

Figure S1 <sup>1</sup>H NMR of **BGF** (bisguaiacol F) with peak assignments. 600 MHz, CDCl<sub>3</sub>, δ (ppm): 6.97–6.47 (m, 6H, Ar-H), 5.67–5.34 (bs, 2H, Ar-OH), 3.94–3.02 (m, 8H, Ar-O-CH<sub>3</sub> and Ar-CH<sub>2</sub>-Ar).

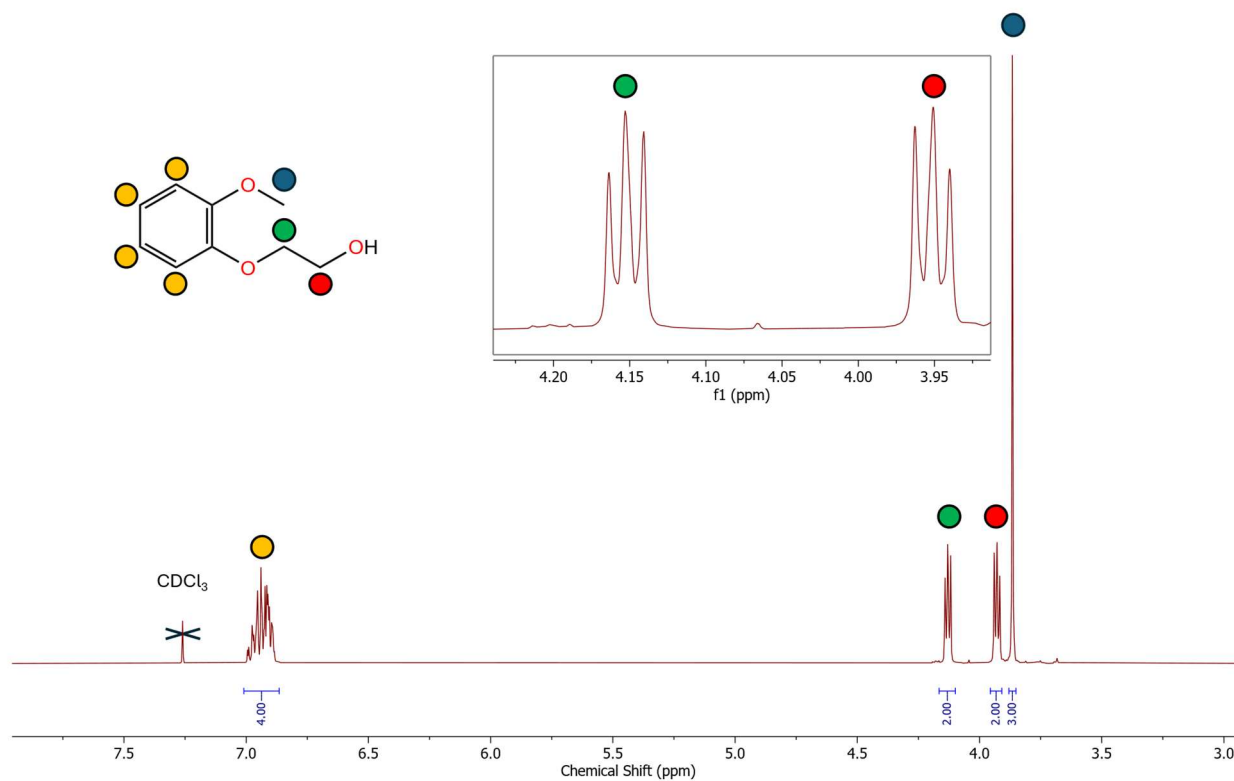


Figure S2  $^1\text{H}$  NMR of **GuaEG** with peak assignments. 400 MHz,  $\text{CDCl}_3$ ,  $\delta$  (ppm): 7.00–6.87 (m, 4H, Ar-H), 4.12 (t,  $J = 4.4$  Hz, 3H, Ar-O- $\text{CH}_2$ ), 3.92 (t,  $J = 4.8$  Hz, 3H, C- $\text{CH}_2$ -O), 3.86 (s, 3H, Ar-O- $\text{CH}_3$ ).

