

Supplementary Materials

to the article

A simple way to decachloro cobalt bis(dicarbollide)

by

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The NMR spectra at 400.1 MHz (^1H), 128.4 MHz (^{11}B) and 100.0 MHz (^{13}C) were recorded with Varian Inova-400 and Bruker-400 spectrometers. All spectra were processed in MestRenova version 6.0.2-5475. When processing ^{11}B NMR and ^{11}B NMR $\{^1\text{H}\}$ spectra, the baseline alignment was applied to improve the quality of integration.

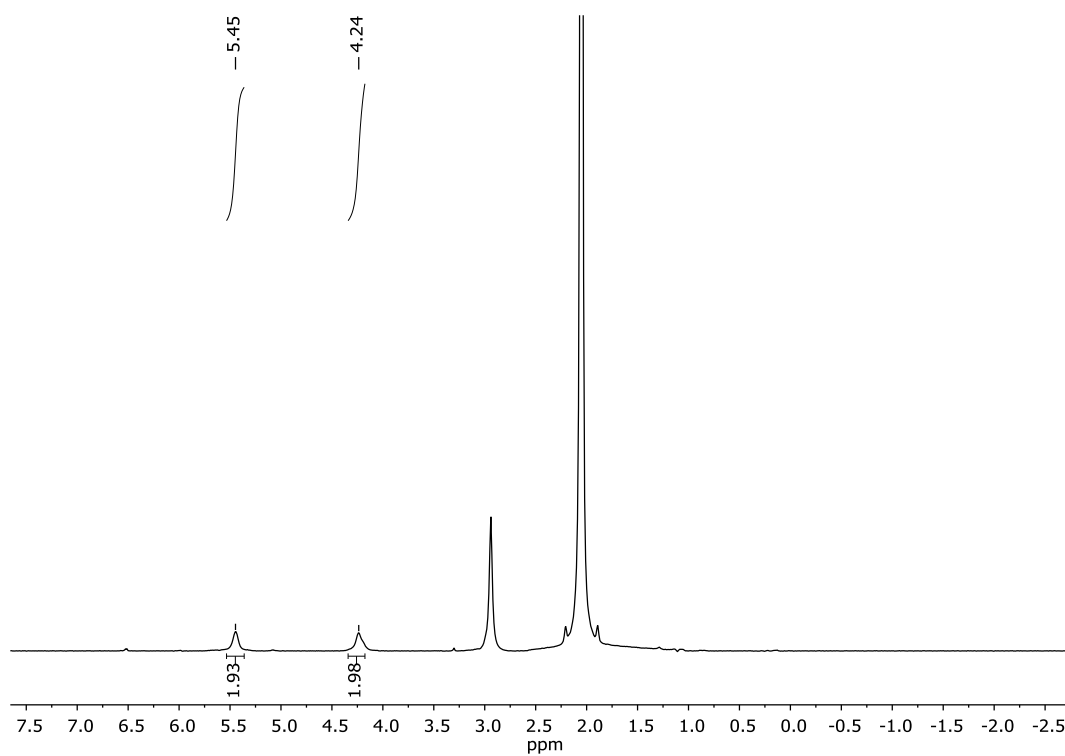


Figure S1. ^1H NMR spectrum of $\text{Cs}[3,3'\text{-Co}(4,7,8,9,12\text{-Cl}_5\text{-1,2-C}_2\text{B}_9\text{H}_6)_2]$ in acetone- d_6

