

Supporting Information

Variable crystallinity polyethylene nanoparticles

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MW Averages

Mp: 1315287	Mn: 248009	Mv: 1262449	Mw: 1599187
Mz: 4177954	Mz+1: 6634192	PD: 6.4481	

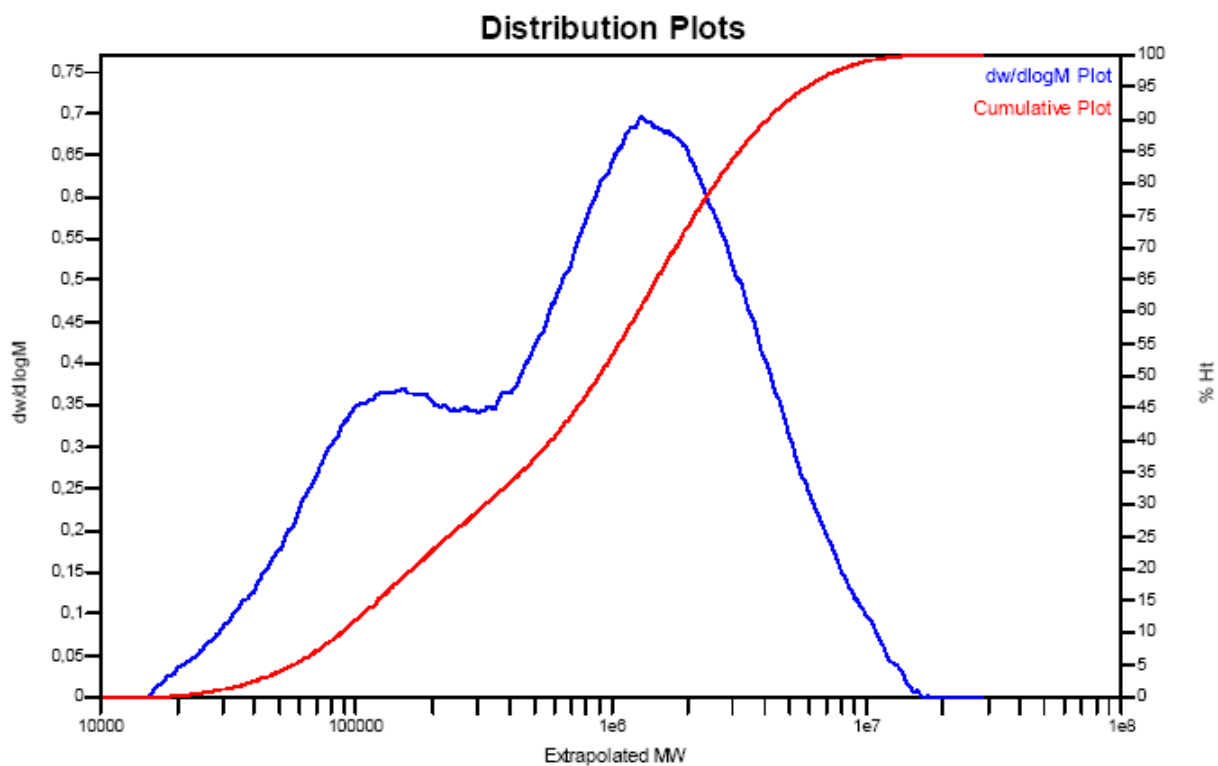


Figure S1. GPC profile of polyethylene obtained with complex **1a** at 30 °C (Table 1, entry 6).

