

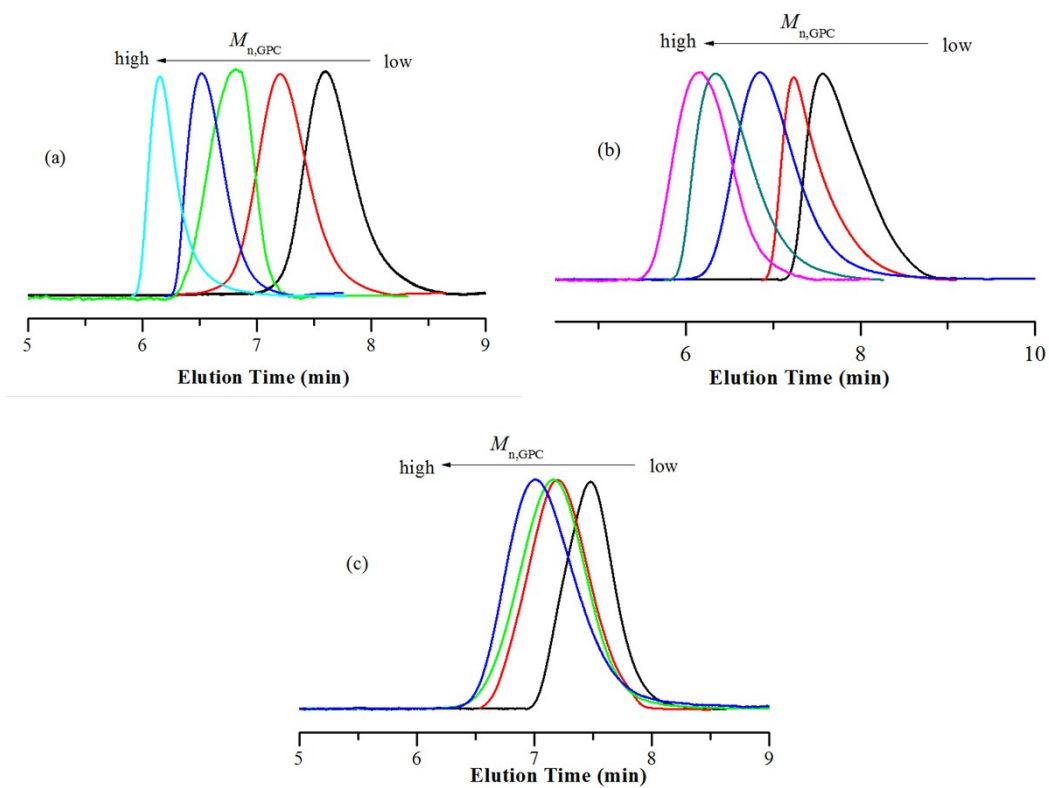
## Supporting Information

### **PMDETA as an Efficient Catalyst for Bulk Reversible Complexation Mediated Polymerization (RCMP) in the Absence of Additional Metal Salts and Deoxygenation**