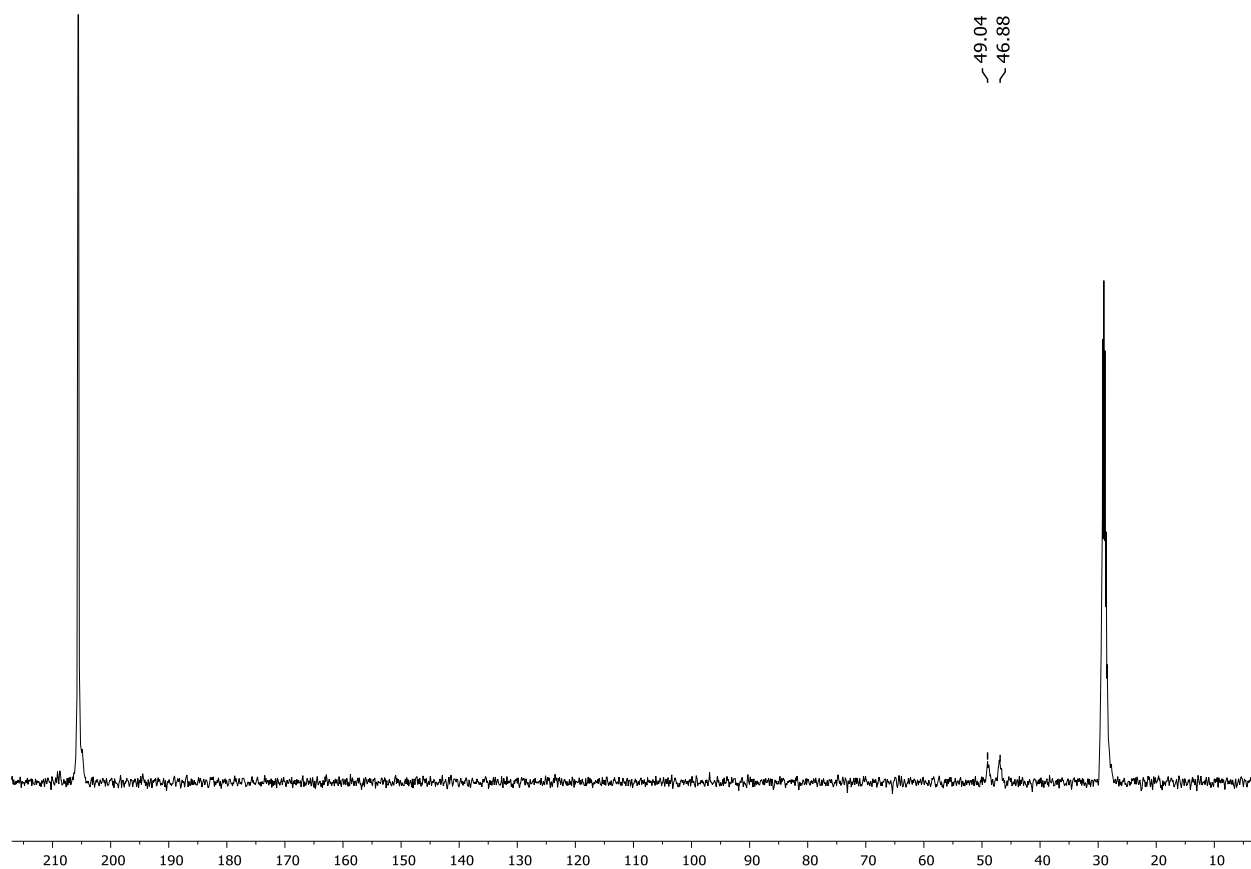


Figure S2. ^{13}C NMR spectrum of $\text{Cs}[3,3'\text{-Co}(4,7,8,9,12\text{-Cl}_5\text{-1,2-C}_2\text{B}_9\text{H}_6)_2]$ in acetone- d_6