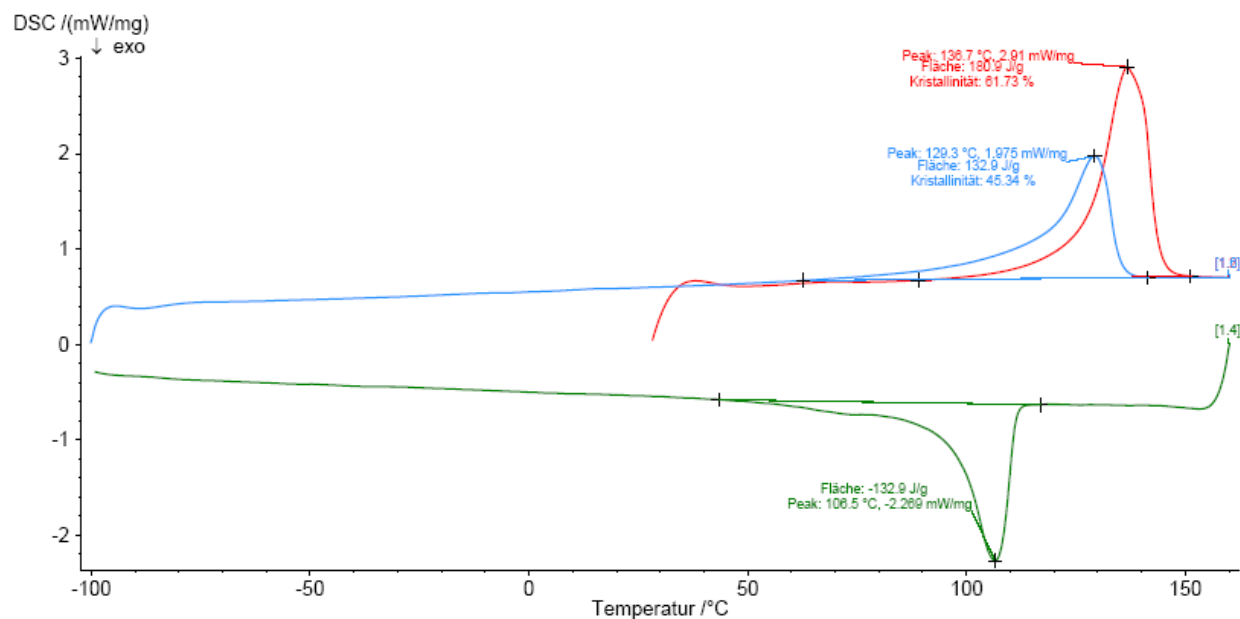


Figure S2. DSC traces of isolated bulk polymer obtained with complex **1a** at 30 °C (Table 1, entry 6, heating/cooling rate 10 K/min).

