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Supplementary Material

Trifluoroacetic acid (TFA) supported polyethylene graphene composite as a novel and efficient double-Bronsted acidic catalyst for the synthesis of benzimidazoles under solvent-free conditions

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1H NMR, 500 MHz, DMSO-d6

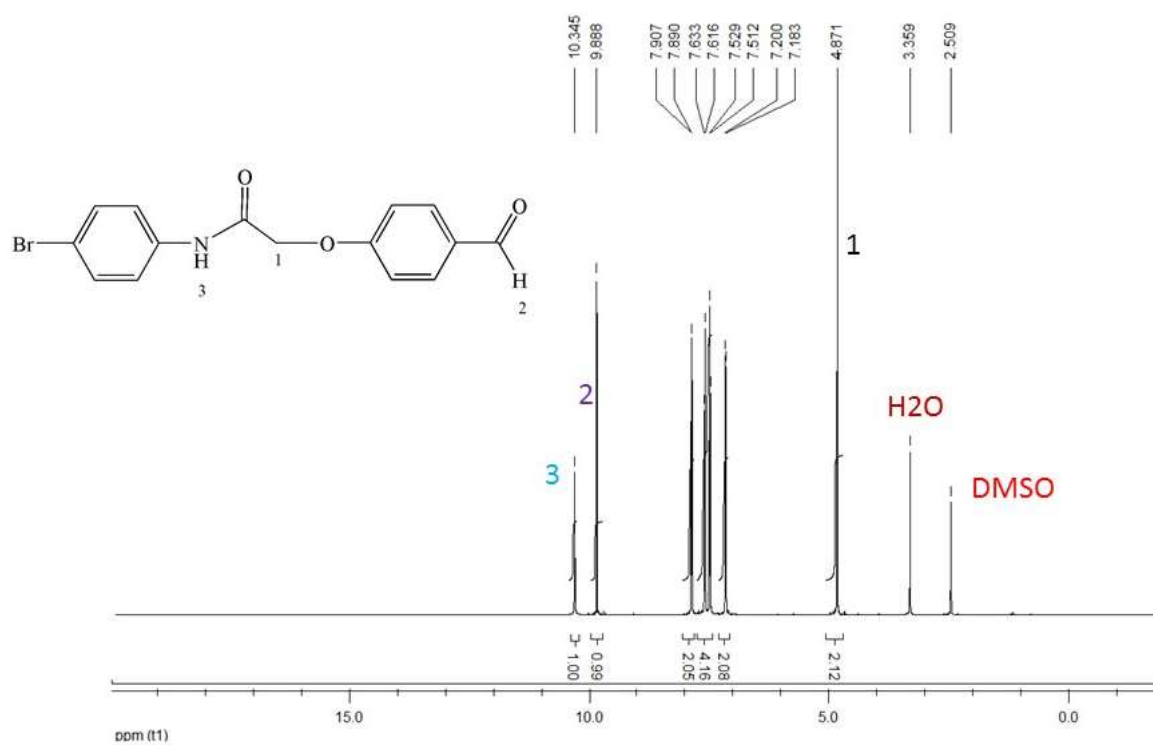


Figure S1. 500 MHz ¹H NMR spectrum of **3** in DMSO-d₆ solvent.