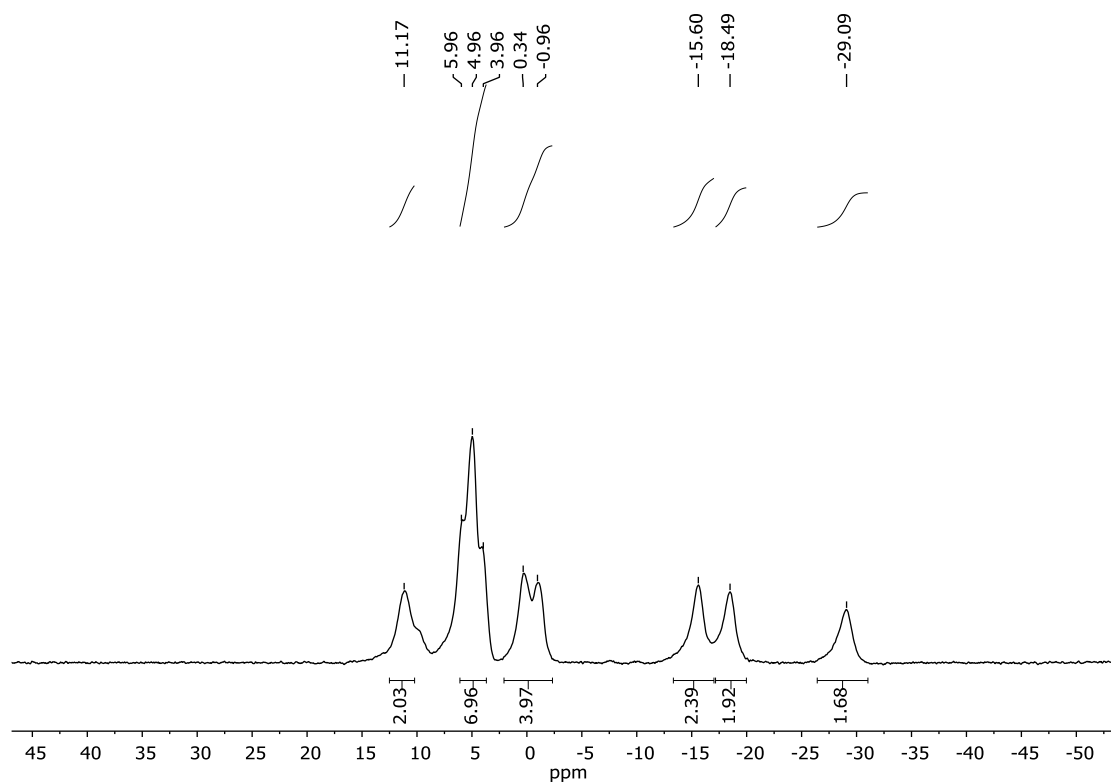


Figure S3. $^{11}\text{B}\{^1\text{H}\}$ NMR spectrum of $\text{Cs}[3,3'\text{-Co}(4,7,8,9,12\text{-Cl}_5\text{-1,2-C}_2\text{B}_9\text{H}_6)_2]$ in acetone- d_6