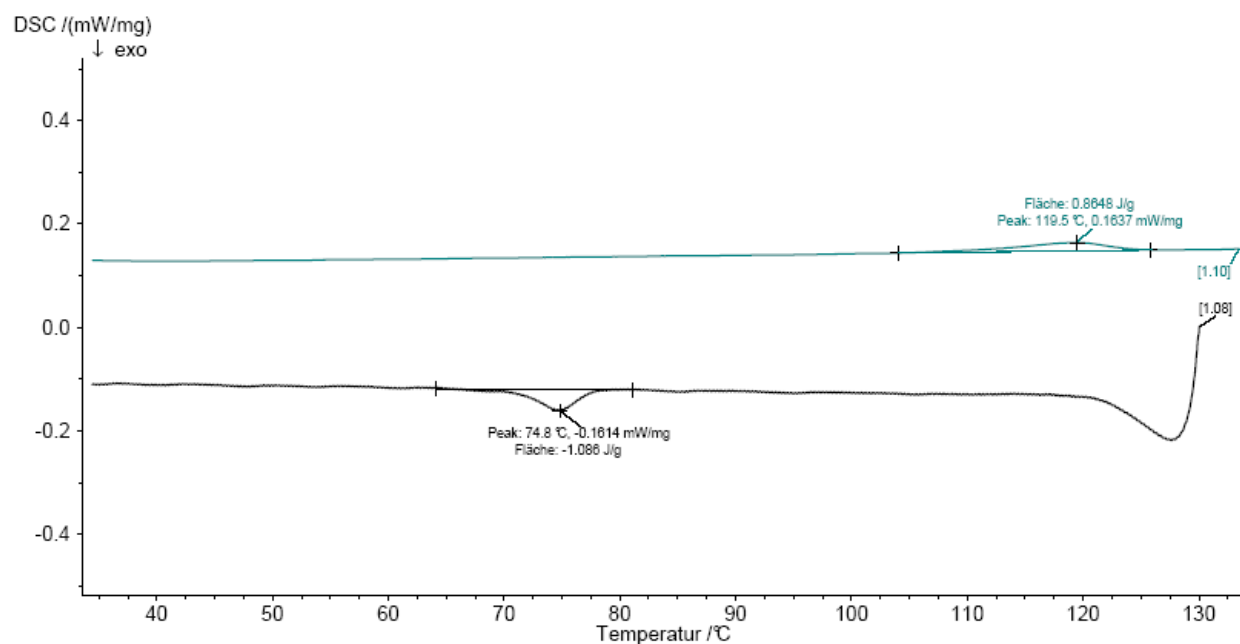


Figure S3. DSC traces of polyethylene dispersion obtained with complex **1a** at 30 °C (Table 1, entry 6, heating/cooling rate 10 K/min).

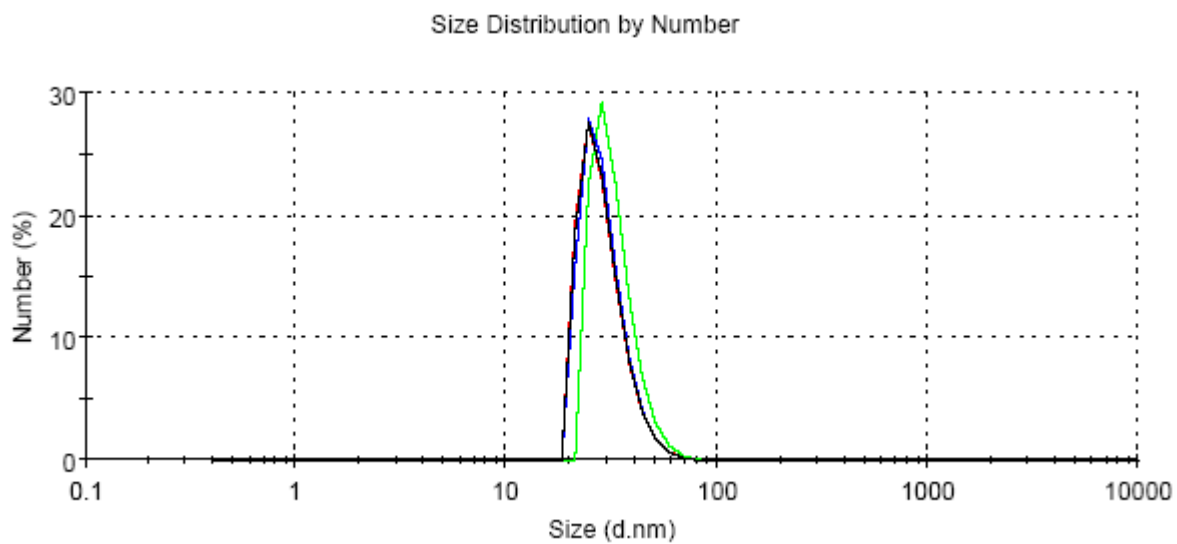


Figure S4. DLS traces of polyethylene dispersion obtained with **1a** at 30 °C (750 mg SDS, 40 bar ethylene, 10 μ mol **1a**), size average particle diameter (average of 4 runs) = 29 nm.

