

SUPPORTING MATERIAL

A. Reaction Order model and Pre-Exponential Factor model fitting for kinetic parameters determination

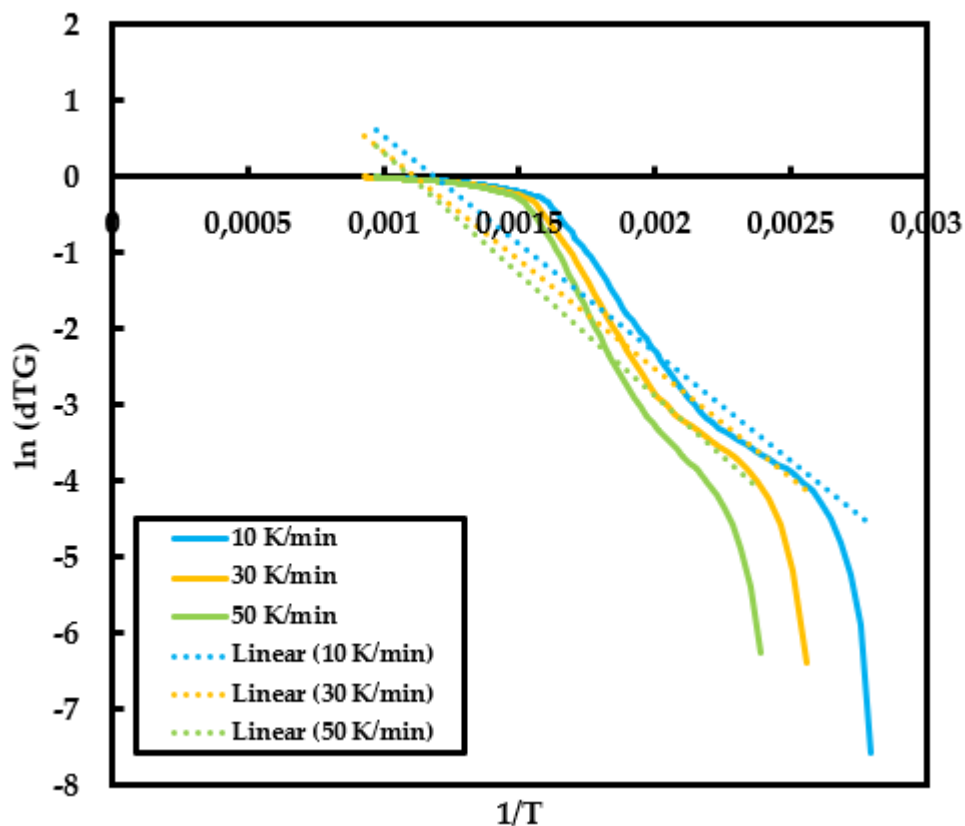


Figure S1. N-Reaction Order model fitting for EFB.

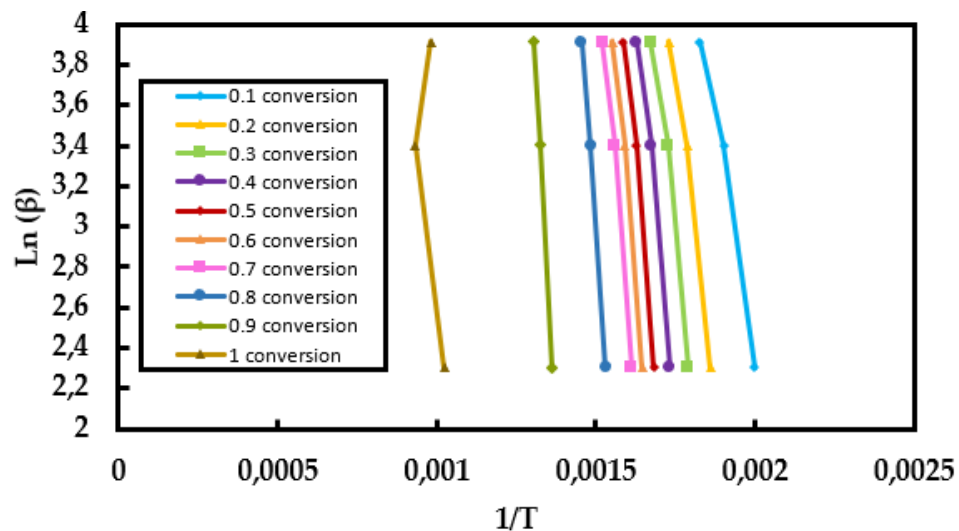
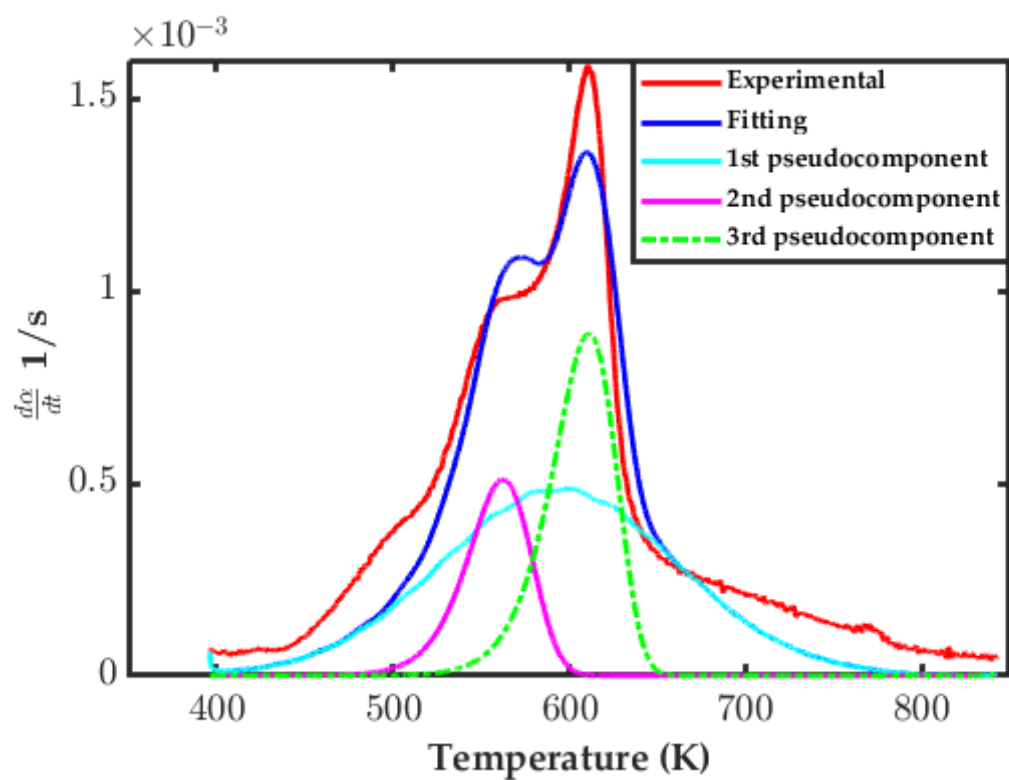
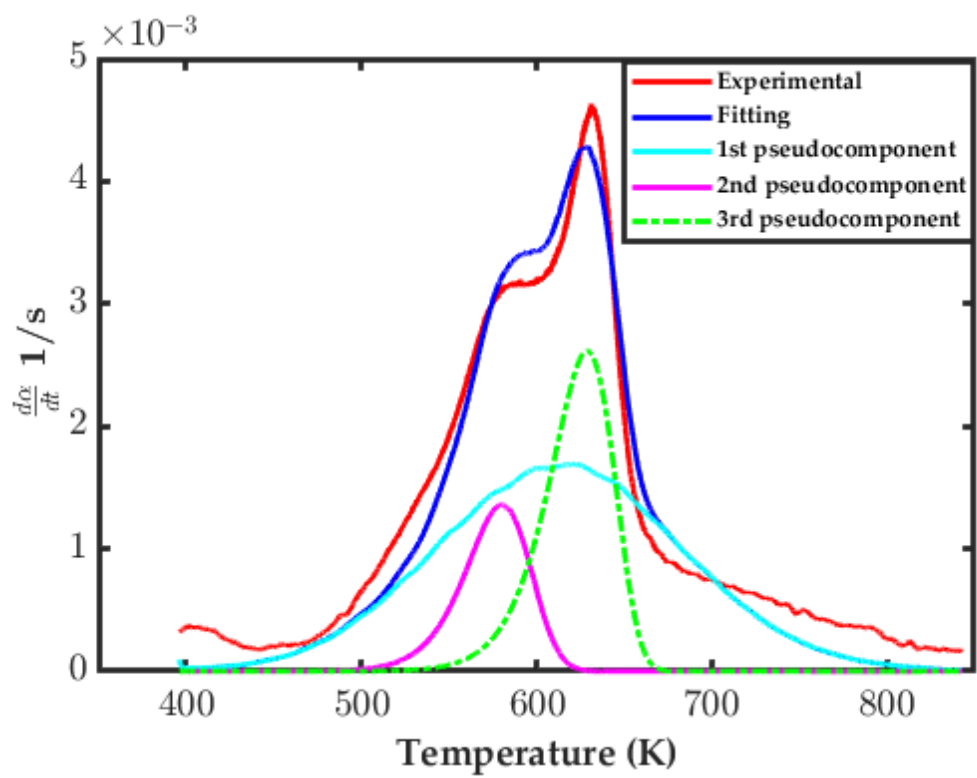


Figure S2. Pre-Exponential Factor model fitting for EFB.