13C NMR, 125 MHz, DMSO-d6

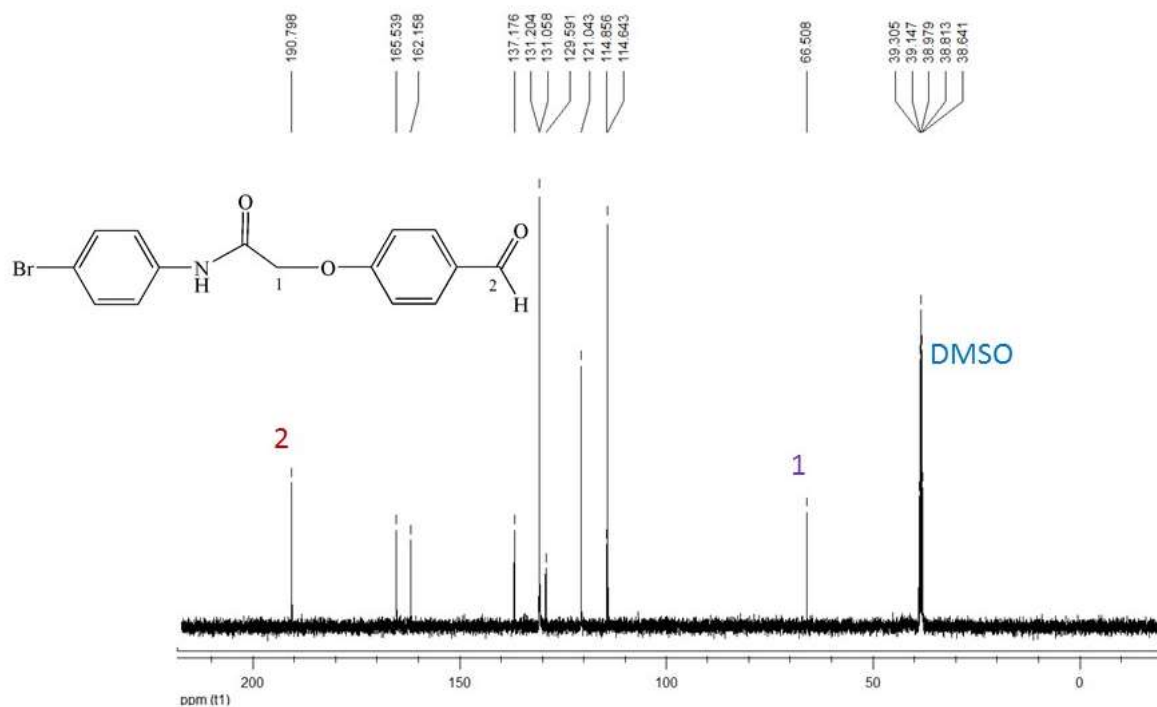


Figure S2. 125 MHz ^{13}C NMR spectrum of **3** in DMSO- d_6 solvent.

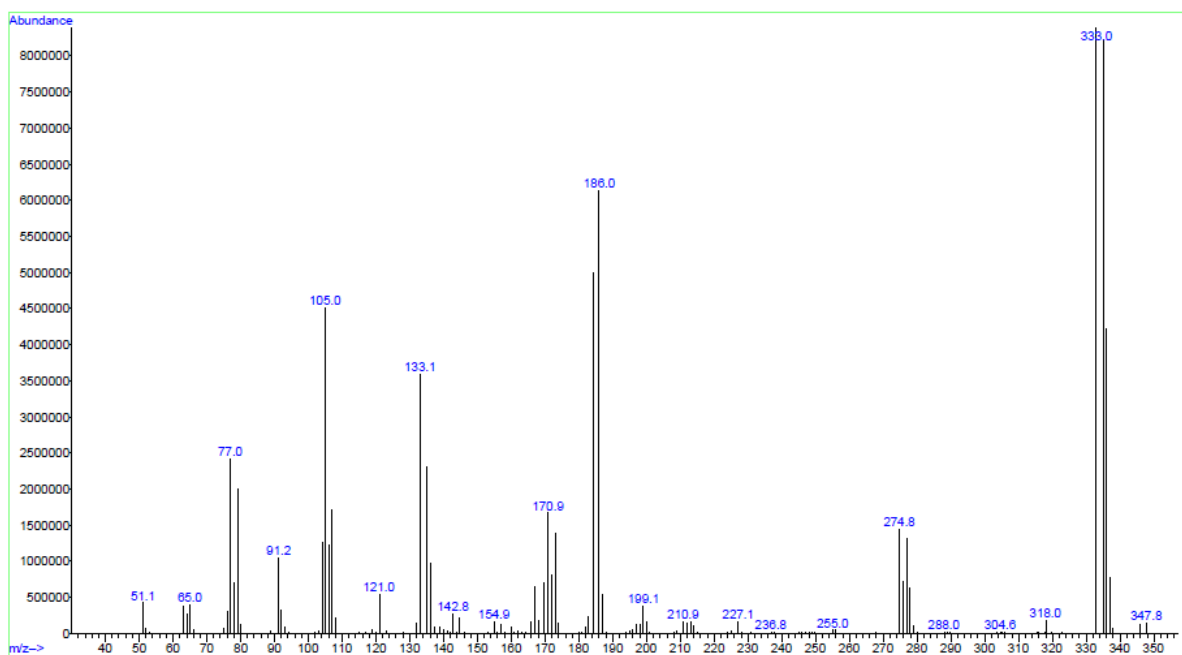


Figure S3. Mass spectrum of **3** (M = 333 g/mol).

