

## Supplementary Materials

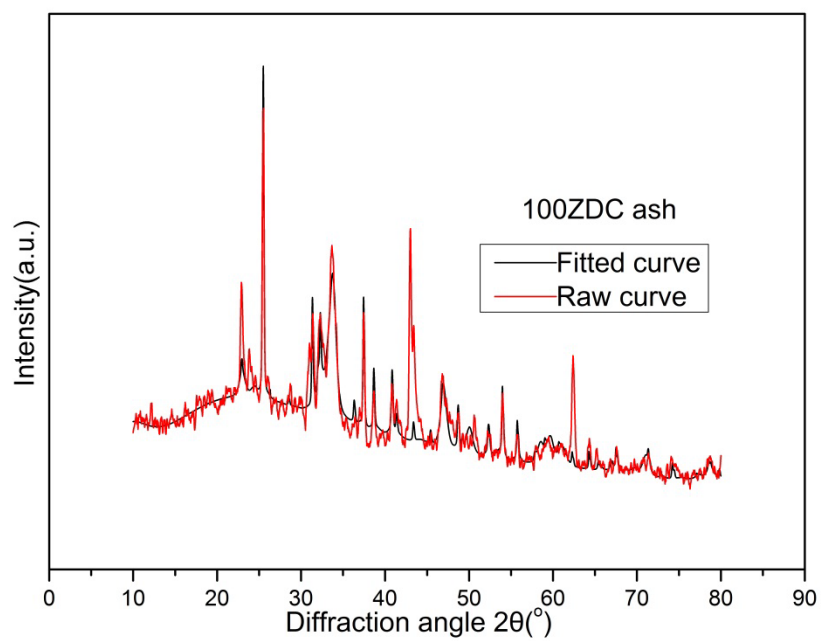


Figure S1 Raw and fitted XRD patterns of 100ZDC ash.

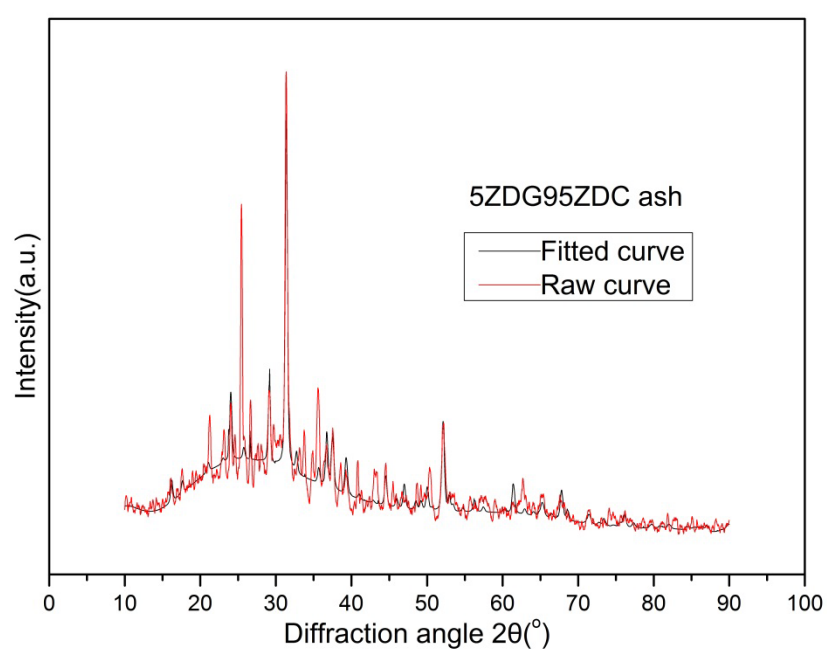


Figure S2 Raw and fitted XRD patterns of 5ZDG95ZDC ash.