B. DAEM Model Fitting for EFB Samples Mixed with Zn



(a)



(b)

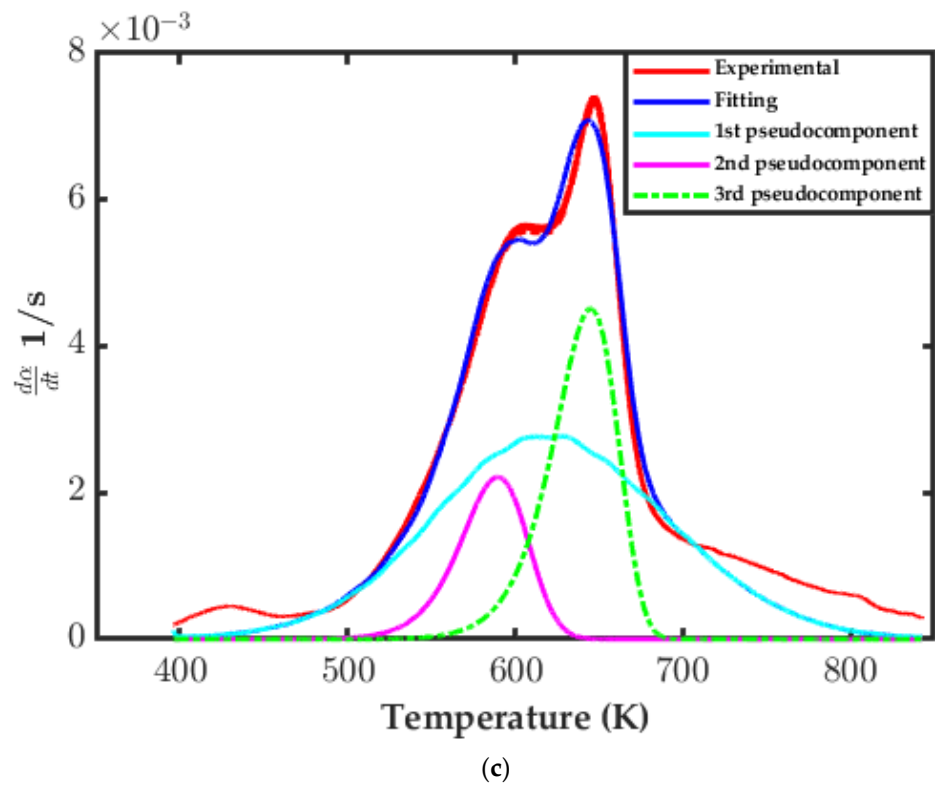
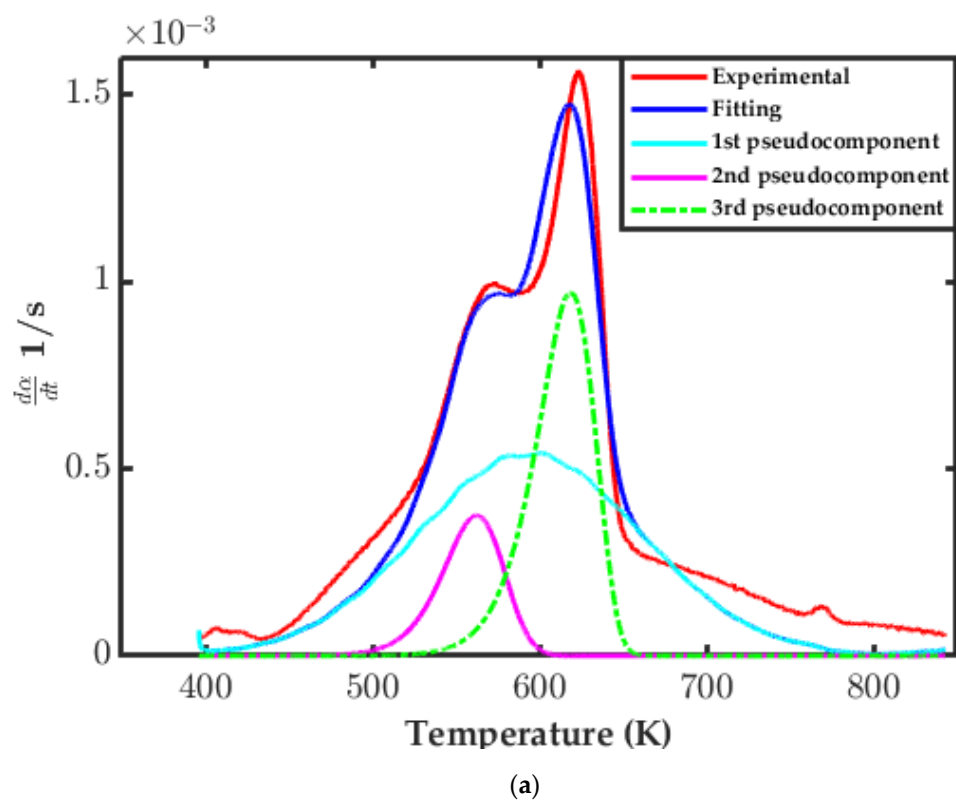


Figure S3. DAEM model fitting for: (a) EFB at 10 K/min; (b) EFB at 30 K/min; (c) EFB at 50 K/min.



