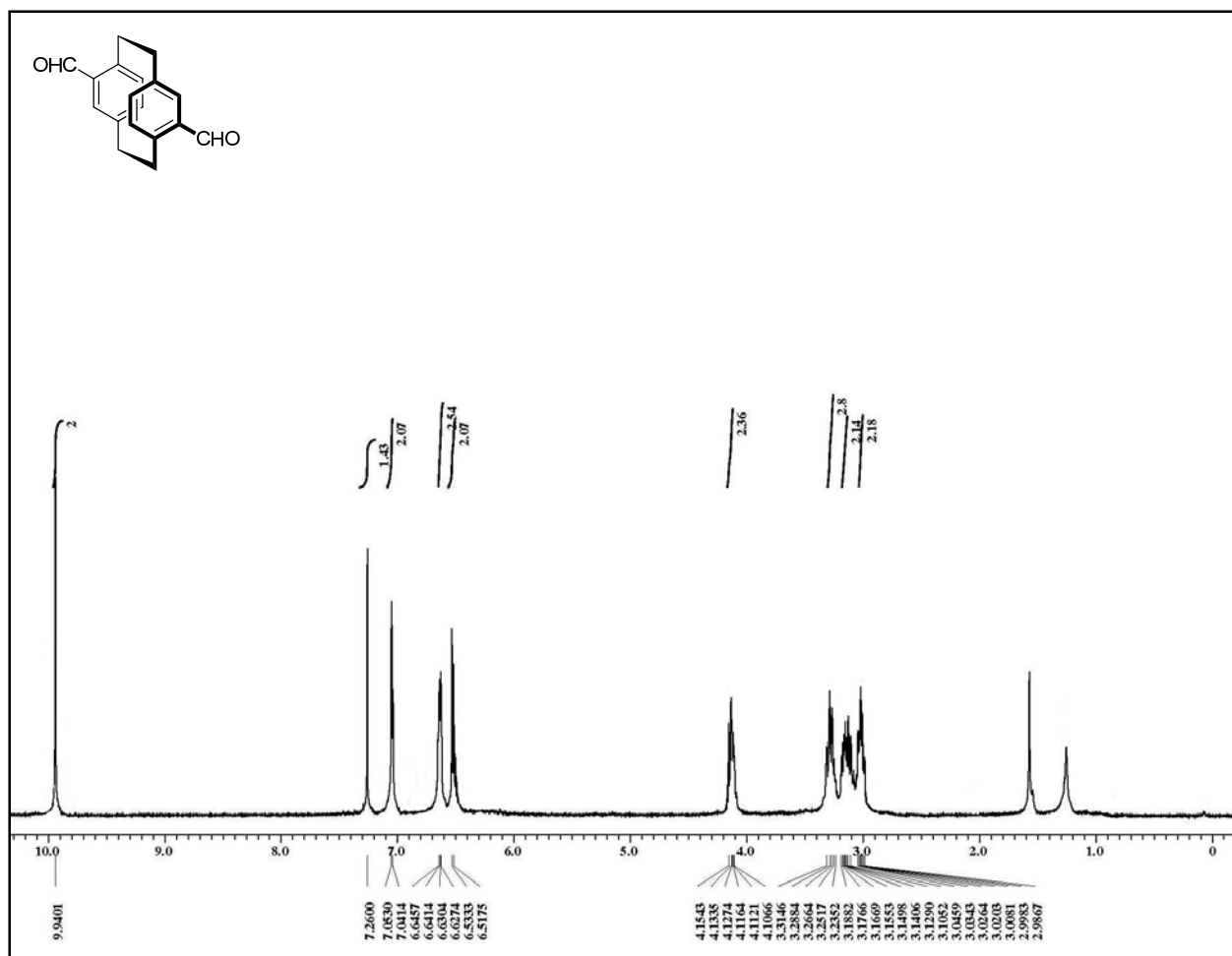


Figure S5. ¹H NMR (CDCl₃, 500 MHz) spectrum of 4,16-diformyl[2.2]paracyclophane in CDCl₃.