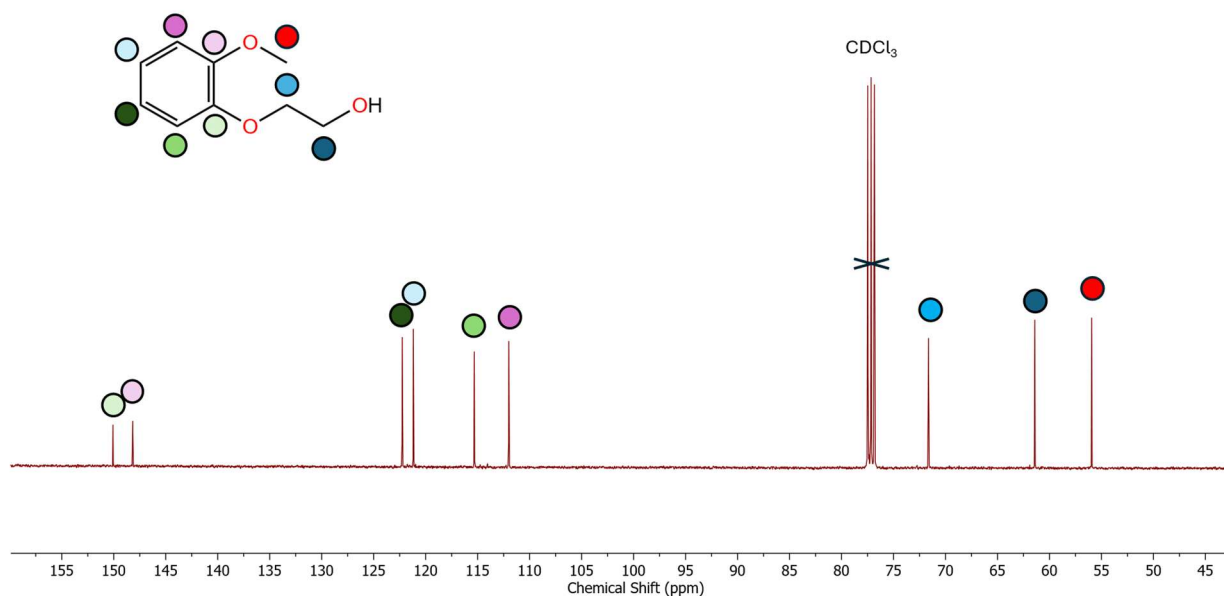


Figure S3  $^{13}\text{C}$  NMR of **GuaEG** with peak assignments. 100.61 MHz,  $\text{CDCl}_3$ ,  $\delta$  (ppm): 150.1, 148.2, 122.3, 121.2, 115.3, 112.0, 71.6, 61.4, 55.9.