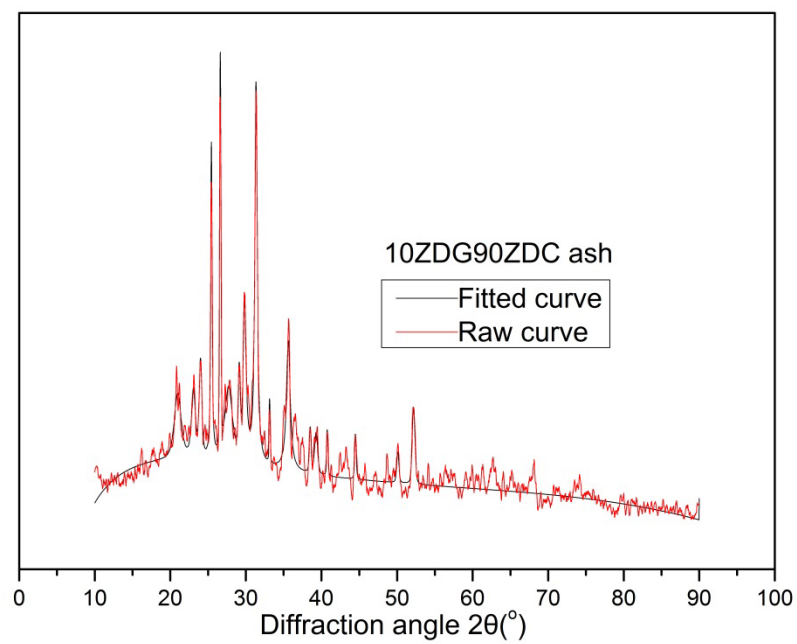


Figure S3 Raw and fitted XRD patterns of 10ZDG90ZDC ash.

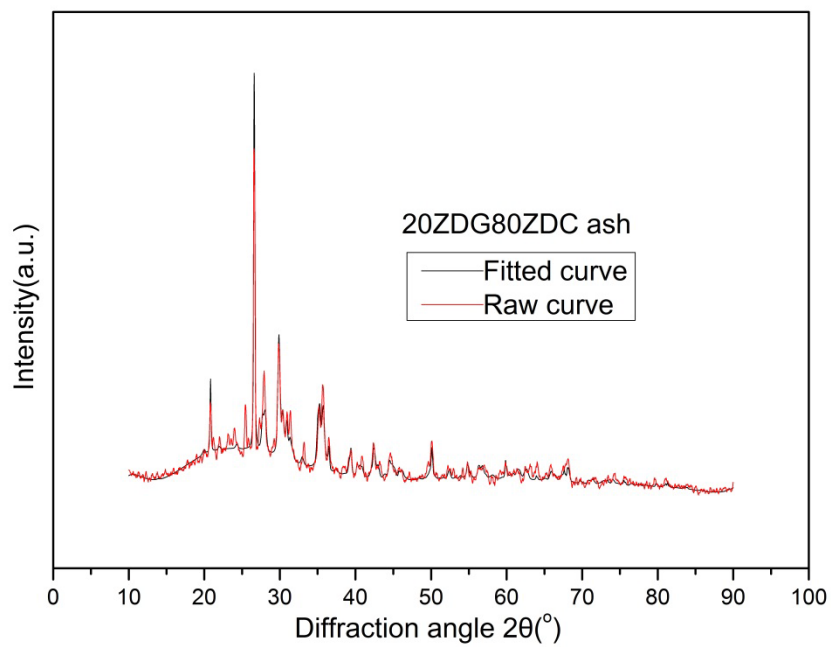


Figure S4 Raw and fitted XRD patterns of 20ZDG80ZDC ash.

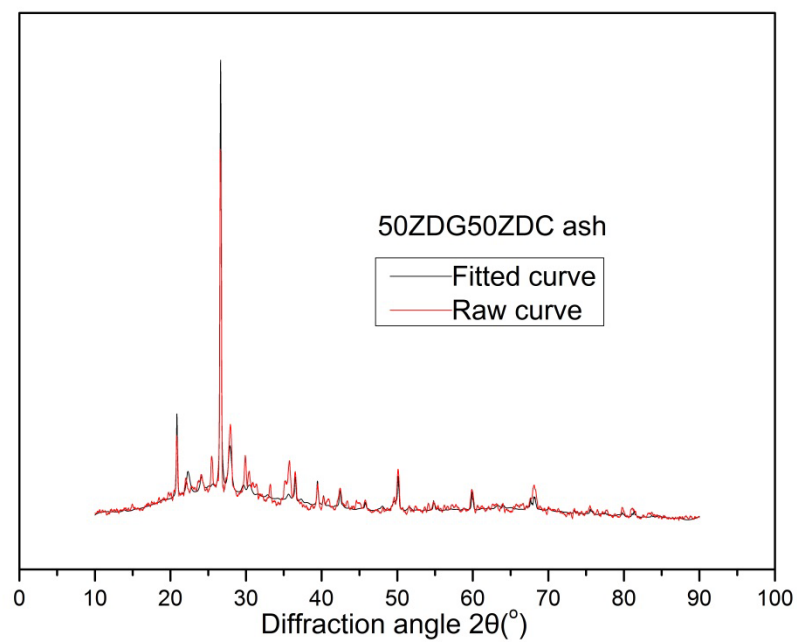


Figure S5 Raw and fitted XRD patterns of 50ZDG50ZDC ash.