MW Averages

Mp: 7390

Mn: 2980

Mv: 8188

Mw: 9494

Mz: 21858

Mz+1: 37854

PD: 3.1859

Distribution Plots

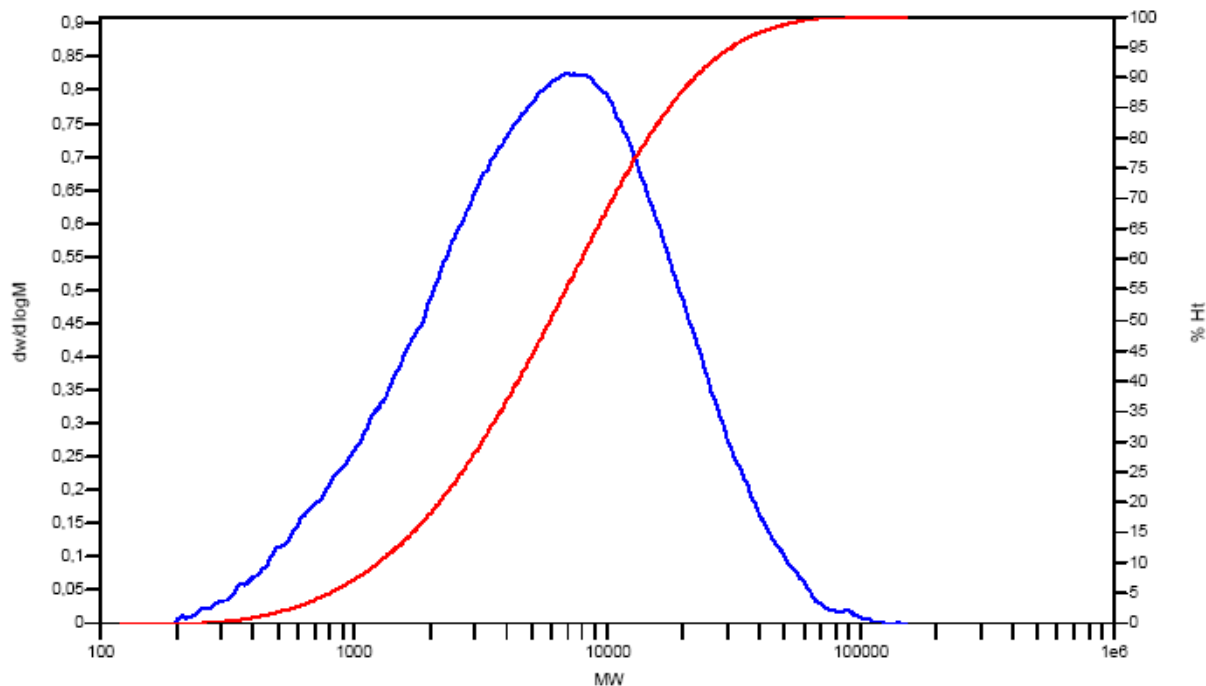


Figure S5. GPC profile of polyethylene obtained with complex **2b** at 50 °C (Table 1, entry 12).

