Anion variation on a cobalt(III) complex of Salen-type ligand tethered by four quaternary ammonium salts for CO<sub>2</sub>/epoxide copolymerization

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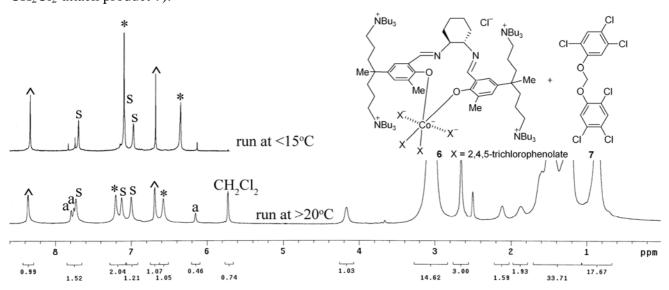
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**Supplementary Information** 

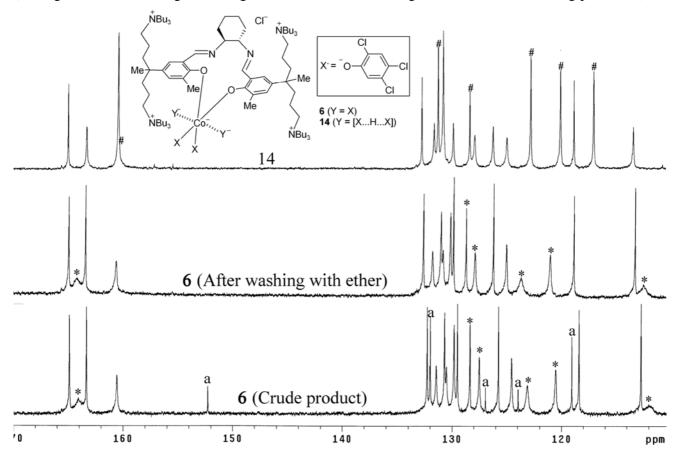
#### <The <sup>1</sup>H NMR spectra of crude product of 6 showing formation of CH<sub>2</sub>Cl<sub>2</sub>-attack product 7>

("s" signals for Salen-unit; " $^{"}$ " signals for coordinated X; " $^{"}$ " signals for scrambling X; "a" signals for CH<sub>2</sub>Cl<sub>2</sub>-attack product 7).



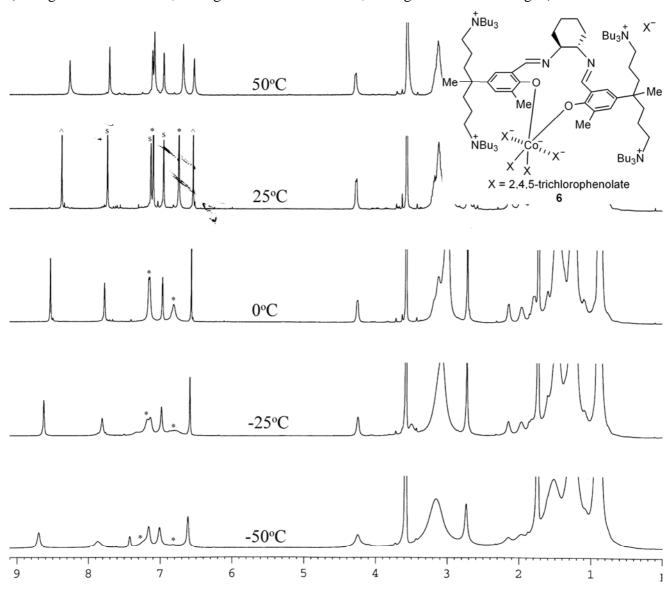
# <The <sup>13</sup>C NMR spectra of 2,4,5-trichlorophenolate (X) complexes 6 and 14 in THF-d<sub>6</sub>>

("\*" signals for scrambling X; "#" signals for [X...H...X]; "a" signals for CH<sub>2</sub>Cl<sub>2</sub>-attacking product 7).



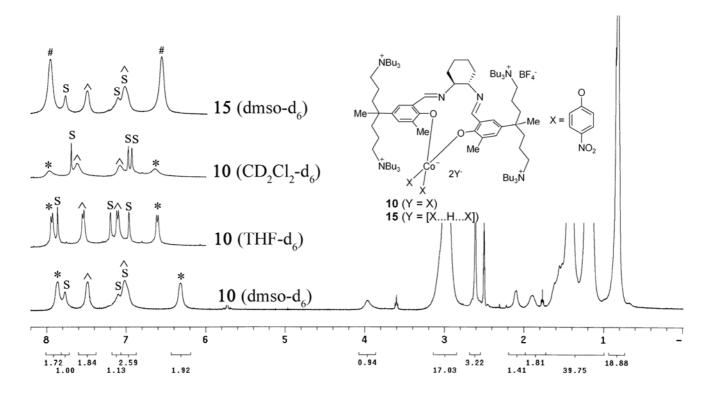
# <The variable temperature <sup>1</sup>H NMR spectra of 6 >