^1H NMR, 500 MHz, DMSO

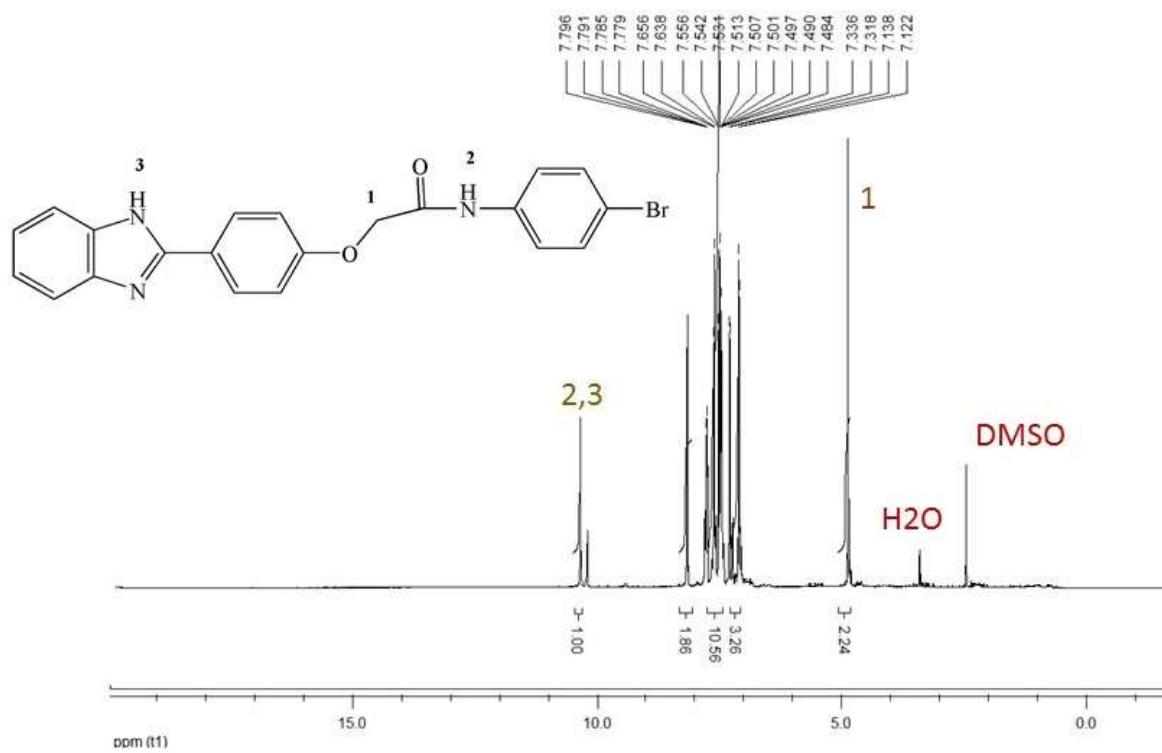


Figure S7. 500 MHz ^1H NMR spectrum of **6n** in DMSO- d_6 solvent.