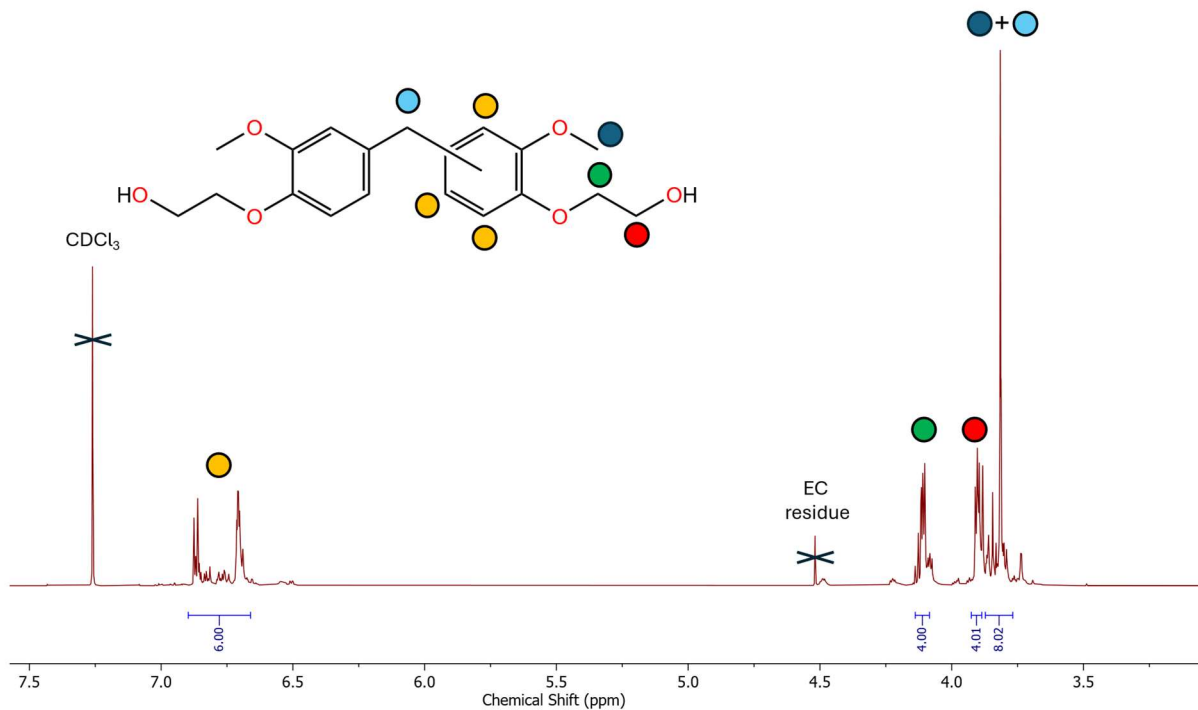


Figure S4 <sup>1</sup>H NMR of **BGFEF** with peak assignments. 400 MHz, CDCl<sub>3</sub>, δ (ppm): 6.89– 6.62 (m, 6H, Ar-H), 4.12-4.09 (m, 4H, Ar-O-CH<sub>2</sub>), 3.91-3.88 (m, 4H, C-CH<sub>2</sub>-O), 3.88-3.72 (m, 8H, Ar-O-CH<sub>3</sub> and Ar-CH<sub>2</sub>-Ar).

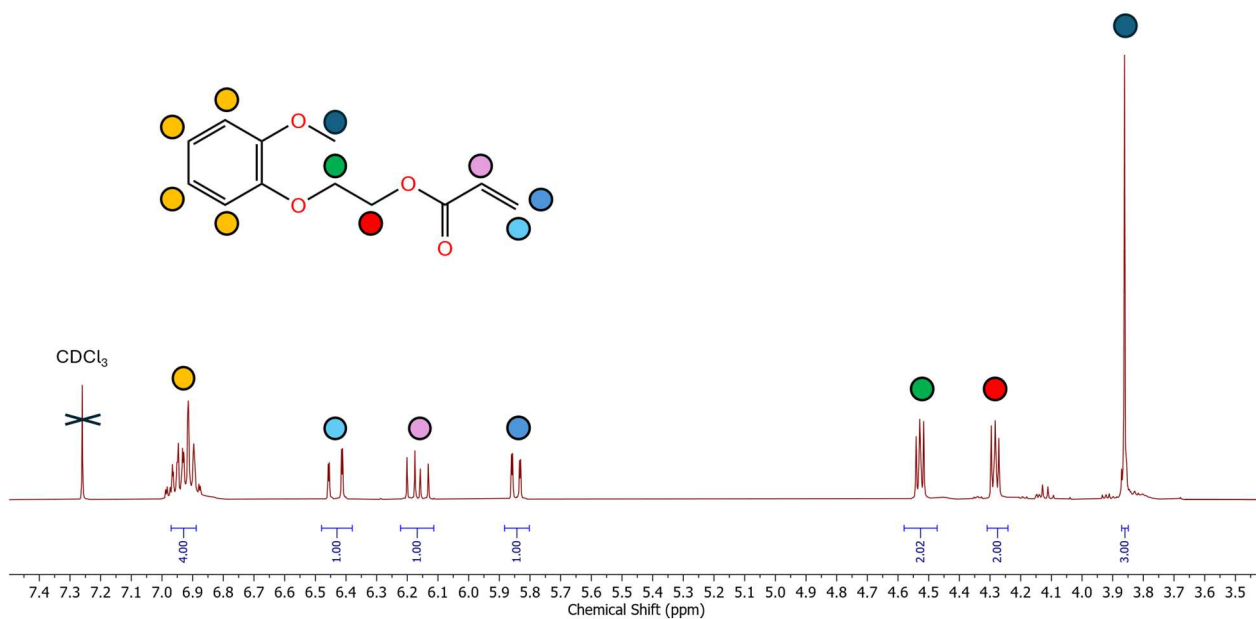


Figure S5  $^1\text{H}$  NMR of **MA** with peak assignments. 400 MHz,  $\text{CDCl}_3$ ,  $\delta$  (ppm): 7.00–6.87 (m, 4H, Ar-H), 6.43 (dd,  $J_1 = 1.2$  Hz,  $J_2 = 16.8$  Hz, 1H, C=CH<sub>2</sub>), 6.17 (dd,  $J_1 = 10.4$  Hz,  $J_2 = 17.4$  Hz, 1H, C(=O)-CH=C), 5.84 (dd,  $J_1 = 1.2$  Hz,  $J_2 = 10.4$  Hz, 1H, C=CH<sub>2</sub>), 4.53 (t,  $J = 4.8$  Hz, 2H, Ar-O-CH<sub>2</sub>), 4.28 (t,  $J = 5.2$  Hz, 3H, C-CH<sub>2</sub>-O-C(=O)), 3.86 (s, 3H, Ar-O-CH<sub>3</sub>).