("s" signals for Salen-unit; "^" signals for coordinated X; "\*" signals for scrambling X)

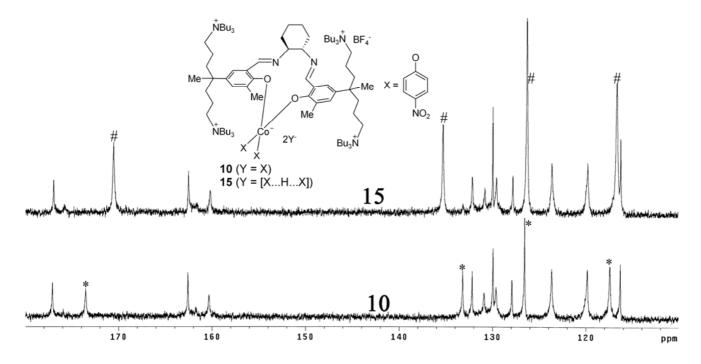


#### <The <sup>1</sup>H NMR spectra of 4-nitrophenolate (X) complexes 10 and 15>

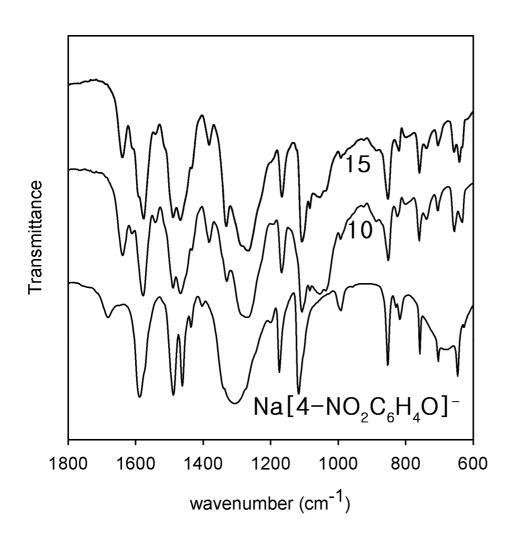
("s" signals for Salen-unit; " $^{^{^{\prime\prime}}}$  signals for coordinated X; " $^{**}$ " signals for uncoordinated X; " $^{#*}$ " signals for [X...H...X]).



# < ^ 13C NMR spectra (aromatic region) of 4-nitrophenolate (X) complexes 10 and 15 in dmso-d<sub>6</sub>> ("\*" signals for uncoordinated X; "#" signals for [X...H...X])

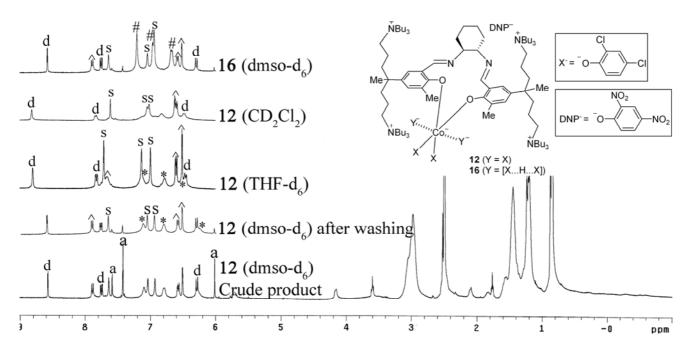


# <The IR spectra of 10, 15, and sodium 4-nitrophenolate >



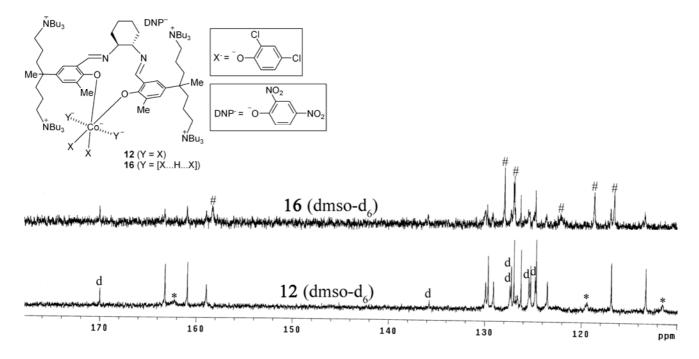
# <The <sup>1</sup>H NMR spectra of 2,4-dichlorophenolate (X) complexes 12 and 16>

("s" signals for Salen-unit; "^" signals for coordinated X; "\*" signals for scrambling X; "#" signals for [X...H...X], "a" signals for  $CH_2Cl_2$ -attack product 13, "d" signals for 2,4-dinitrophenolate).



<The <sup>13</sup>C NMR spectra of 2,4-dichlorophenolate (X) complexes 12 and 16>

("\*" signals for scrambling X; "#" signals for [X...H...X], "d" signals for 2,4-dinitrophenolate).



<The obtained viscous polymerization solution and the isolated resin (entry 9 in Table 1)>