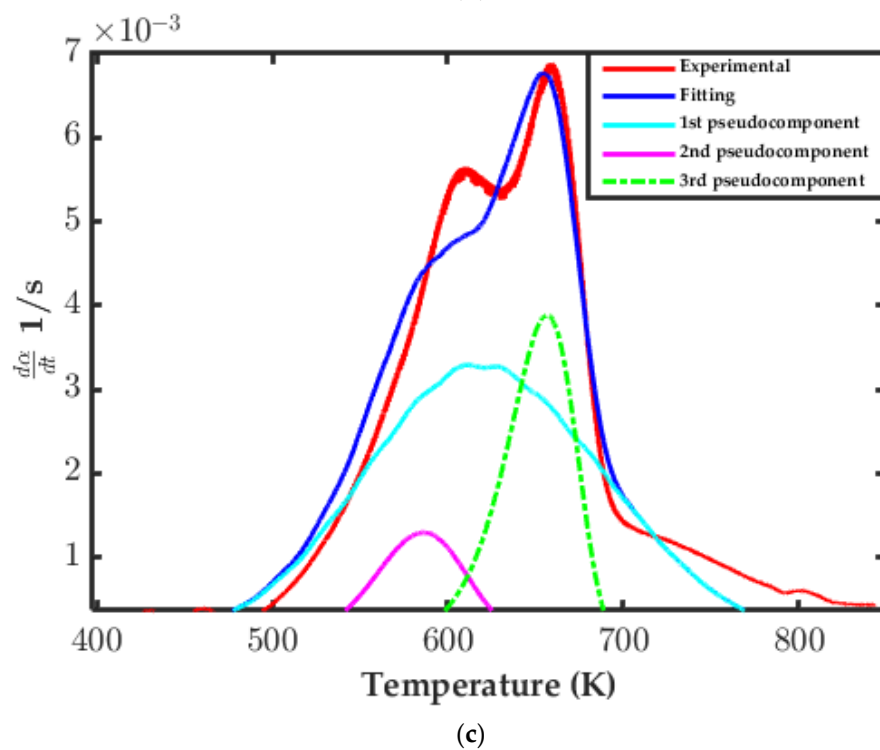
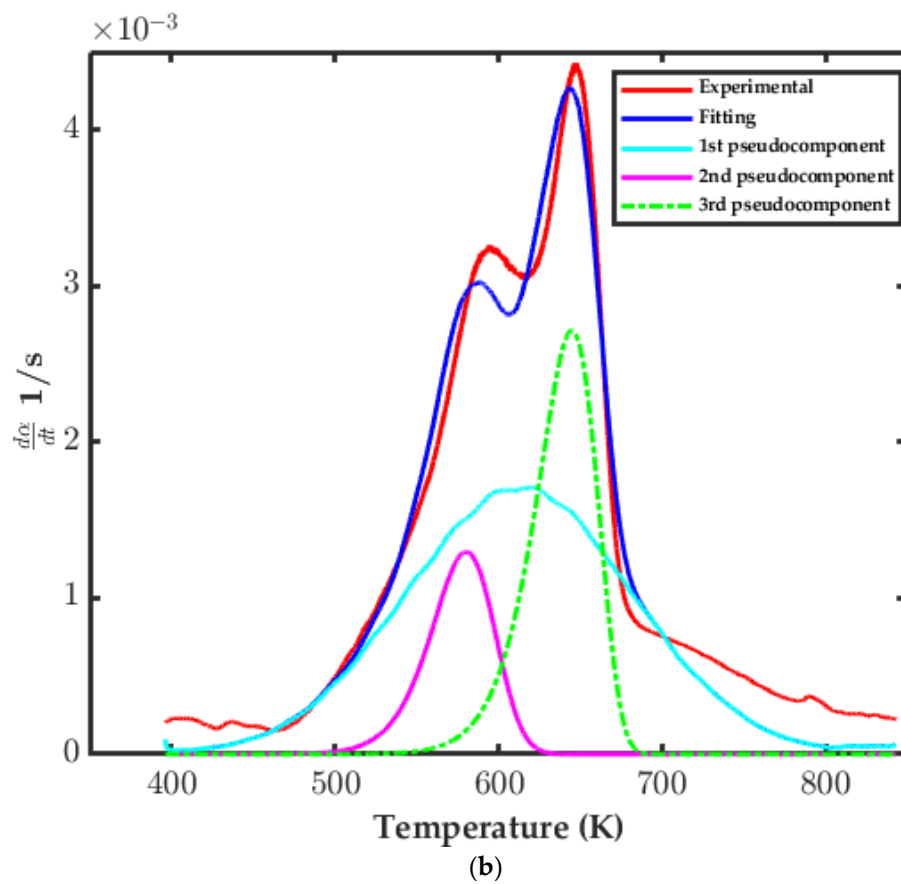
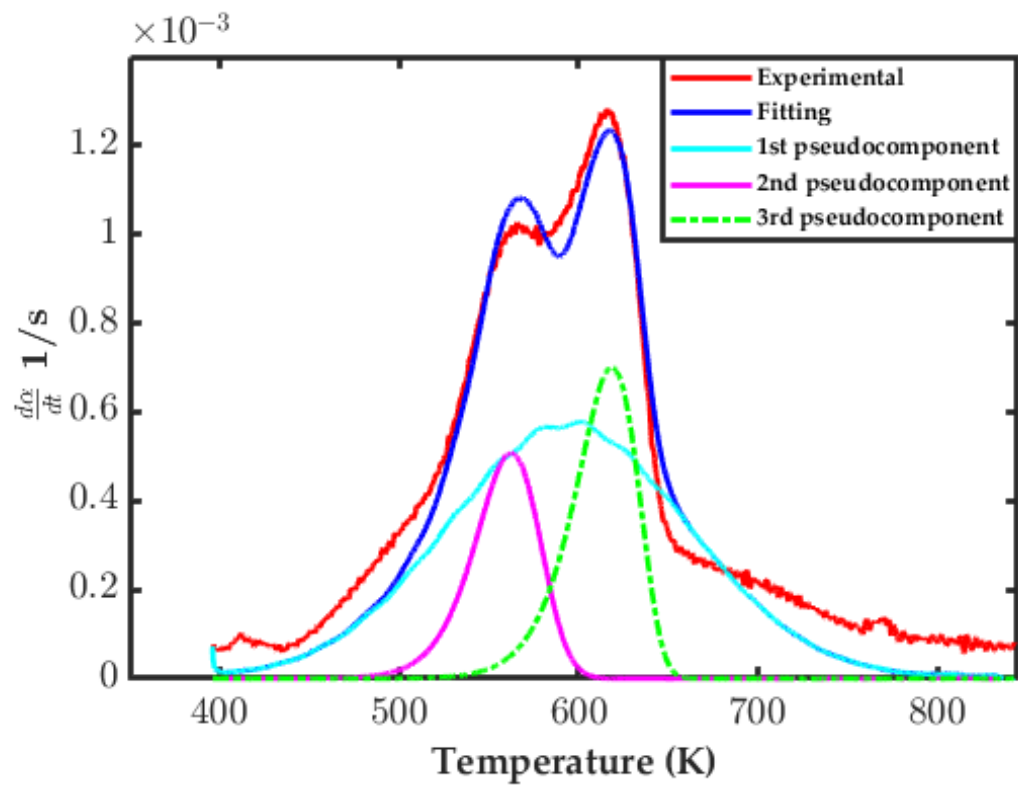
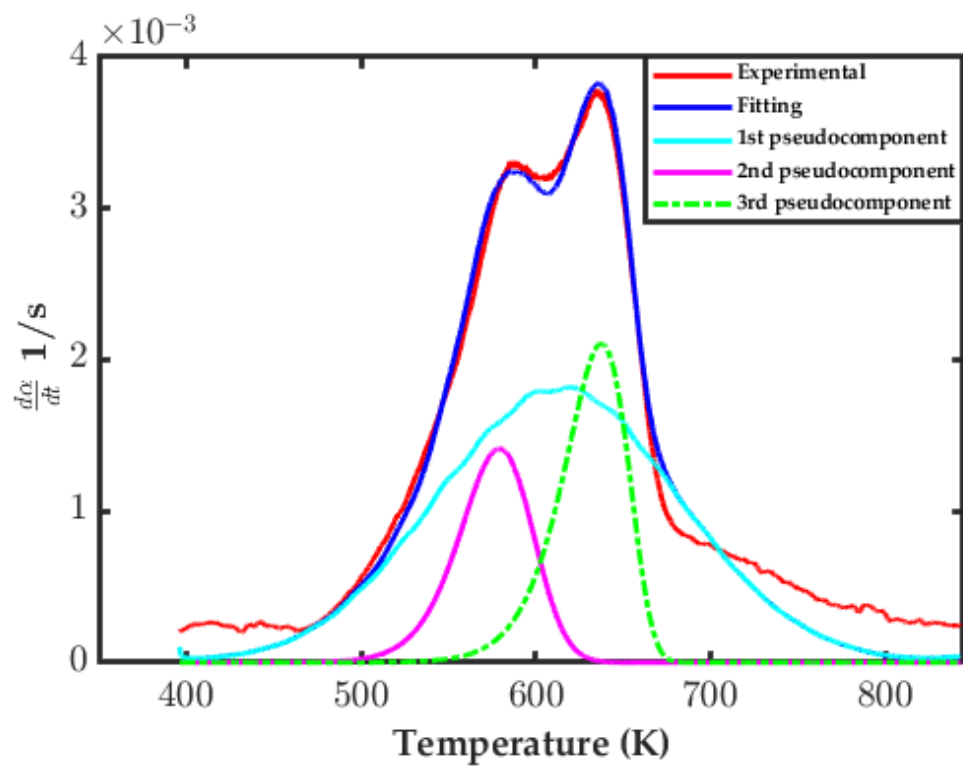


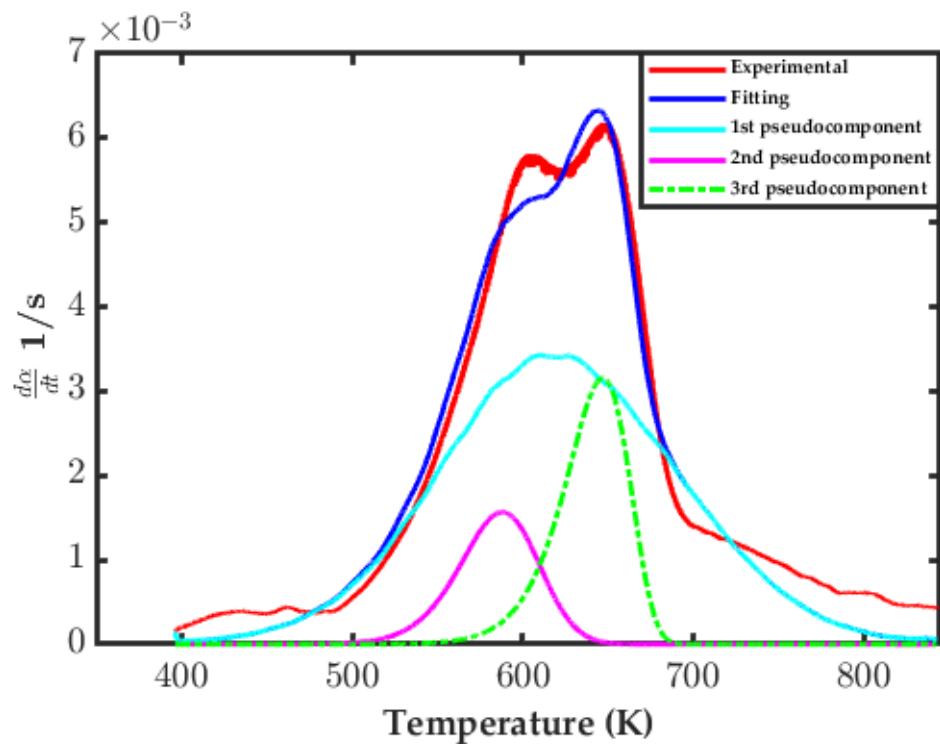
Figure S4. DAEM model fitting for: (a) EFB + 2% Zn at 10 K/min; (b) EFB + 2% Zn at 30 K/min; (c) EFB + 2% Zn at 50 K/min.