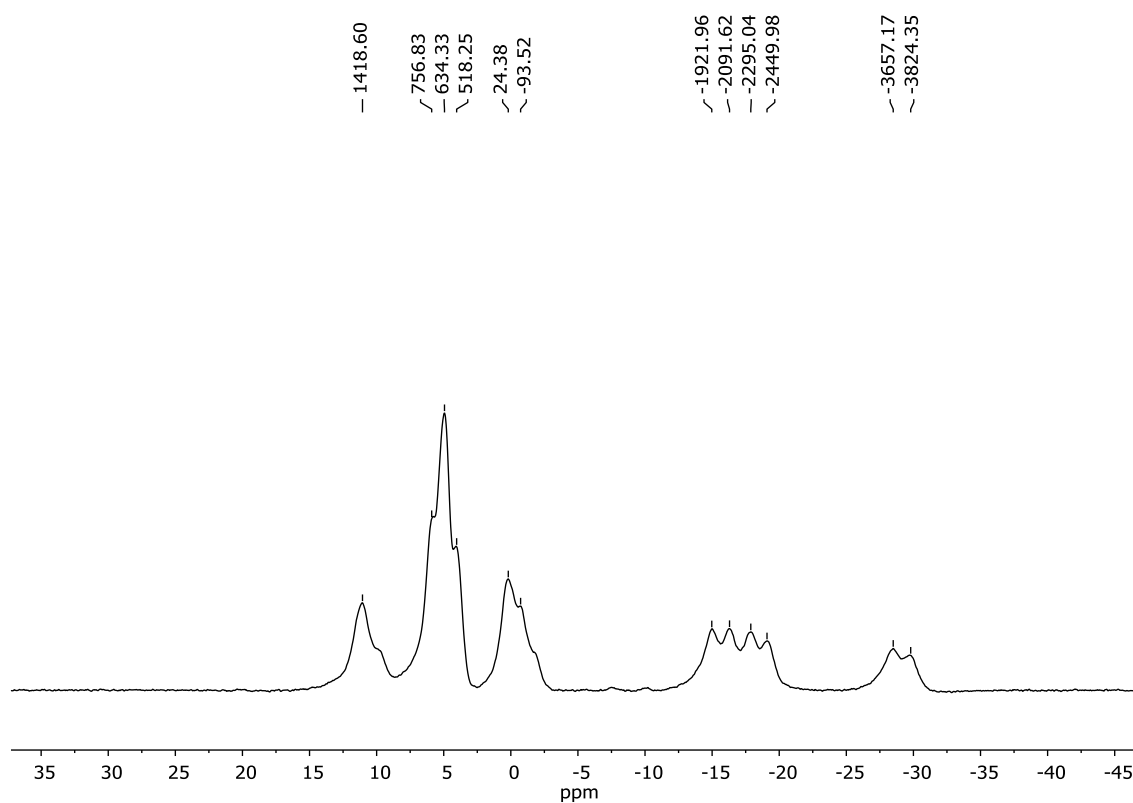


Figure S4. ^{11}B NMR spectrum of $\text{Cs}[3,3'\text{-Co}(4,7,8,9,12\text{-Cl}_5\text{-1,2-C}_2\text{B}_9\text{H}_6)_2]$ in acetone- d_6