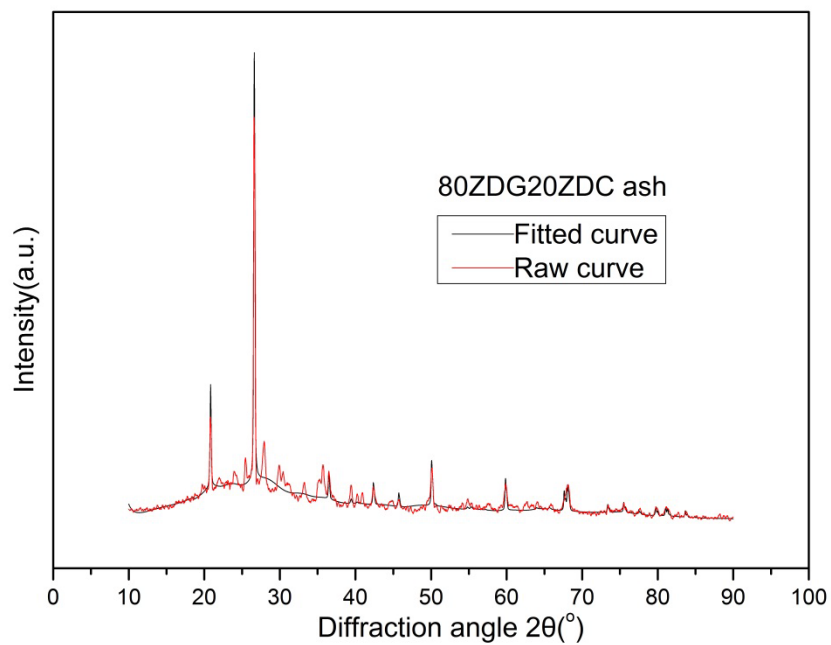


Figure S6 Raw and fitted XRD patterns of 80ZDG20ZDC ash.

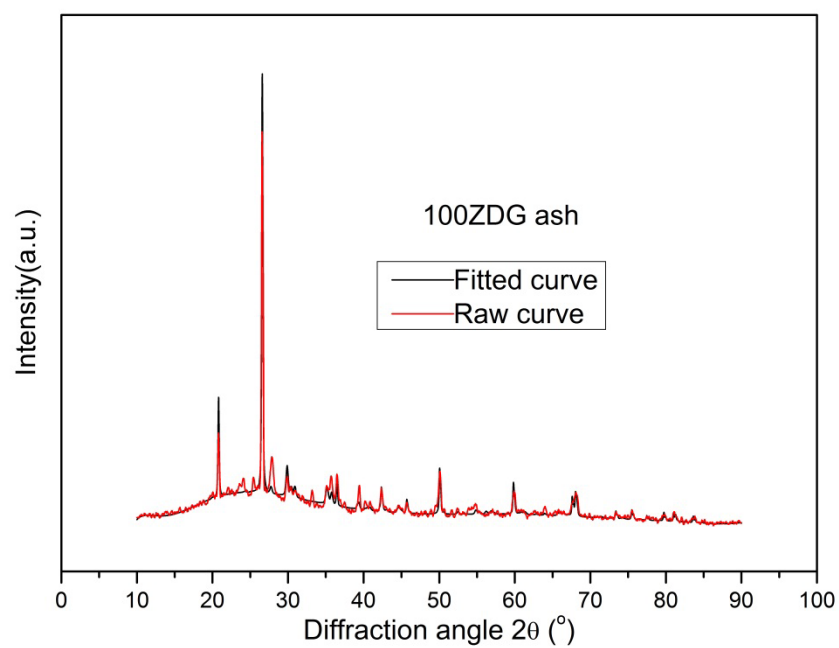


Figure S7 Raw and fitted XRD patterns of 100ZDG ash.