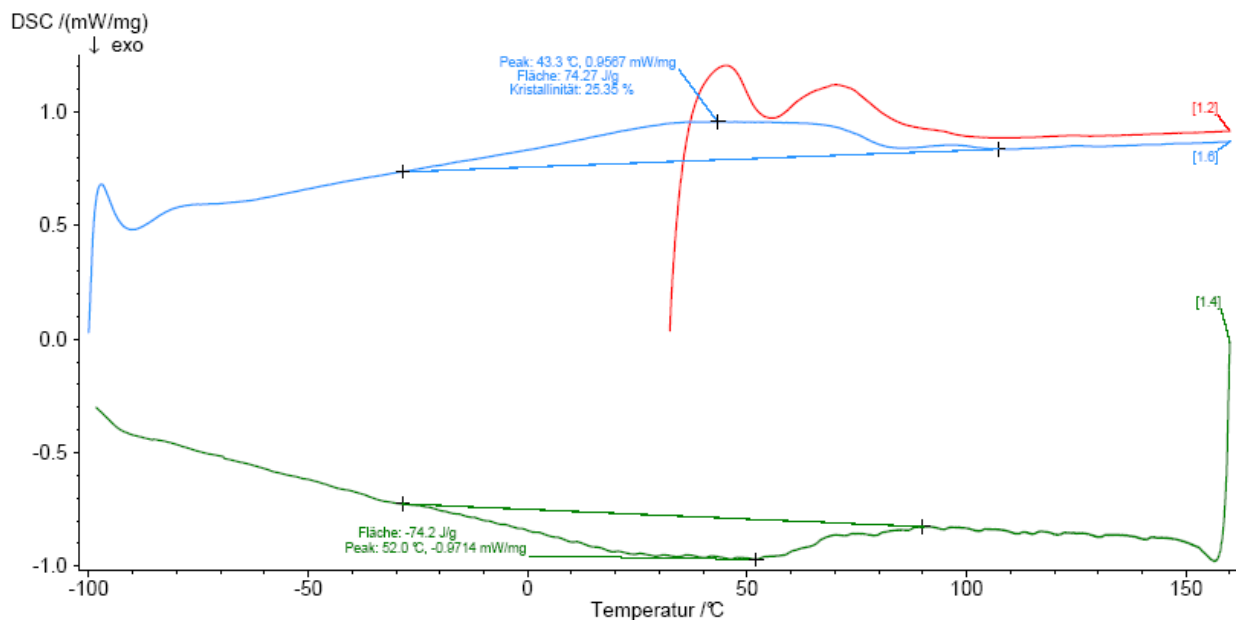


Figure S6. DSC traces of isolated bulk polymer obtained with complex **2b** at 50 °C (Table 1, entry 12, heating/cooling rate 10 K/min).

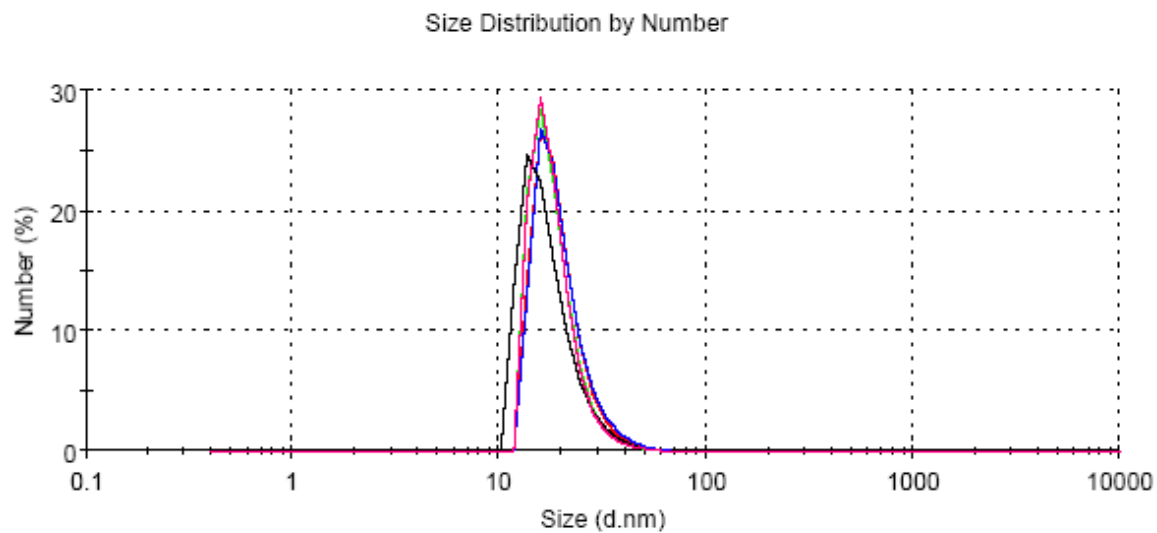


Figure S7. DLS trace of polyethylene dispersion obtained with **2b** at 50 °C (750 mg SDS, 40 bar ethylene, 10 μ mol **2b**), size average particle diameter (average of 5 runs) = 18 nm.