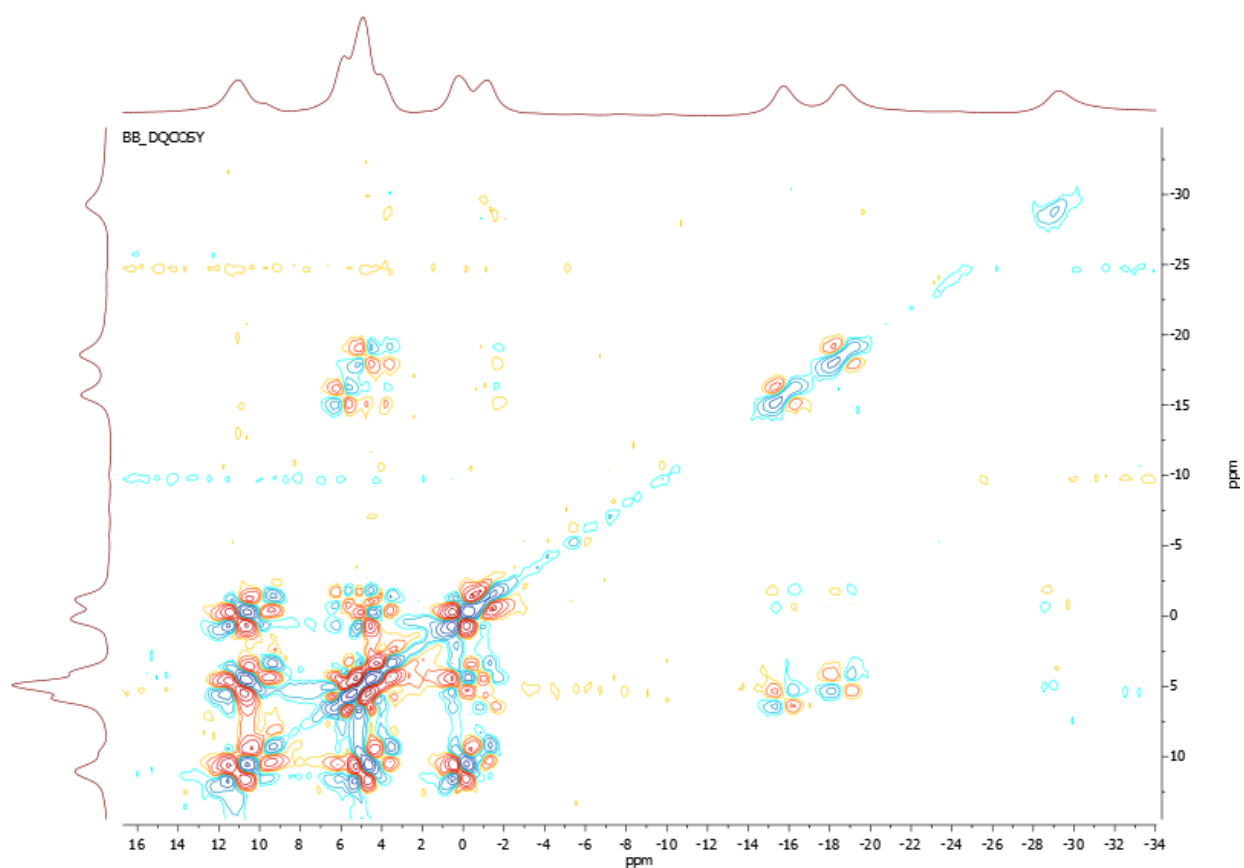


Figure S5. ^{11}B - ^{11}B COSY NMR spectrum of $\text{Cs}[3,3'\text{-Co}(4,7,8,9,12\text{-Cl}_5\text{-1,2-C}_2\text{B}_9\text{H}_6)_2]$ in acetone- d_6