(a)



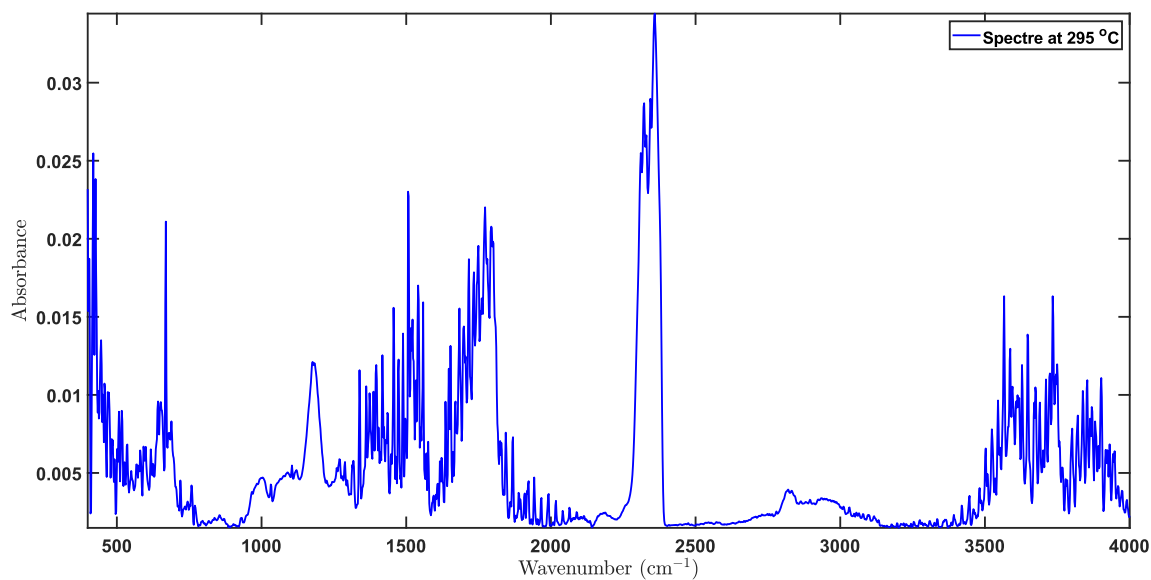
(b)



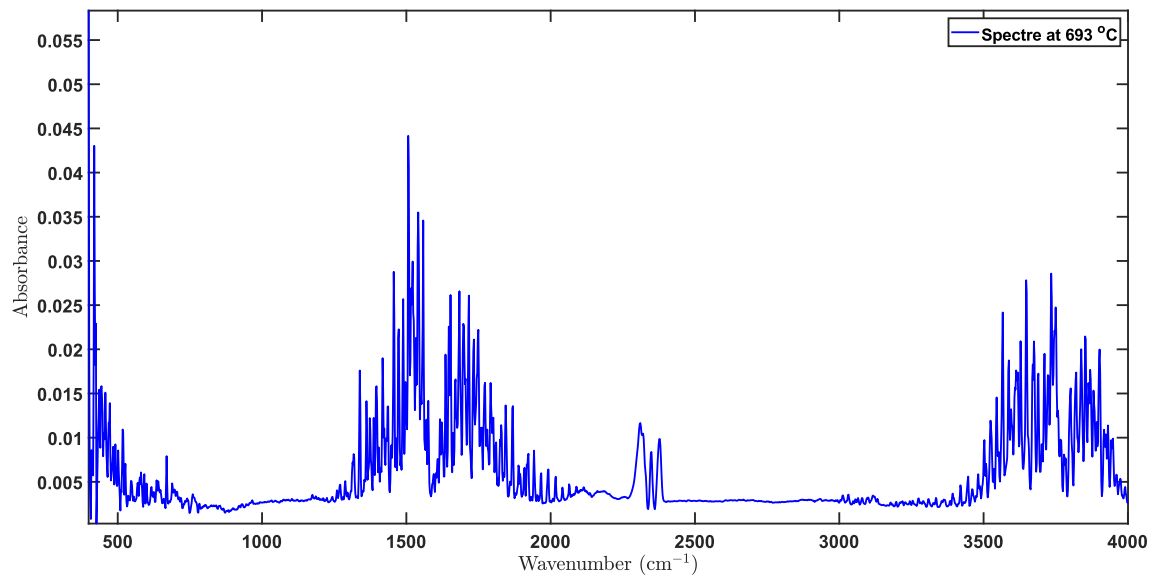
(c)

Figure S5. DAEM model fitting for: (a) EFB + 3% Zn at 10 K/min; (b) EFB + 3% Zn at 30 K/min; (c) EFB + 3% Zn at 50 K/min.

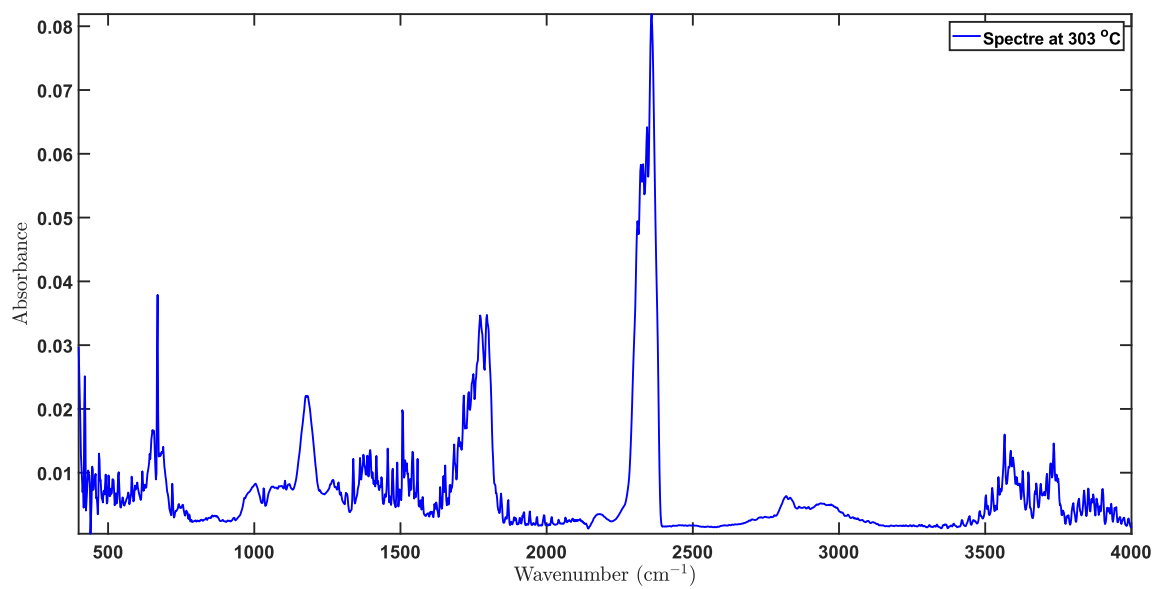
C. FTIR Spectrum of EFB Samples Mixed with Zn