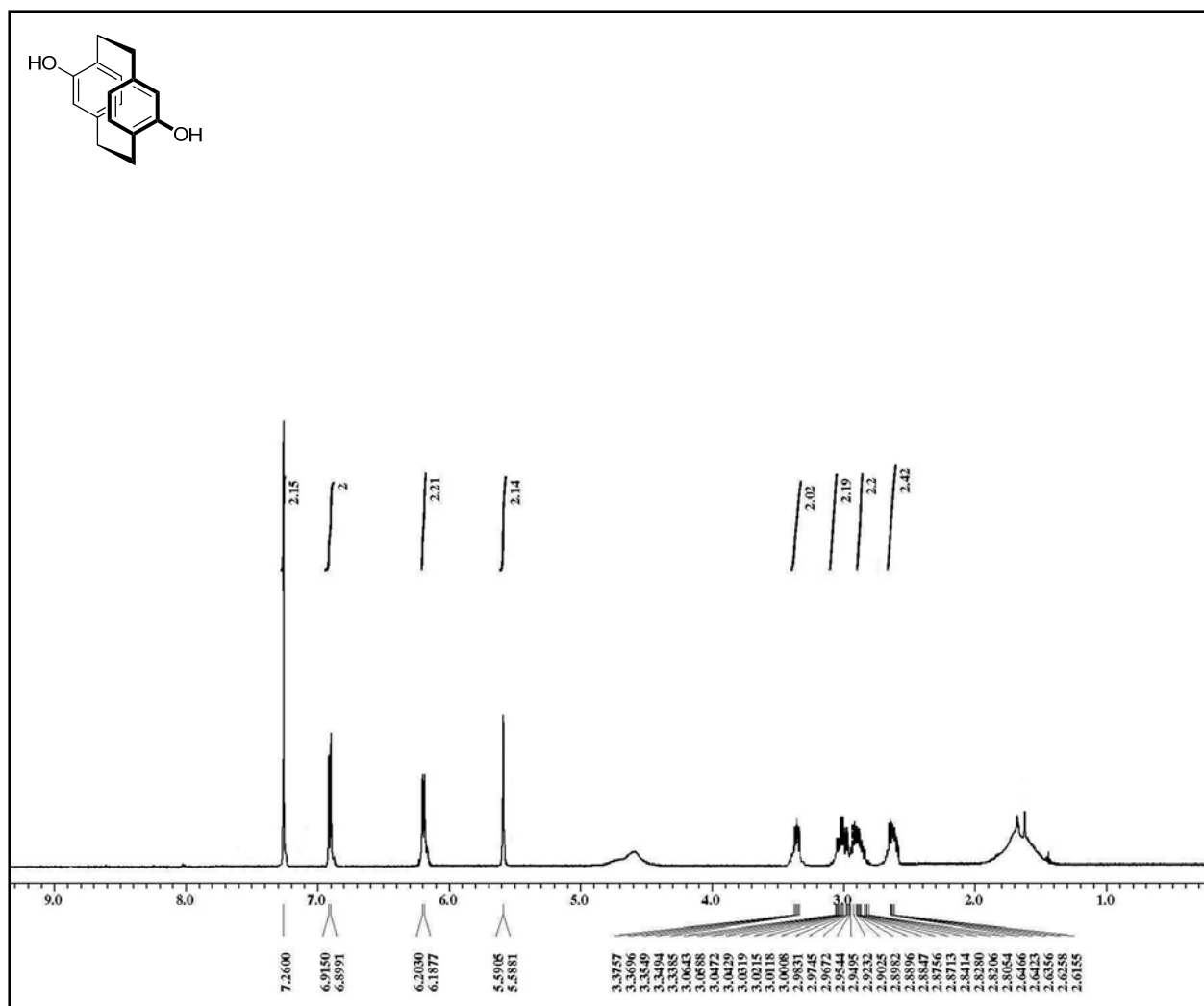


Figure S6. ¹H NMR (CDCl₃, 500 MHz) spectrum of 4,16-dihydroxy[2.2]paracyclophane in CDCl₃.