d10

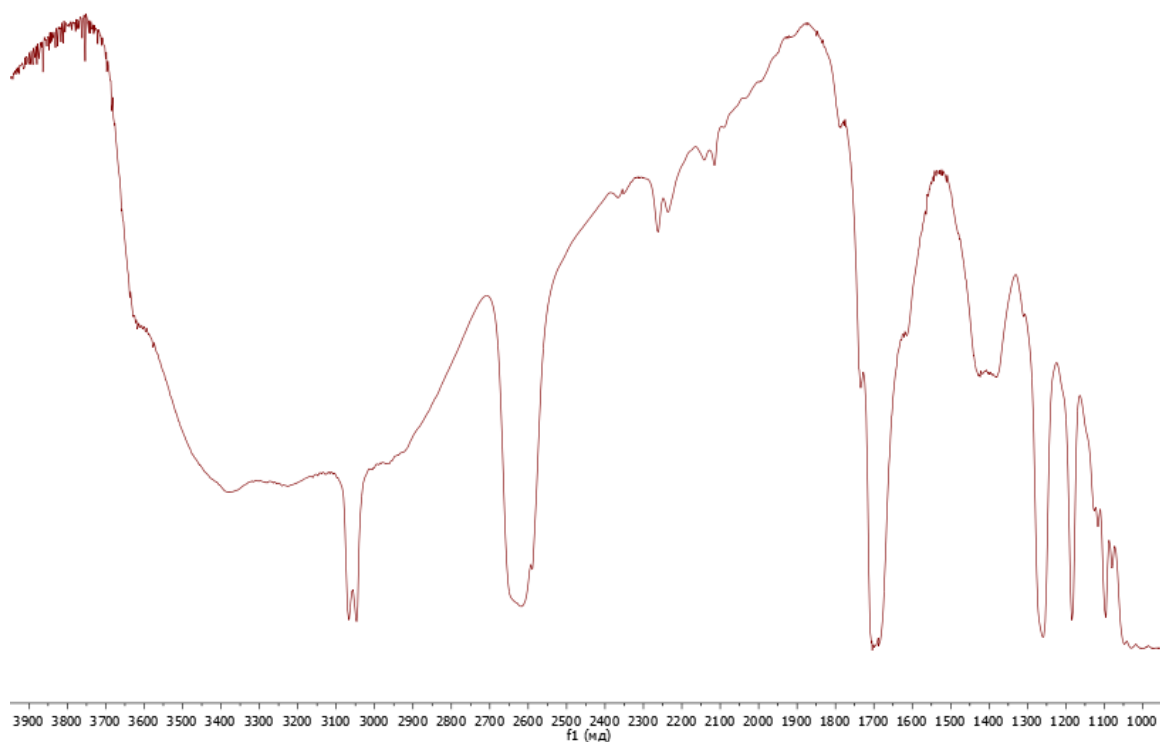


Figure S6. IR spectrum of $\text{Cs}[3,3'\text{-Co}(4,7,8,9,12\text{-Cl}_5\text{-1,2-C}_2\text{B}_9\text{H}_6)_2]$ (thin film from acetone)