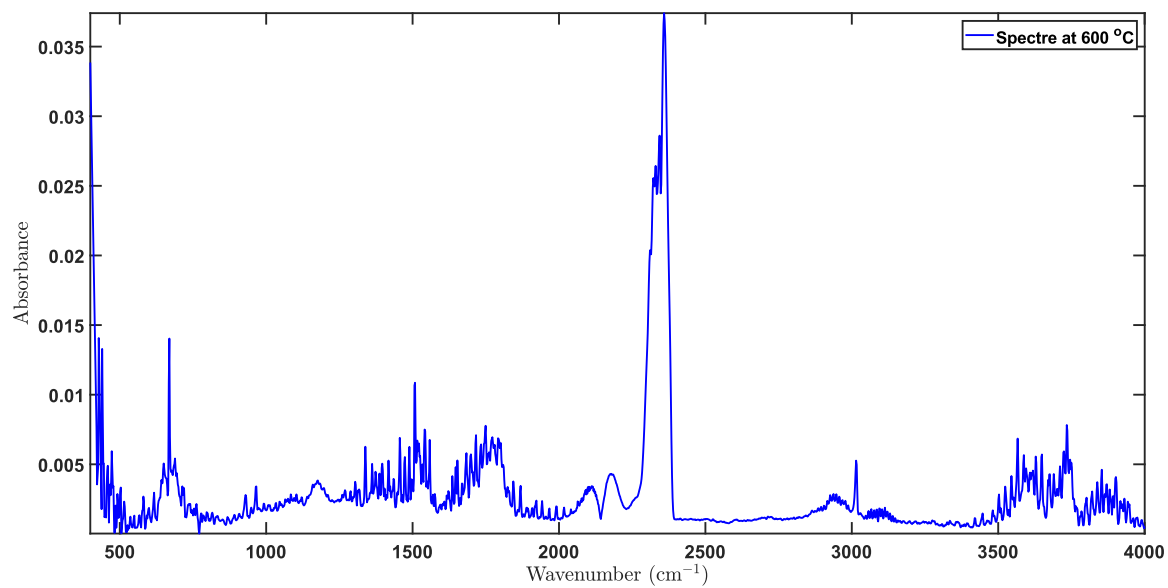
(a)



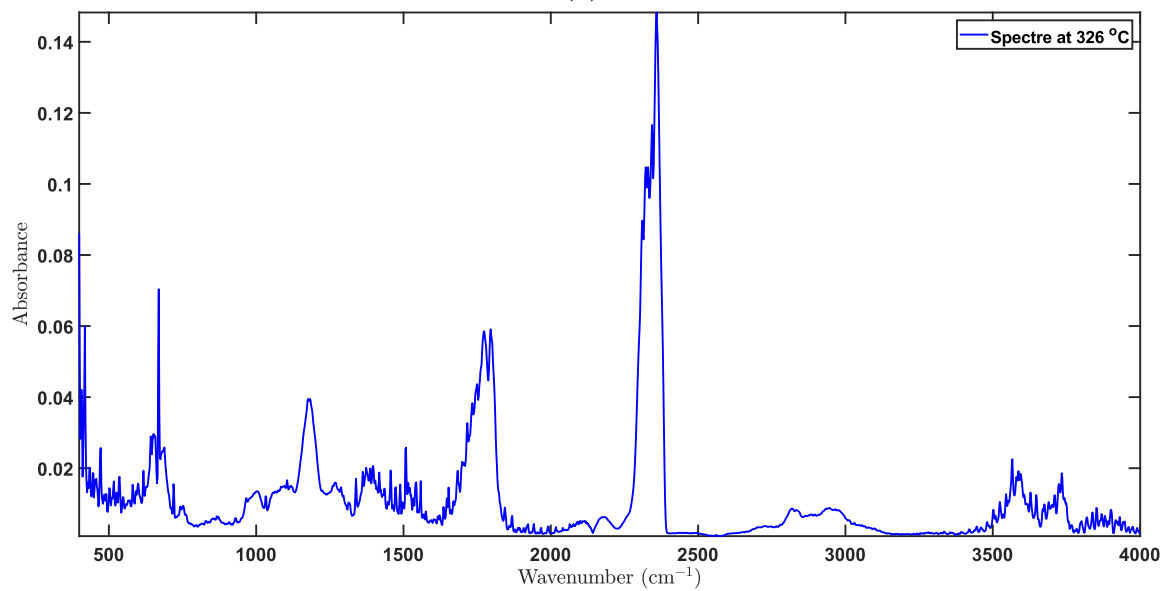
(b)



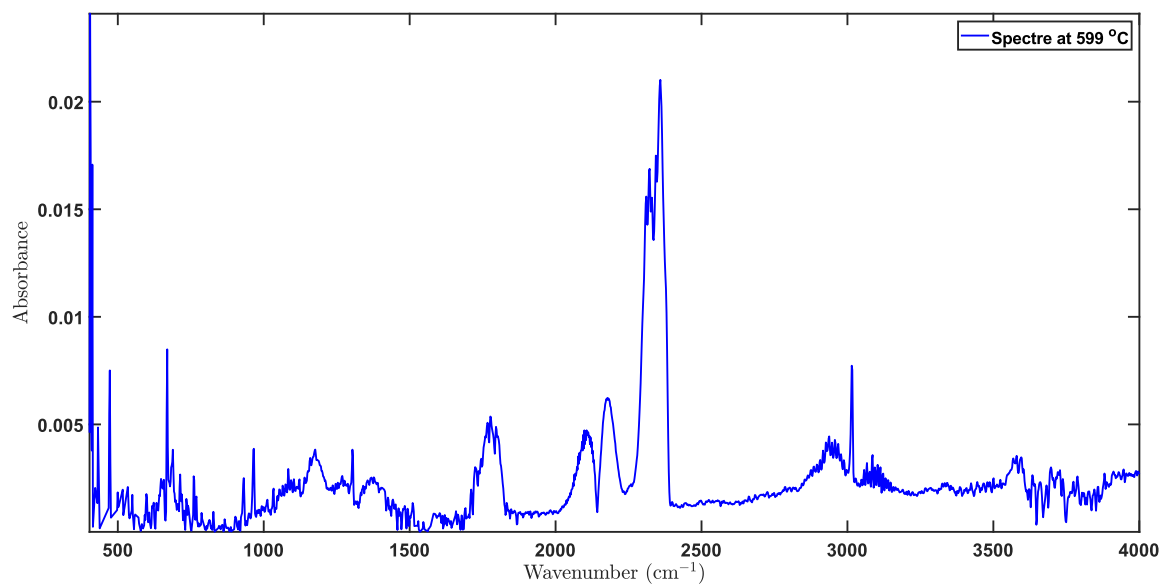
(c)



(d)

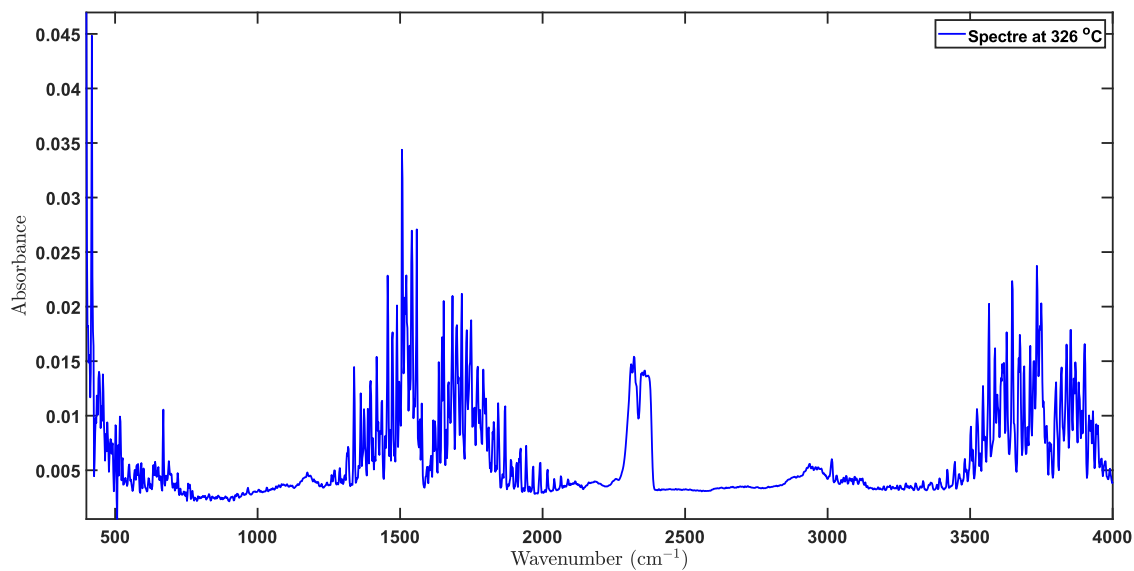


(e)