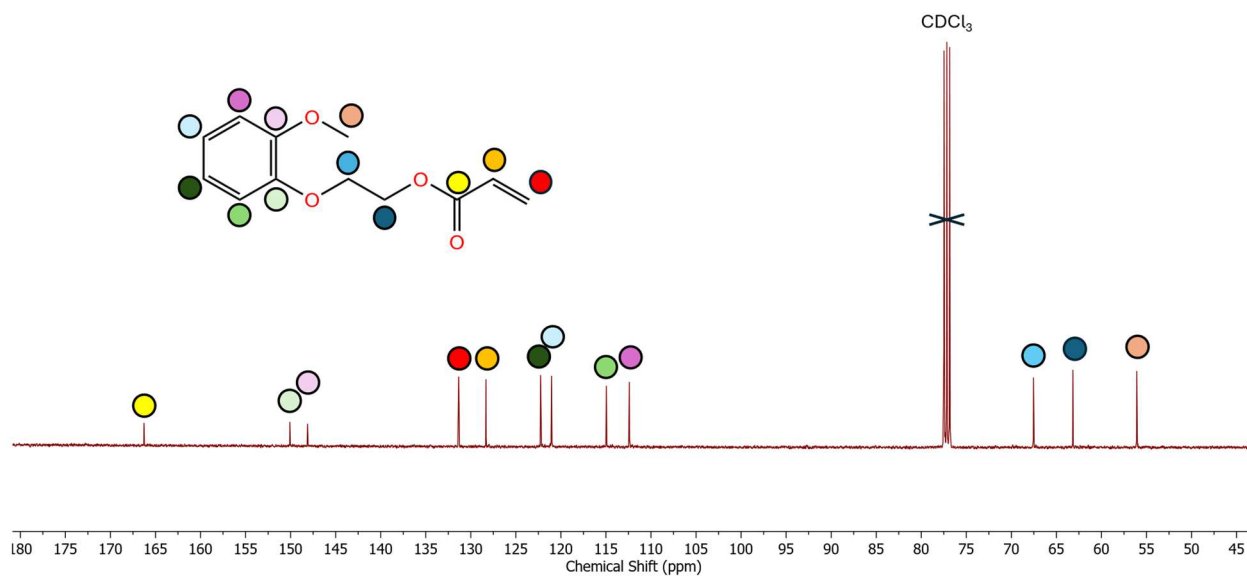


Figure S6  $^{13}\text{C}$  NMR of **MA** with peak assignments. 100.61 MHz,  $\text{CDCl}_3$ ,  $\delta$  (ppm): 166.3, 150.1, 148.1, 131.3, 128.3, 122.2, 121.1, 115.0, 112.4, 67.5, 63.2, 56.1.