13C NMR, 125 MHz, DMSO

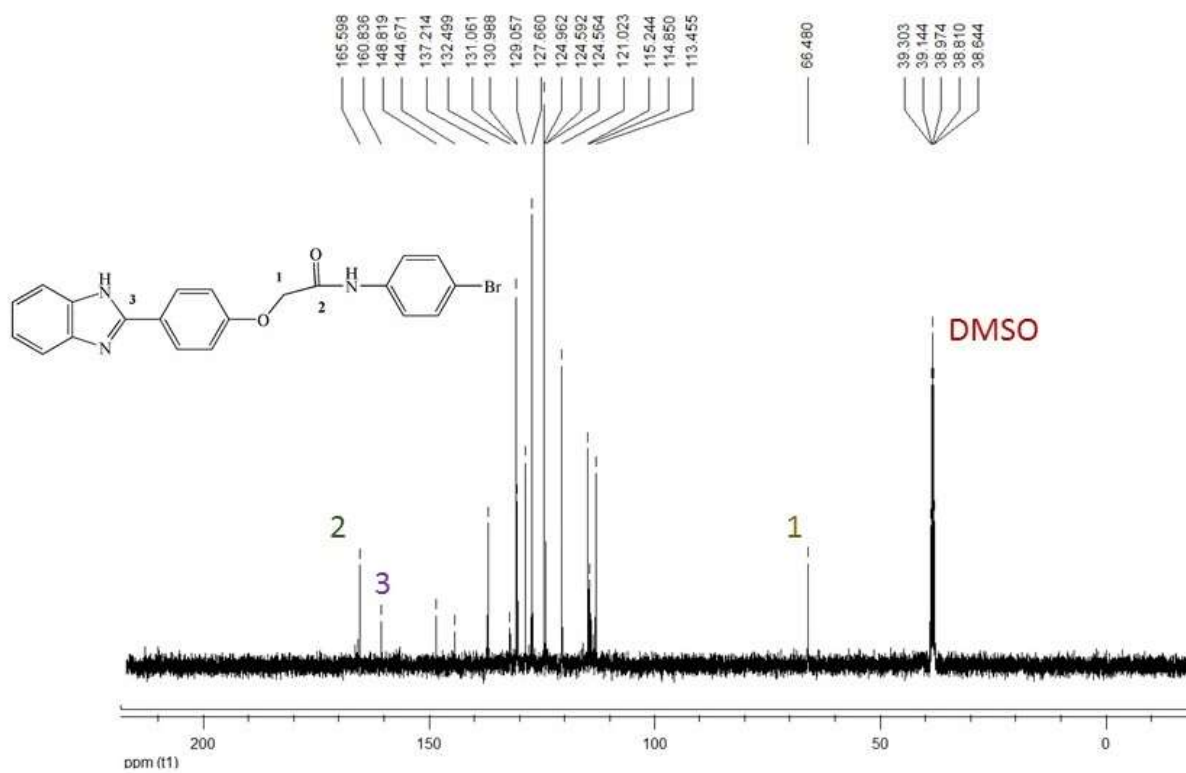


Figure S8. 125 MHz ¹³C NMR spectrum of **6n** in DMSO-d₆ solvent.

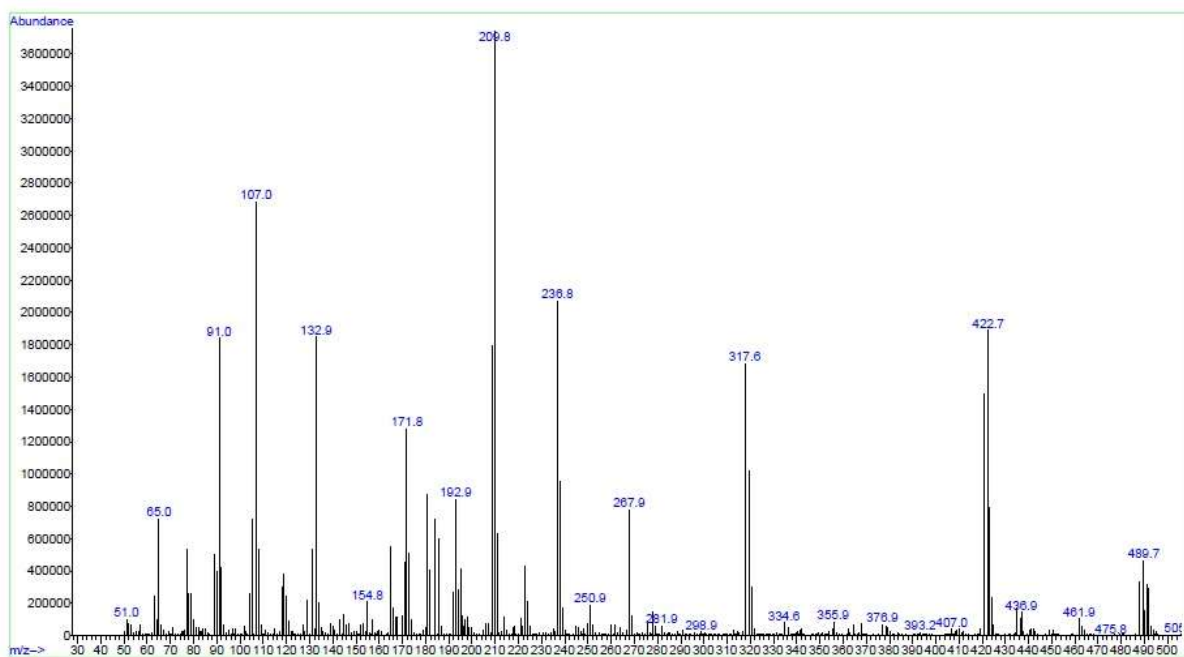


Figure S9. Mass spectrum of **6n** (M = 422 g/mol).