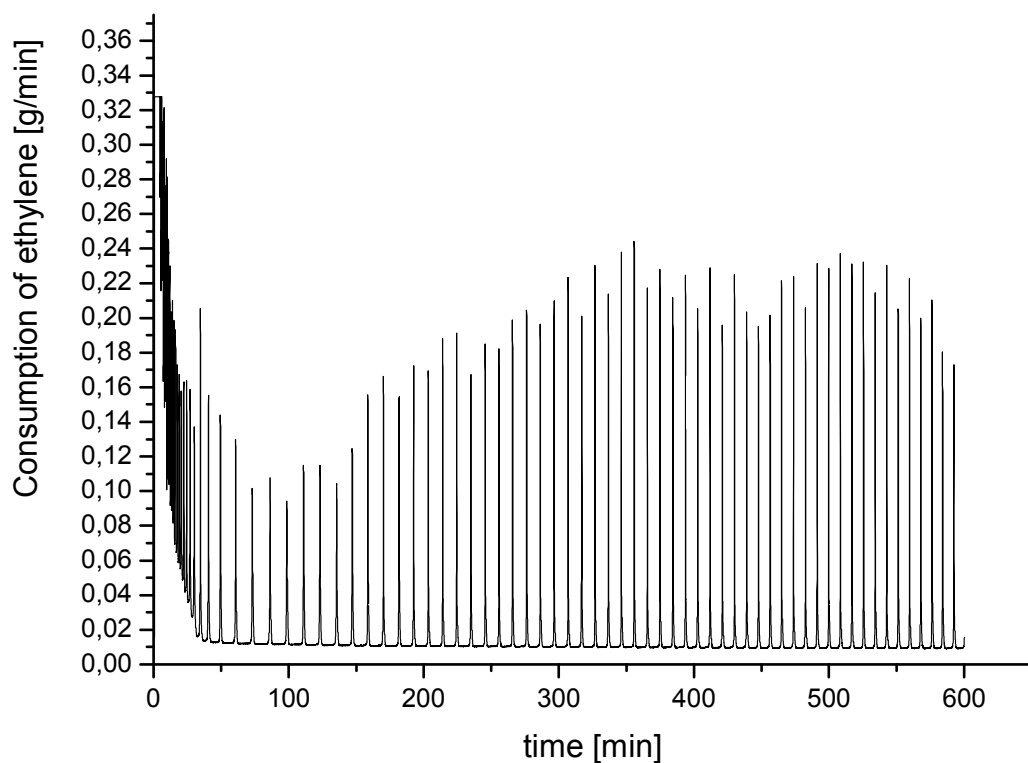


Figure S8. Mass-flow trace of the polymerization of ethylene with **2b** at 50 °C and 40 bar ethylene pressure (Table 1, entry 12).