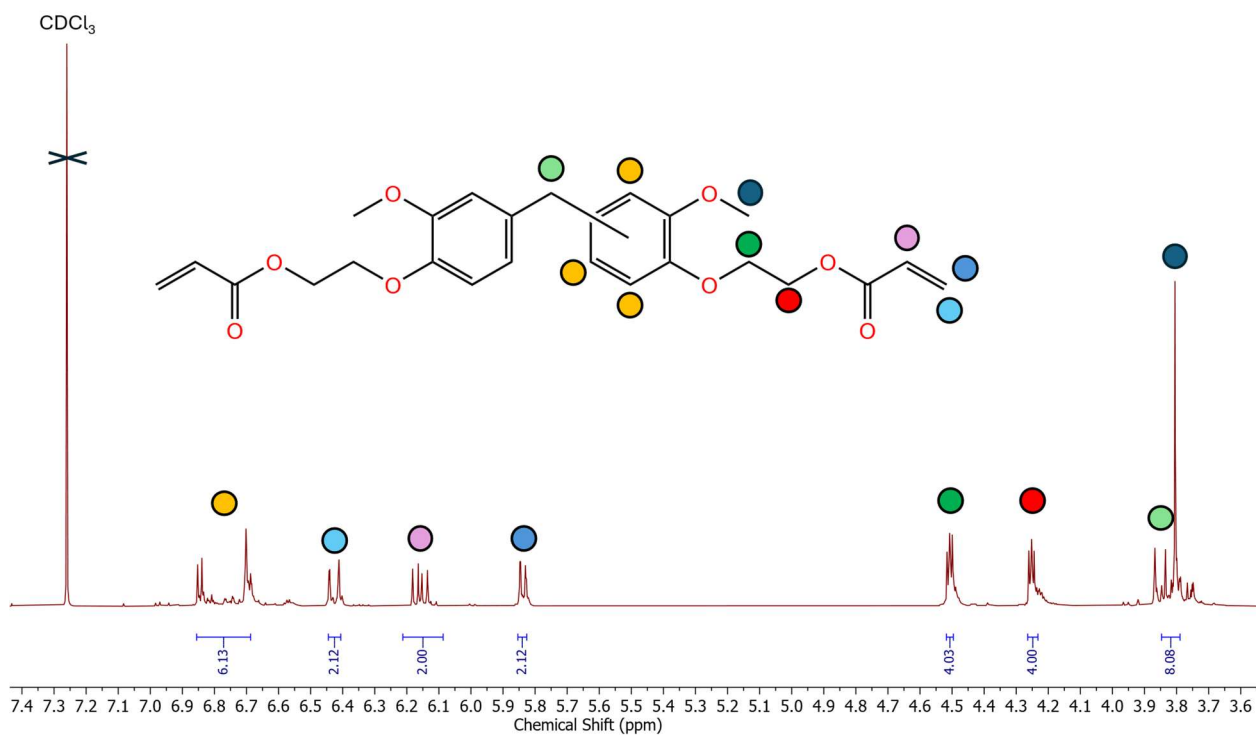


Figure S7  $^1\text{H}$  NMR of DA with peak assignments. 600 MHz,  $\text{CDCl}_3$ ,  $\delta$  (ppm): 6.88–6.63 (m, 6H, Ar-H), 6.42 (dd,  $J_1 = 1.2$  Hz,  $J_2 = 17.4$  Hz, 2H,  $\text{C}=\text{CH}_2$ ), 6.16 (dd,  $J_1 = 10.8$  Hz,  $J_2 = 17.4$  Hz, 2H,  $\text{C}(=\text{O})-\text{CH}=\text{C}$ ), 5.84 (dd,  $J_1 = 1.8$  Hz,  $J_2 = 15.6$  Hz, 2H,  $\text{C}=\text{CH}_2$ ), 4.50 (t,  $J = 5.4$  Hz, 2H, Ar-O- $\text{CH}_2$ ), 4.25 (t,  $J = 4.8$  Hz, 3H,  $\text{C}-\text{CH}_2-\text{O}-\text{C}(=\text{O})$ ), 3.89–3.77 (m, 8H, Ar-O- $\text{CH}_3$  and Ar- $\text{CH}_2$ -Ar).

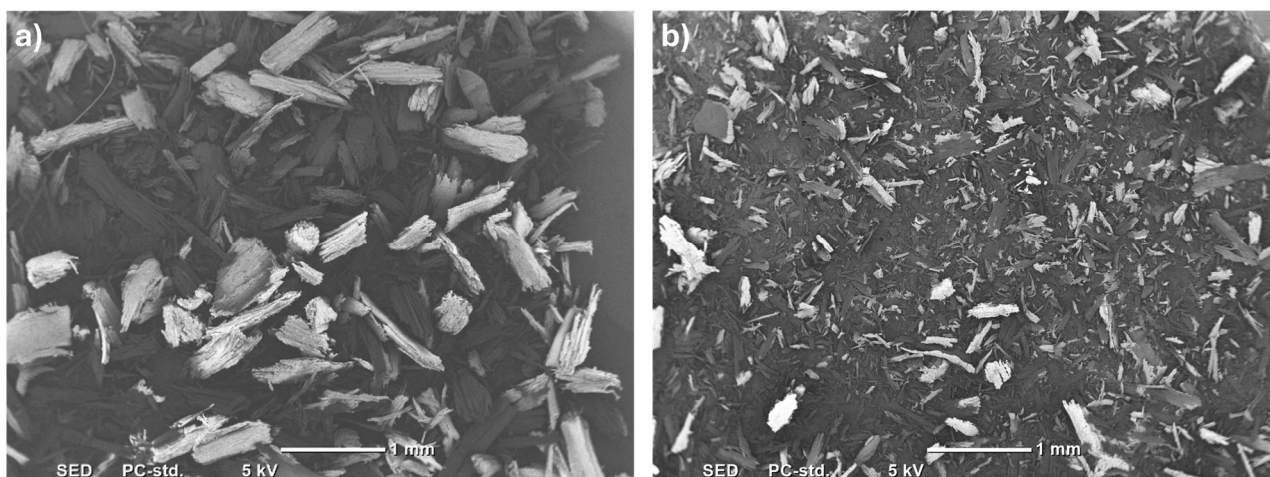


Figure S8 SEM images of MP filler before (a) and after (b) grinding.