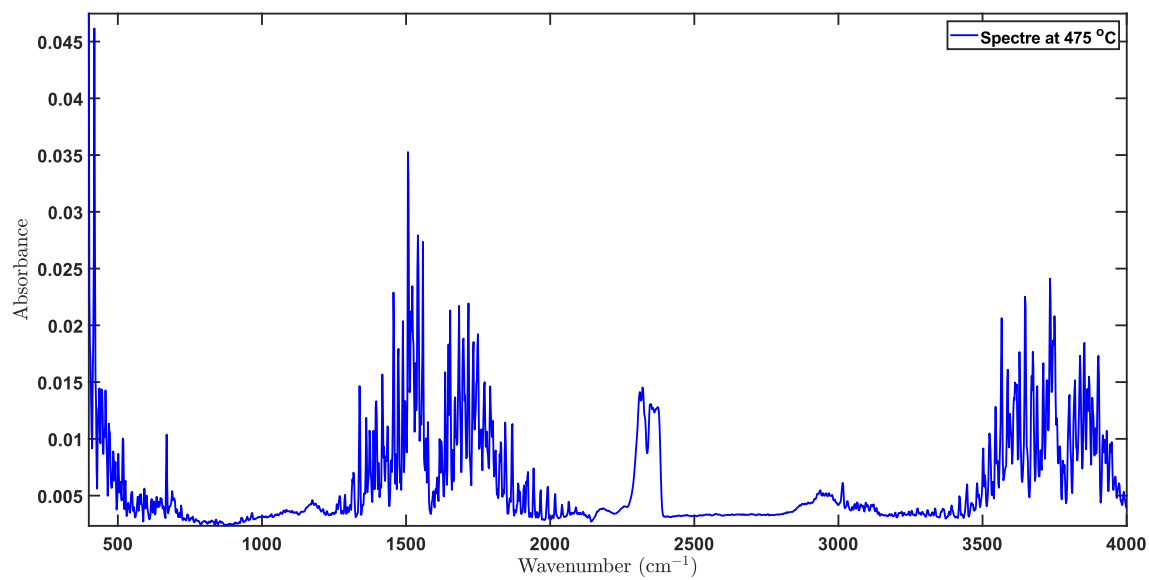


(f)

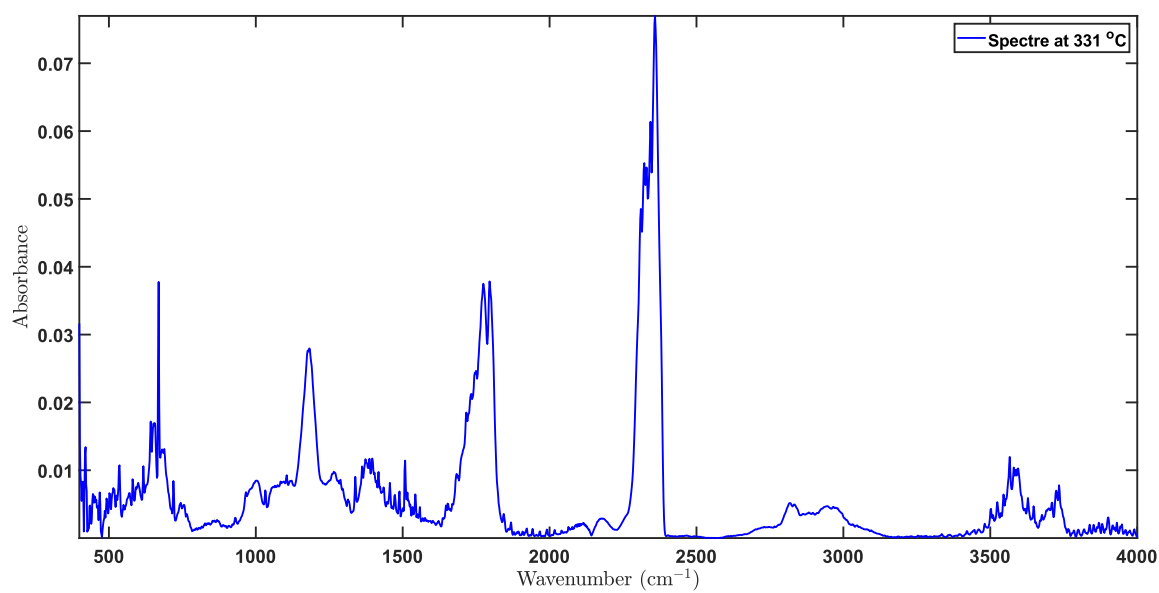
Figure S6. FTIR spectrum of EFB + 1% Zn sample: (a) 10 K/min at 95 °C, (b) 10 K/min at 693 °C, (c) 30 K/min at 303 °C, (d) 30 K/min at 600 °C, (e) 50 K/min at 326 °C, (f) 50 K/min at 599 °C.



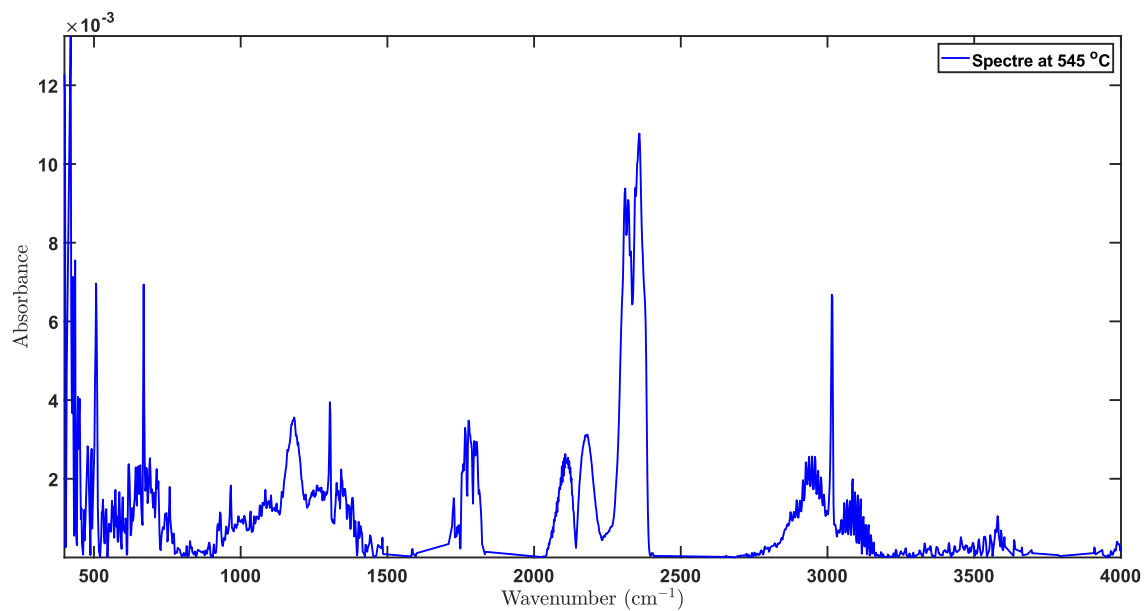
(a)



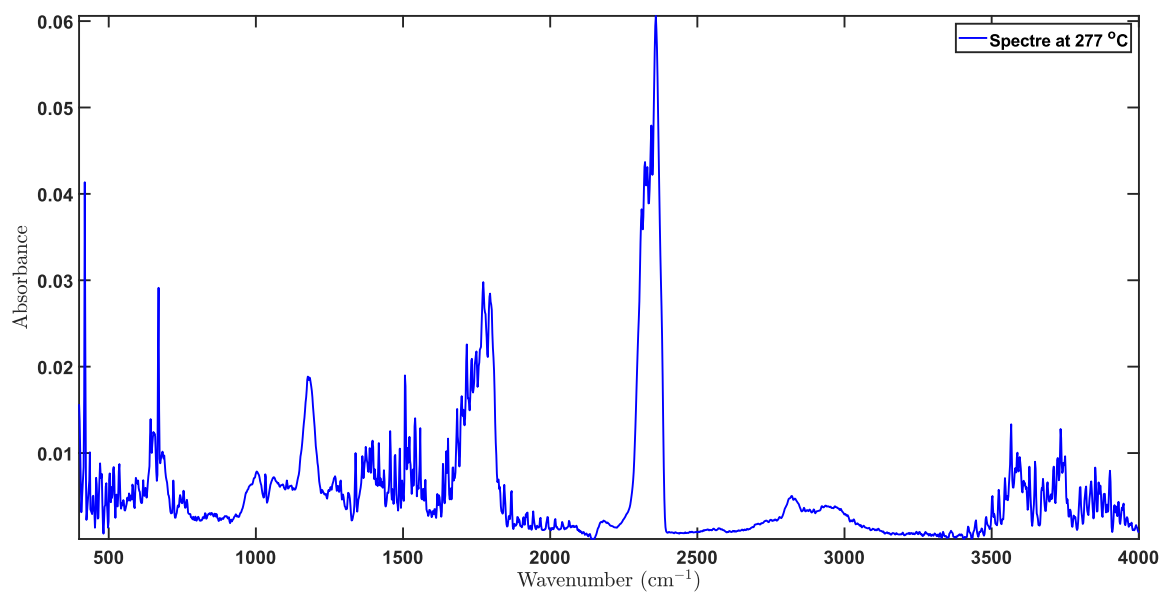
(b)