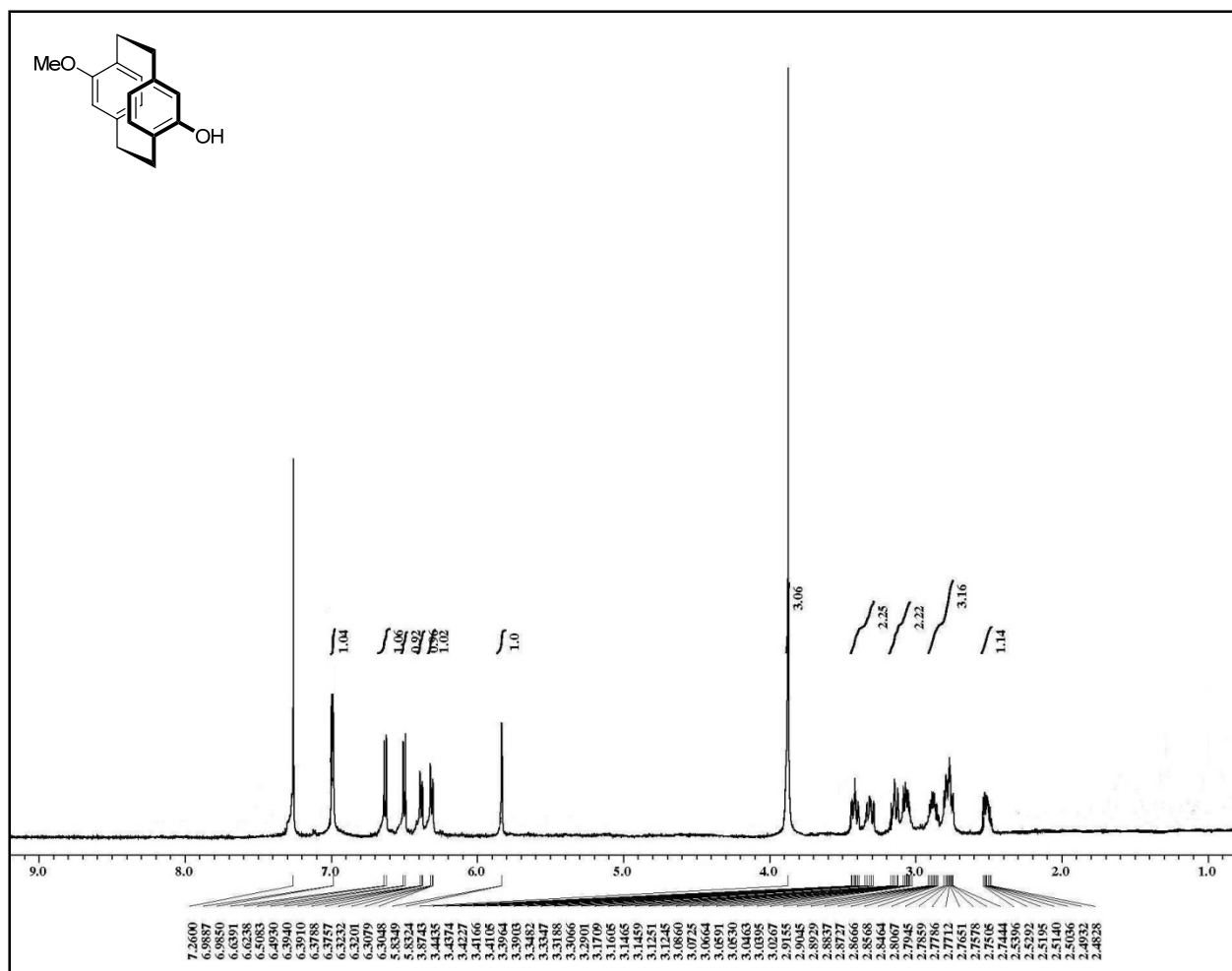


Figure S7. ¹H NMR (CDCl₃, 500 MHz) spectrum of 4-hydroxy-16-methoxy[2.2]paracyclophane in CDCl₃.