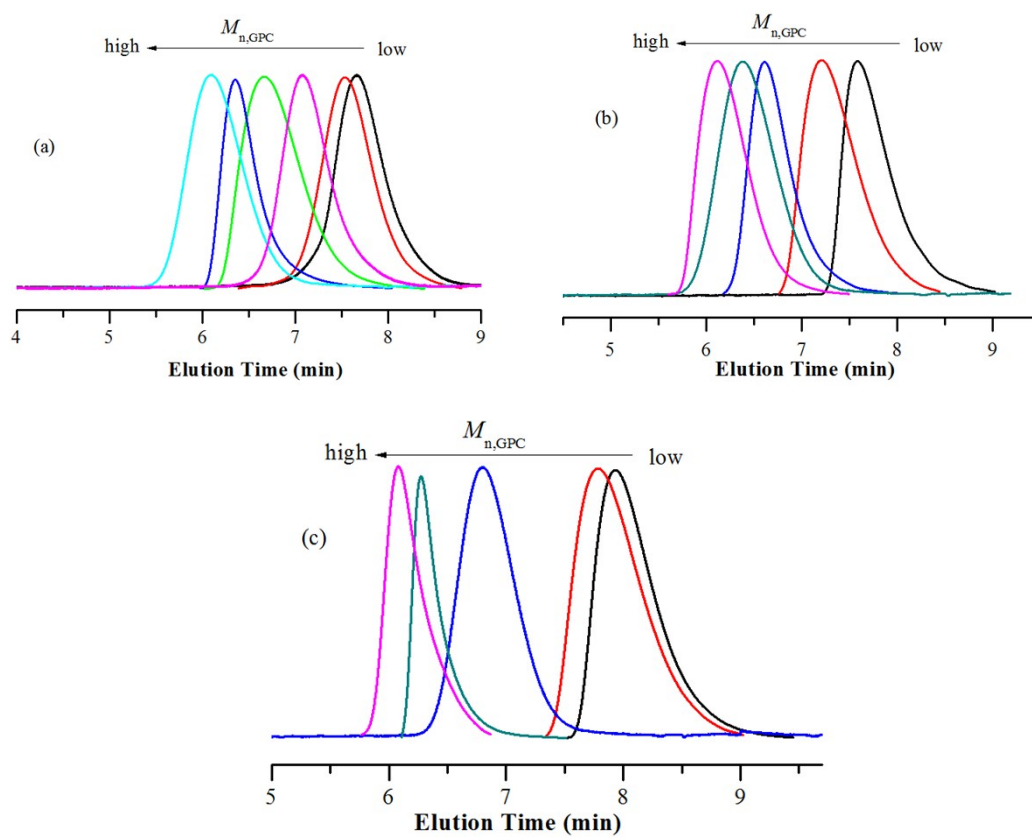
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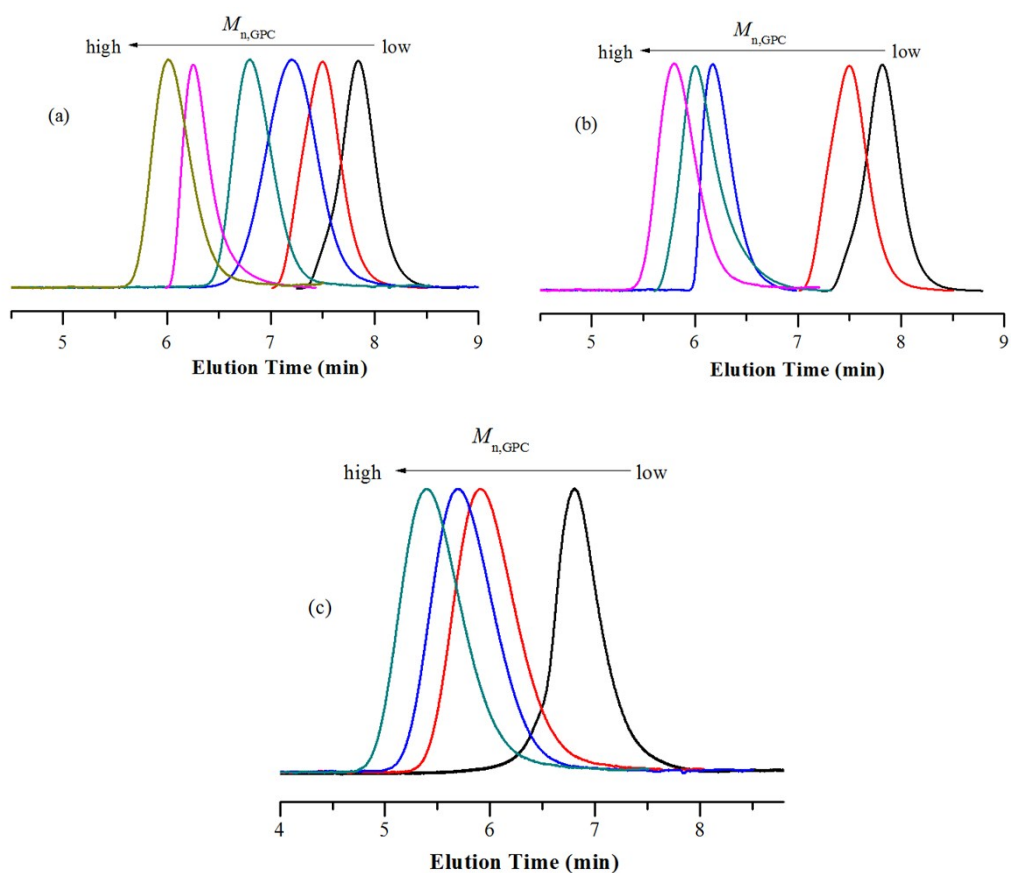
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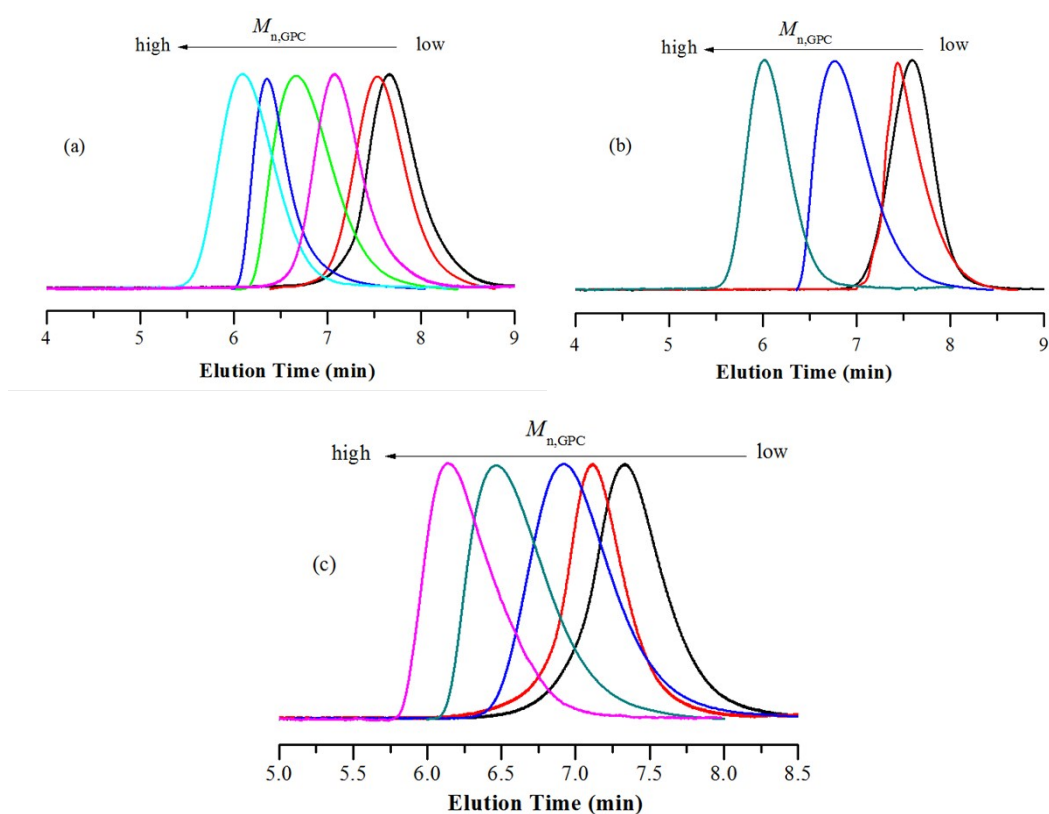
**Figure S1.** GPC traces of PMMA prepared by RCMPs of MMA under different conditions. Polymerization conditions: (a)  $[MMA]_0:[CPI]_0:[PMDETA]_0:[I_2]_0 = 400:1:0.5:0.2$ ; (b)  $[MMA]_0:[CPI]_0:[TEA]_0:[I_2]_0 = 400:1:0.5:0.2$ ; (c)  $[MMA]_0:[CPI]_0:[TMEDA]_0:[I_2]_0 = 400:1:0.5:0.2$ .