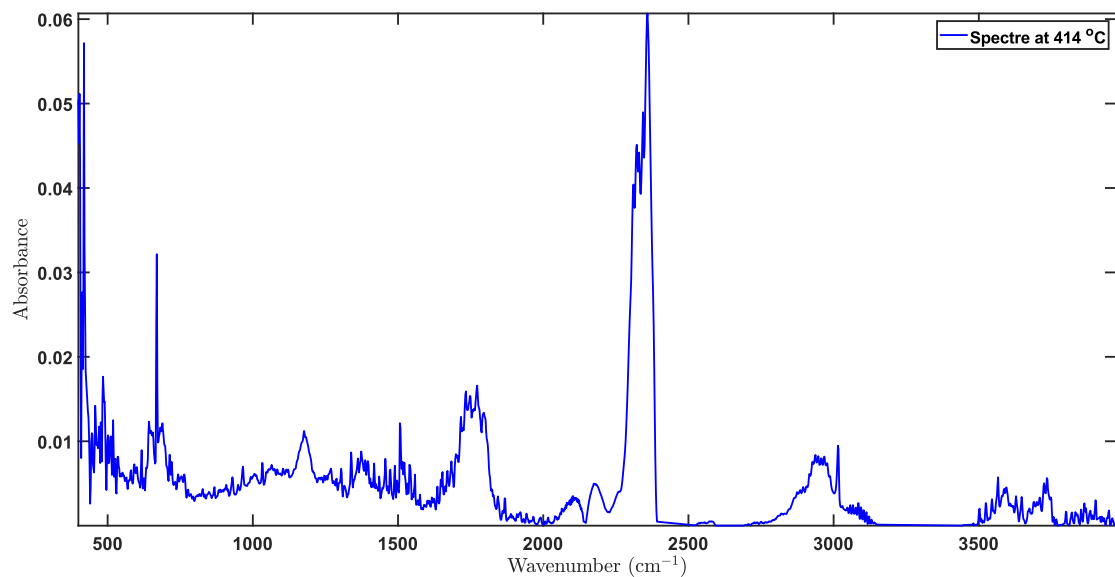
(c)



(d)

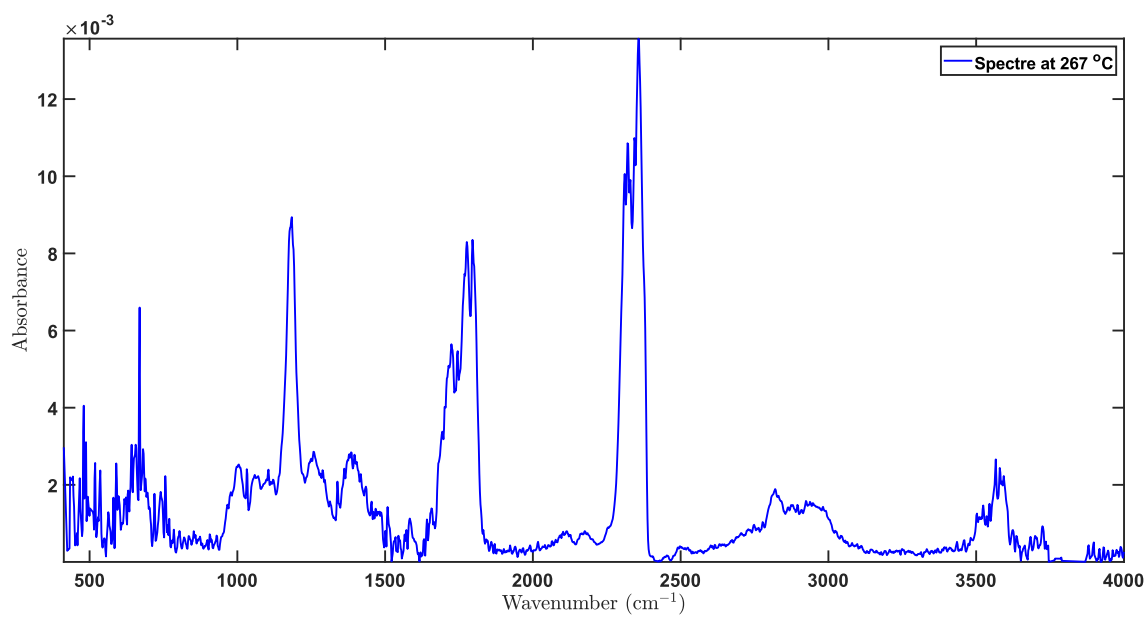


(e)

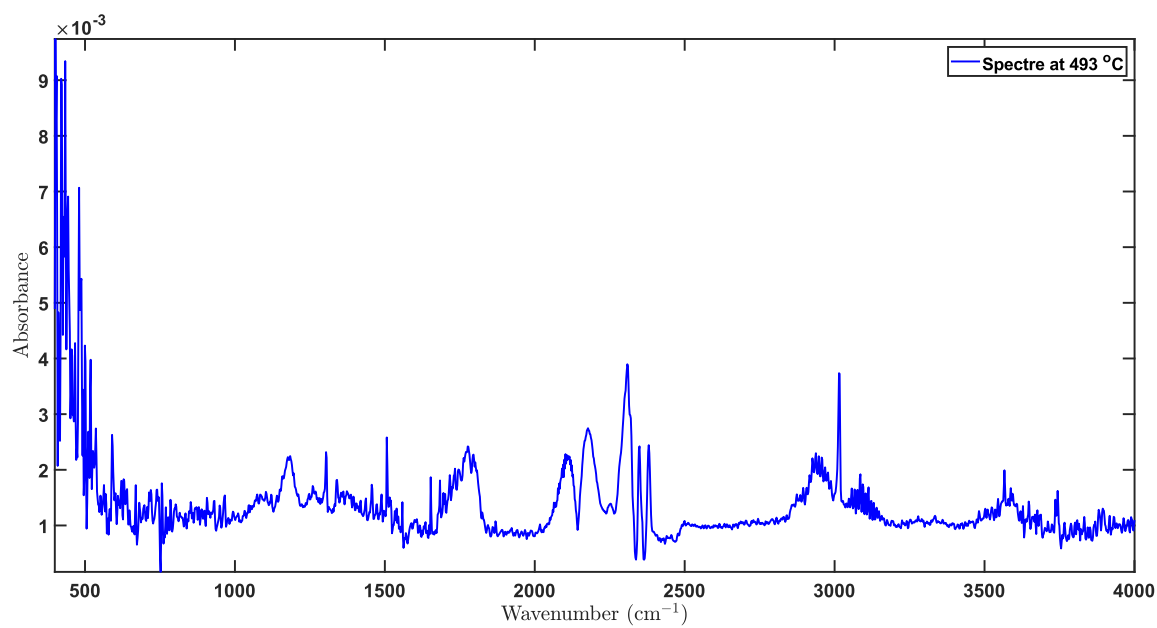


(f)