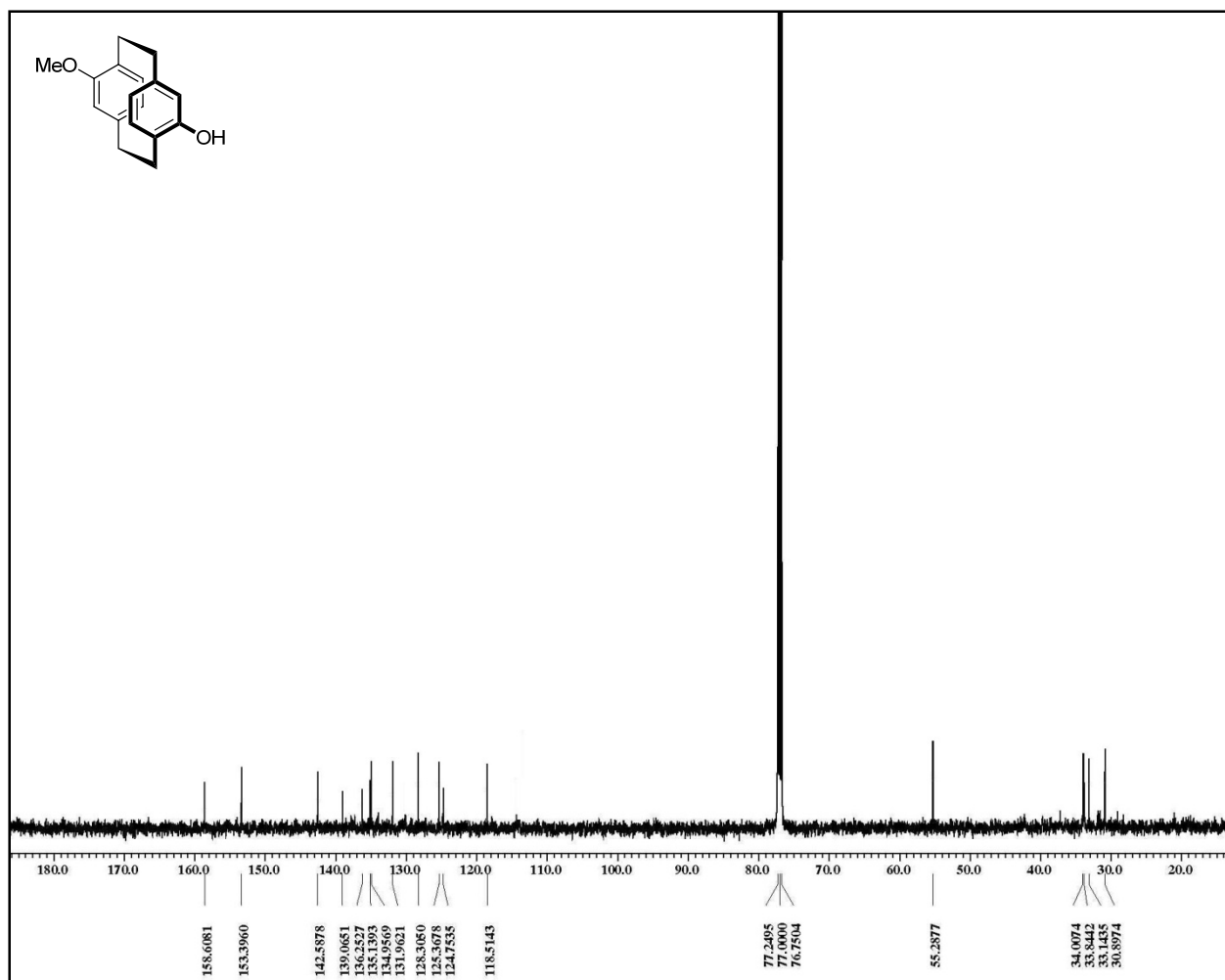


Figure S8. ^{13}C NMR (CDCl_3 , 125 MHz) spectrum of 4-hydroxy-16-methoxy[2.2]paracyclophane in CDCl_3 .