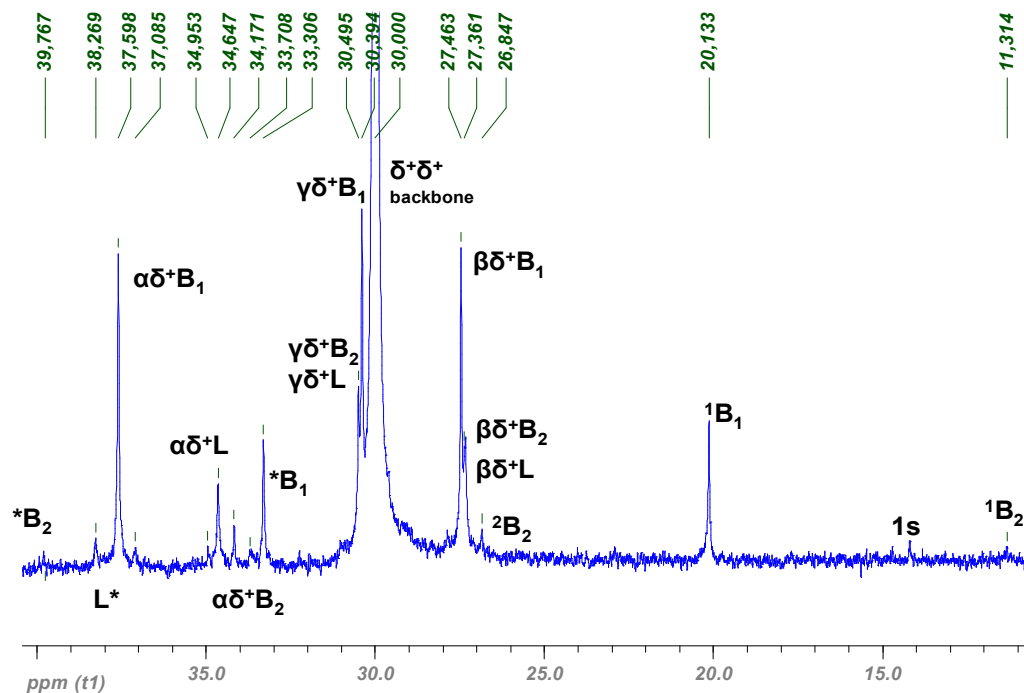


Figure S9. ^{13}C NMR spectrum of polyethylene obtained with complex **1a** at 30 °C (Table 1, entry 6, 100 MHz, solvent $\text{C}_2\text{D}_2\text{Cl}_4$, $T = 130^\circ\text{C}$).

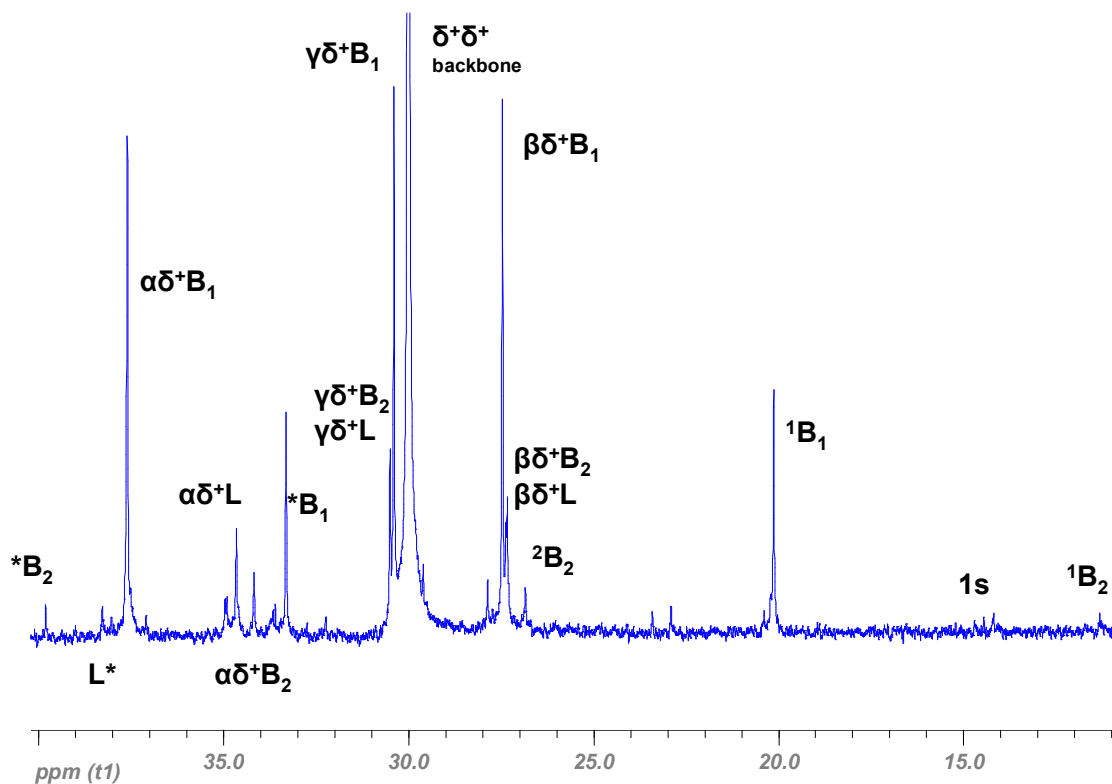


Figure S10. ^{13}C NMR spectrum of polyethylene obtained with complex **2c** at 50 °C; (Table 1, entry 13, 100 MHz, solvent $\text{C}_2\text{D}_2\text{Cl}_4$, $T = 130^\circ\text{C}$).