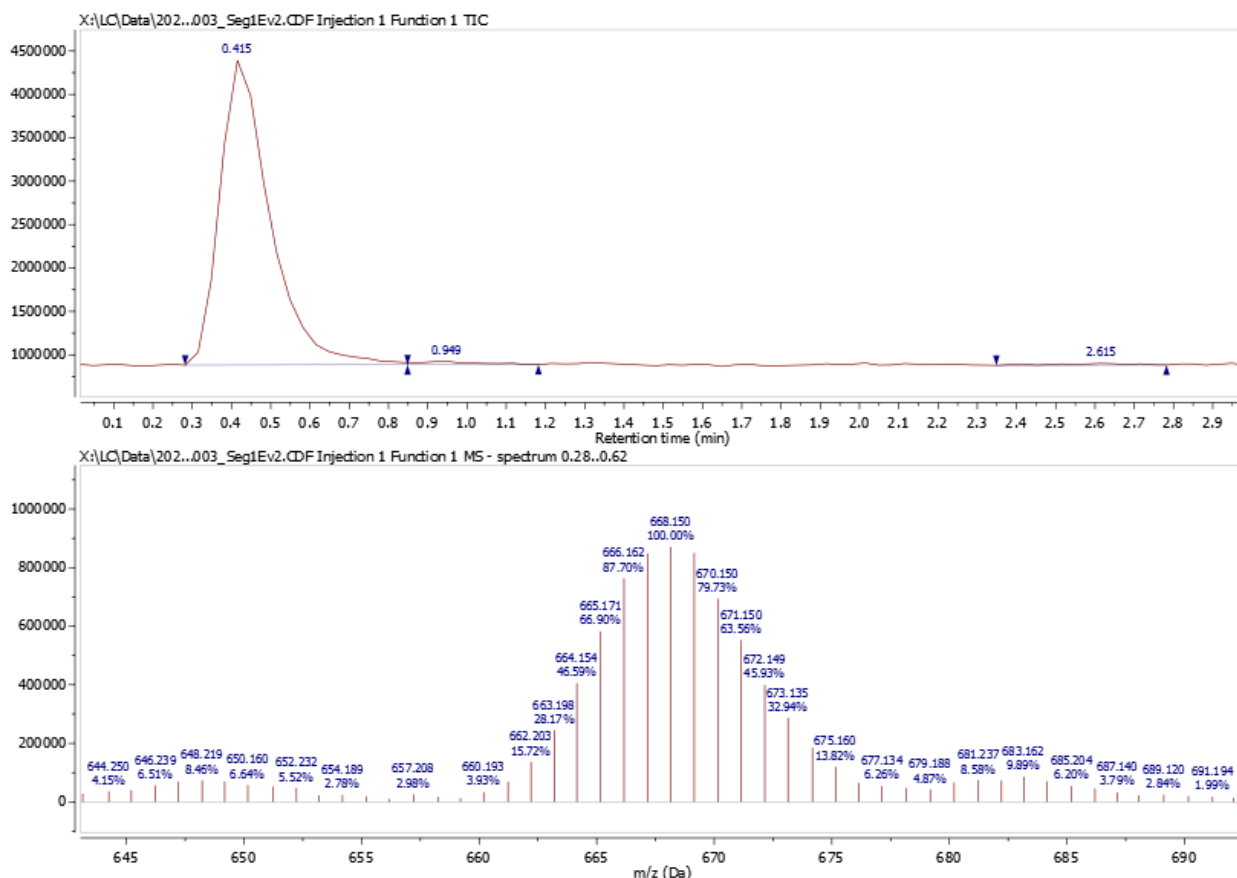


Figure S7. Mass-spectrum of Cs[3,3'-Co(4,7,8,9,12-Cl₅-1,2-C₂B₉H₆)₂]

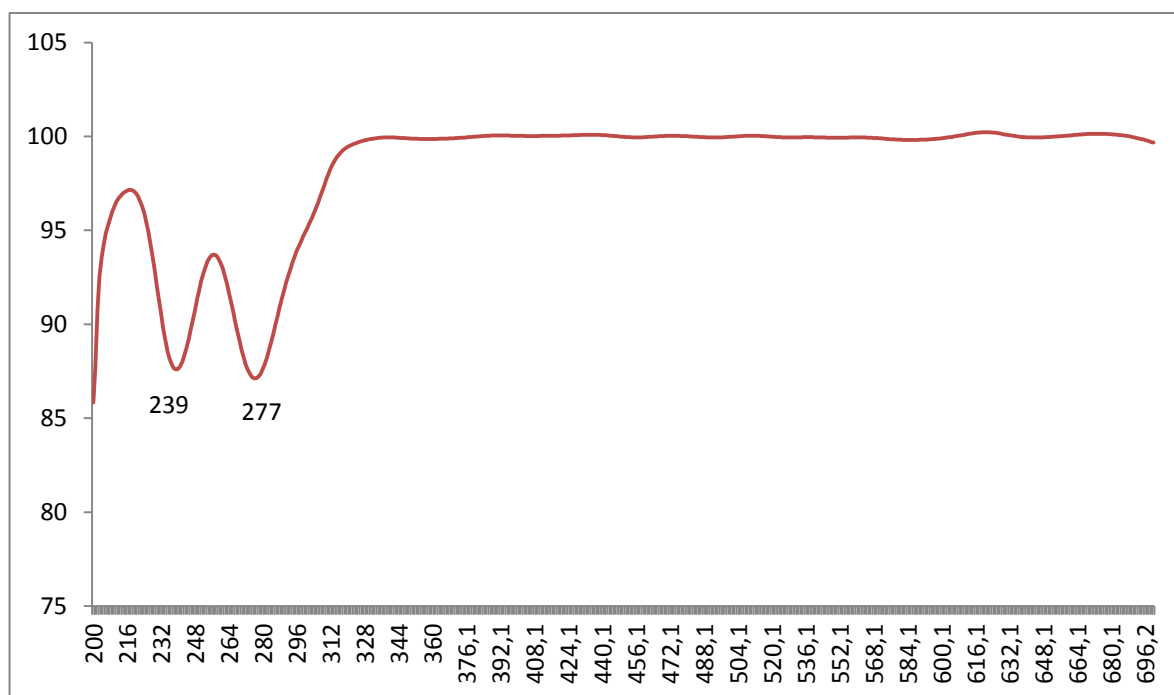


Figure S8. UV/Vis spectrum of Cs[3,3'-Co(4,7,8,9,12-Cl₅-1,2-C₂B₉H₆)₂]