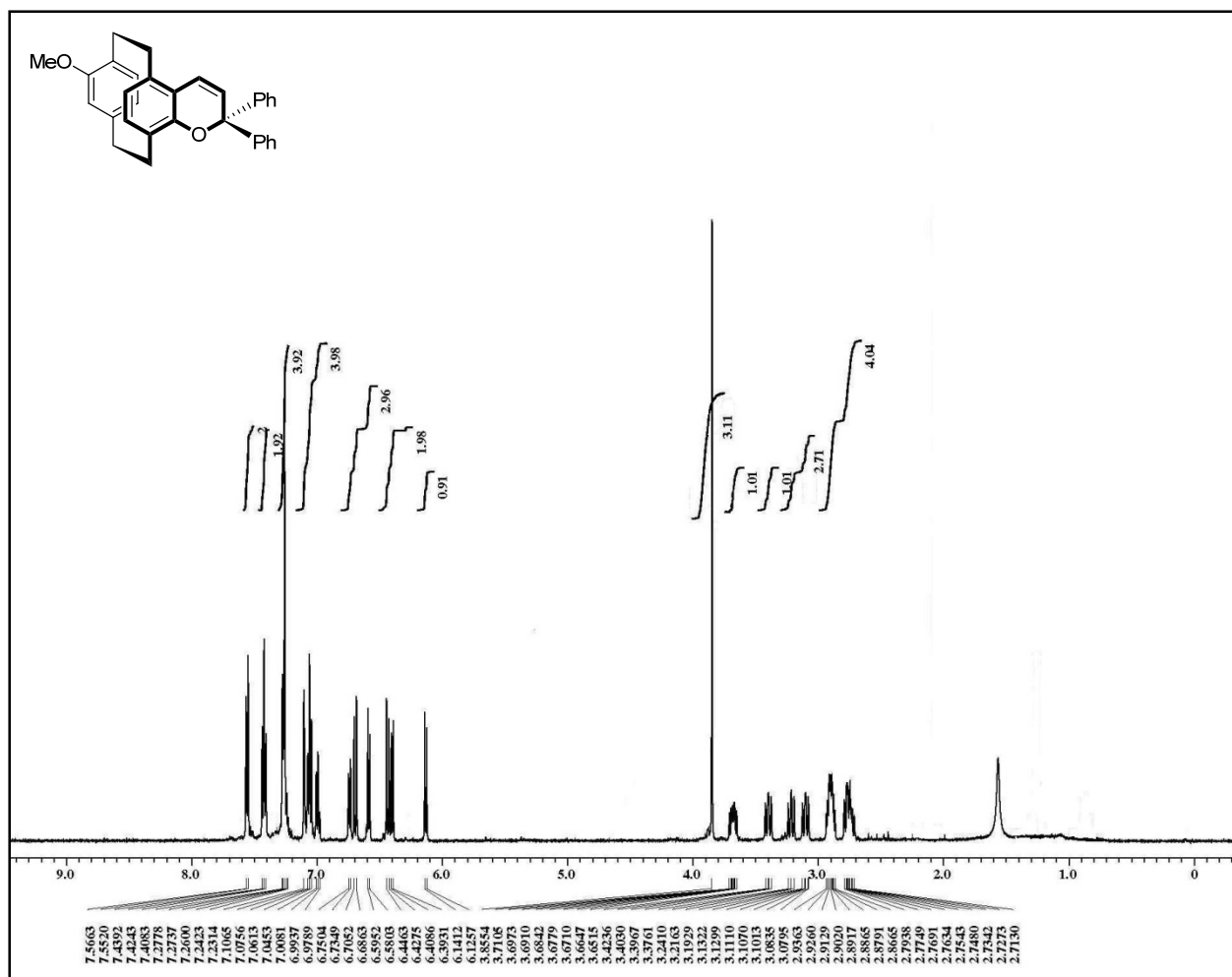


Figure S9. ¹H NMR (CDCl₃, 500 MHz) spectrum of CP-OMe in CDCl₃.