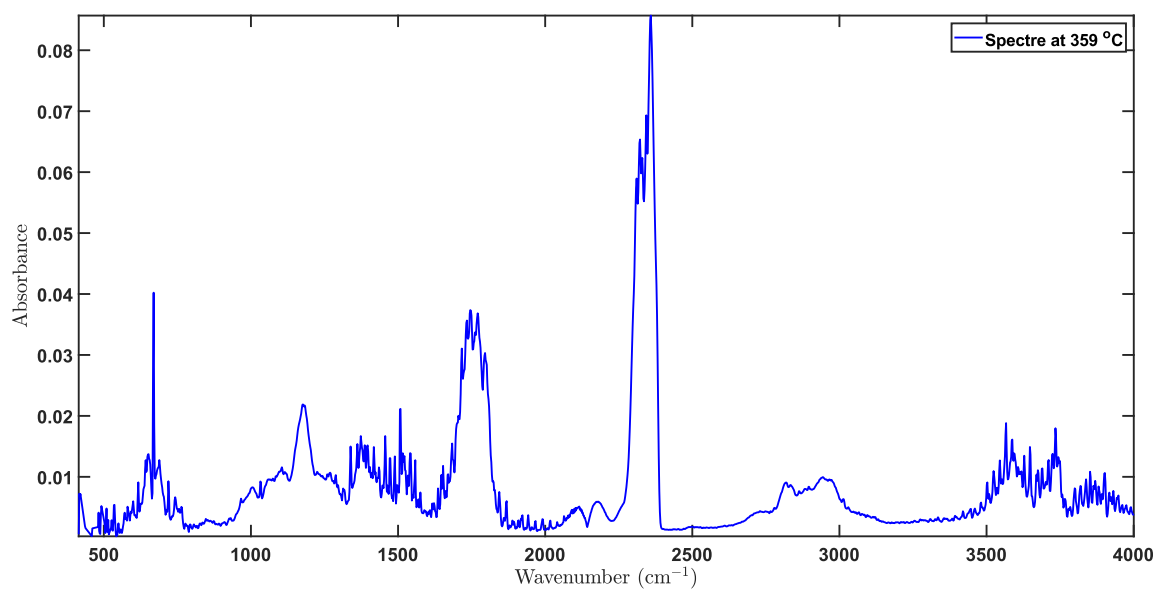
Figure S7. FTIR spectrum of EFB + 2% Zn sample: (a) 10 K/min at 326 °C, (b) 10 K/min at 475° C, (c) 30 K/min at 331 °C, (d) 30 K/min at 545 °C, (e) 50 K/min at 277 °C, (f) 50 K/min at 414 °C.



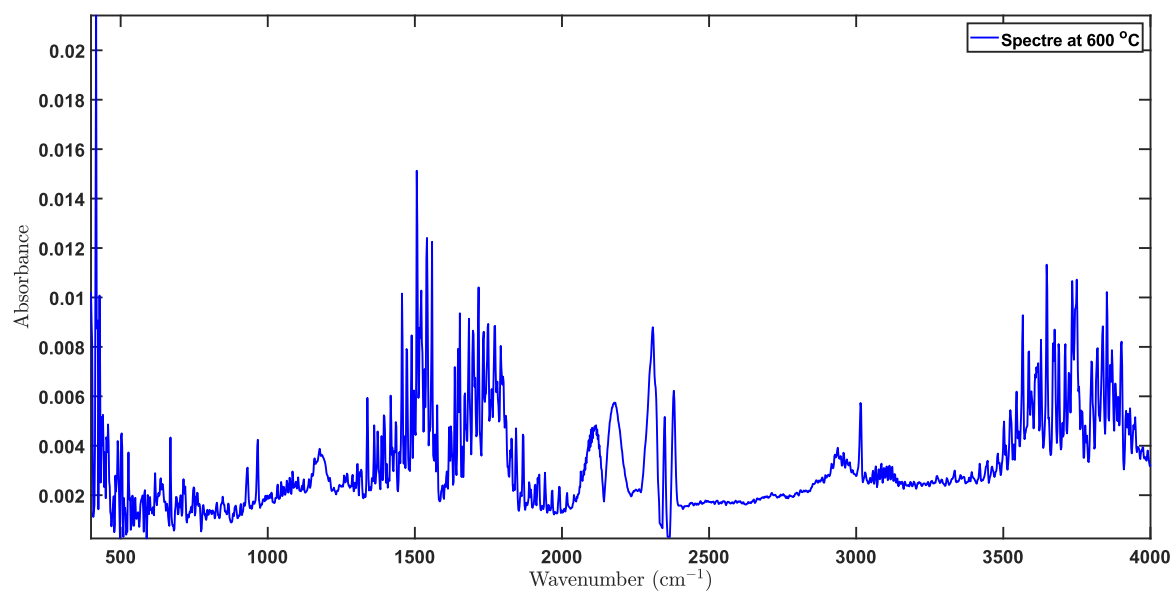
(a)



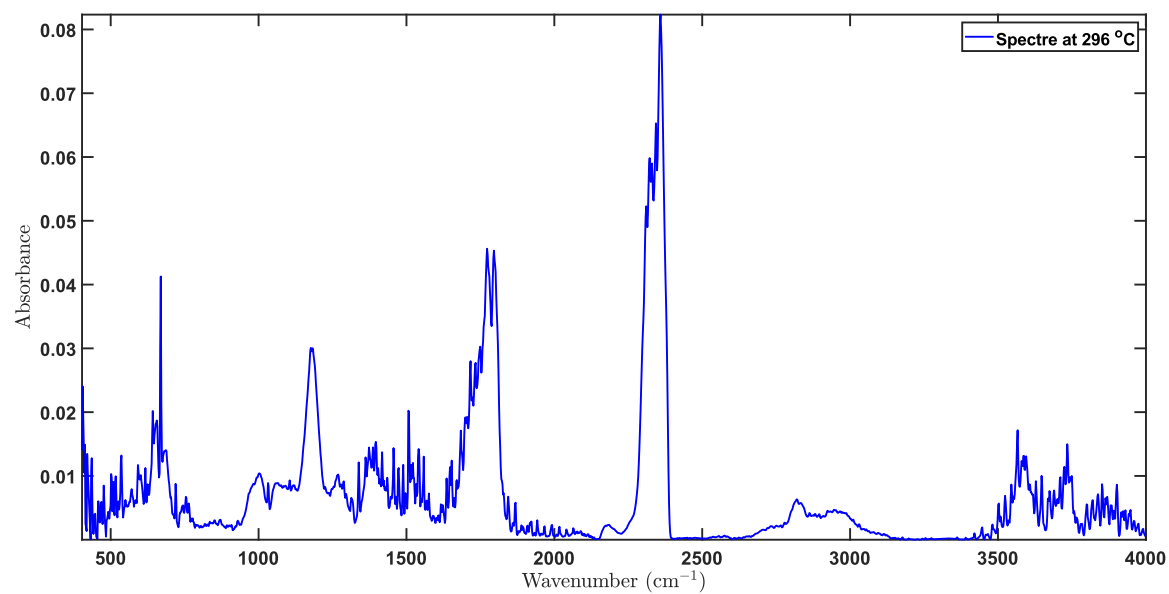
(b)



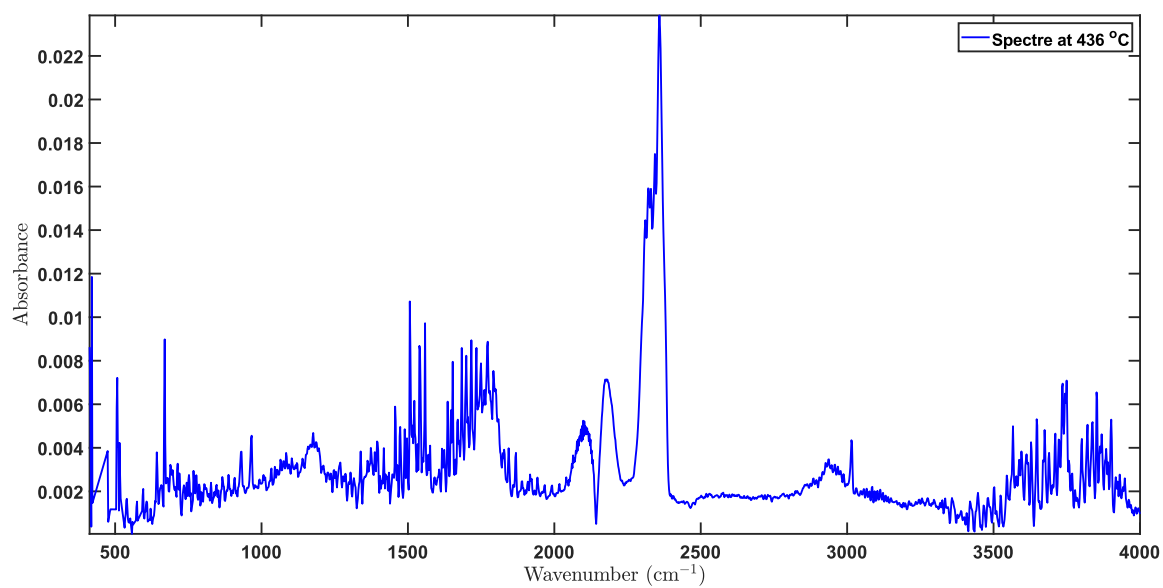
(c)



(d)



(e)



(f)

Figure S8. FTIR spectrum of EFB + 3% Zn sample: (a) 10 K/min at 267 °C, (b) 10 K/min at 493 °C, (c) 30 K/min at 359 °C, (d) 30 K/min at 600 °C, (e) 50 K/min at 296 °C, (f) 50 K/min at 436 °C.