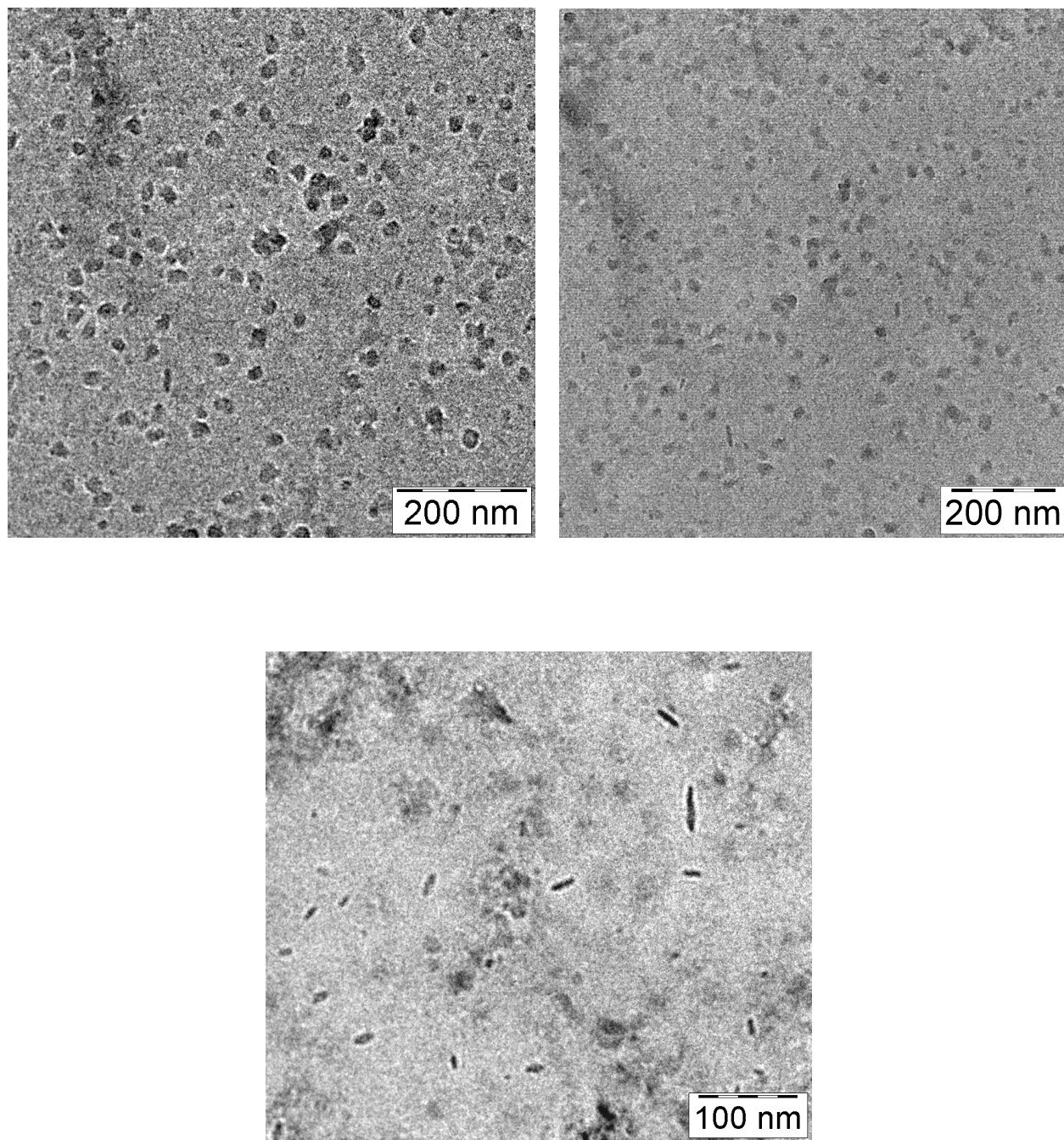


Figure S11. Cryo-TEM images of polymer particles obtained with **1a** at 50 °C (Table 1, entry 1).