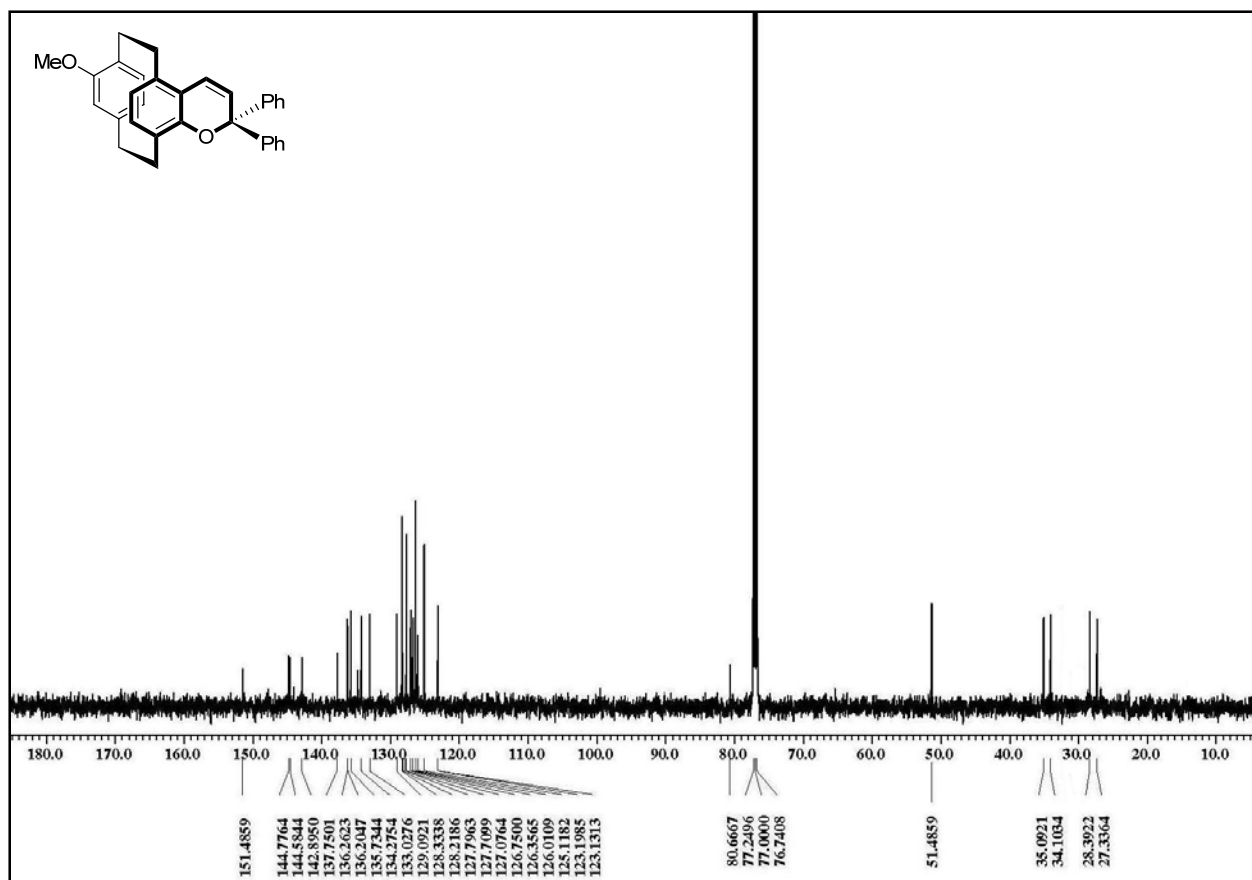


Figure S10. ¹³C NMR (CDCl₃, 125 MHz) spectrum of CP-OMe in CDCl₃.