**Figure S2.** GPC traces of PMMA prepared by RCMPs of MMA under different conditions. Polymerization conditions: (a)  $[MMA]_0:[CPI]_0:[PMDETA]_0:[I_2]_0 = 400:1:0.5:0.2$ ; (b)  $[MMA]_0:[CPI]_0:[PMDETA]_0:[I_2]_0 = 400:1:1:0.2$ ; (c)  $[MMA]_0:[CPI]_0:[PMDETA]_0:[I_2]_0 = 400:1:2:0.2$ .



**Figure S3.** GPC traces of PMMA prepared by RCMPs of MMA under different conditions. Polymerization conditions: (a) [MMA]<sub>0</sub>: [CPI]<sub>0</sub>: [PMDETA]<sub>0</sub>: [I<sub>2</sub>]<sub>0</sub> = 500:1:0.5:0.2; (b) [MMA]<sub>0</sub>: [CPI]<sub>0</sub>: [PMDETA]<sub>0</sub>: [I<sub>2</sub>]<sub>0</sub> = 500:0.5:0.5:0.2; (c) [MMA]<sub>0</sub>: [CPI]<sub>0</sub>: [PMDETA]<sub>0</sub>: [I<sub>2</sub>]<sub>0</sub> = 500:0.25:0.5:0.2.



**Figure S4.** GPC traces of PMMA prepared by RCMPs of MMA under different conditions. Polymerization conditions: (a)  $[MMA]_0:[CPI]_0:[TEMED]_0:[I_2]_0 = 400:1:0.5:0.2$ ; (b)  $[MMA]_0:[CPI]_0:[PMDETA]_0:[I_2]_0 = 400:1:0.5:0.1$ ; (c)  $[MMA]_0:[CPI]_0:[PMDETA]_0:[I_2]_0 = 400:1:0.5:0.01$ .