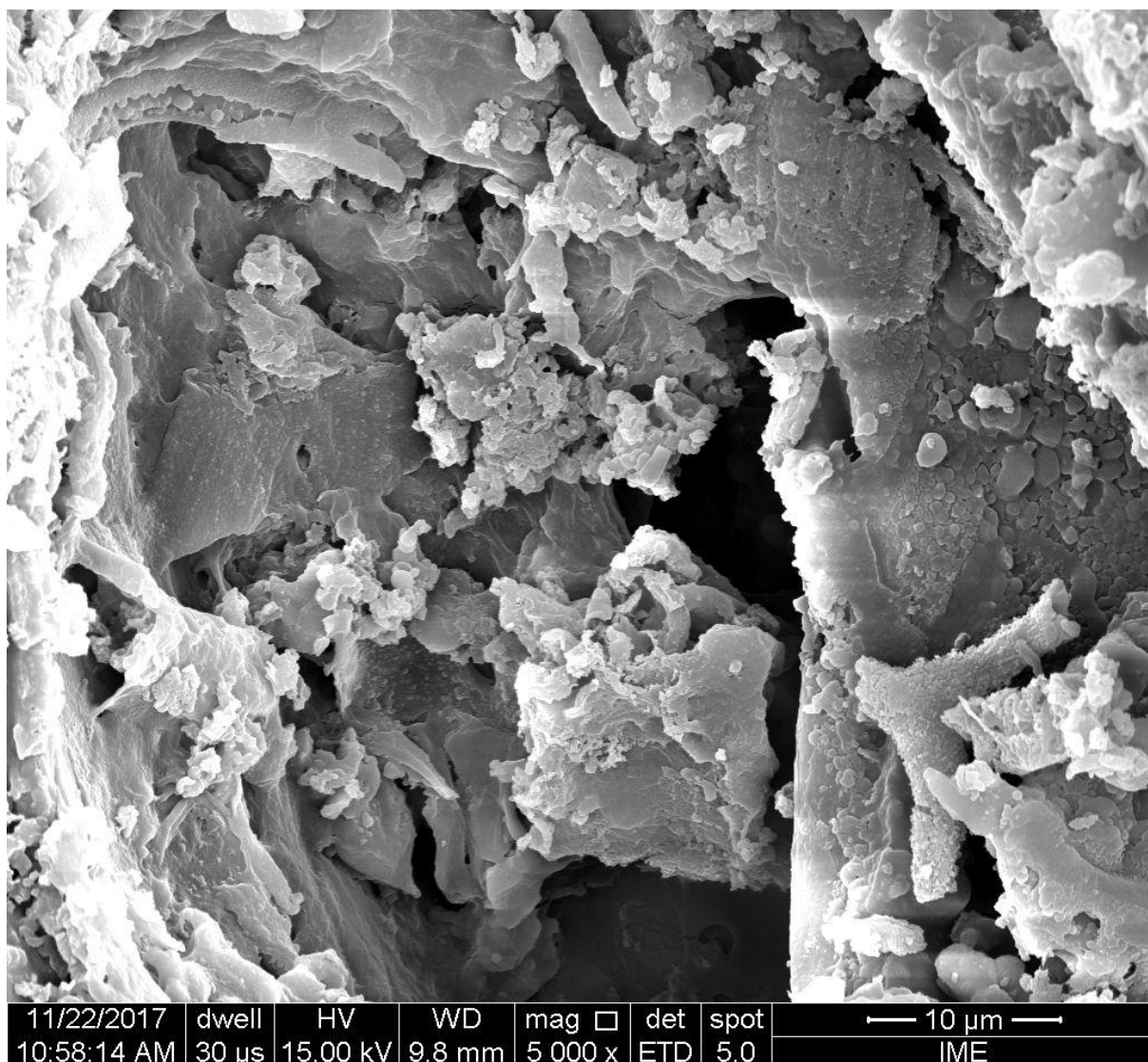
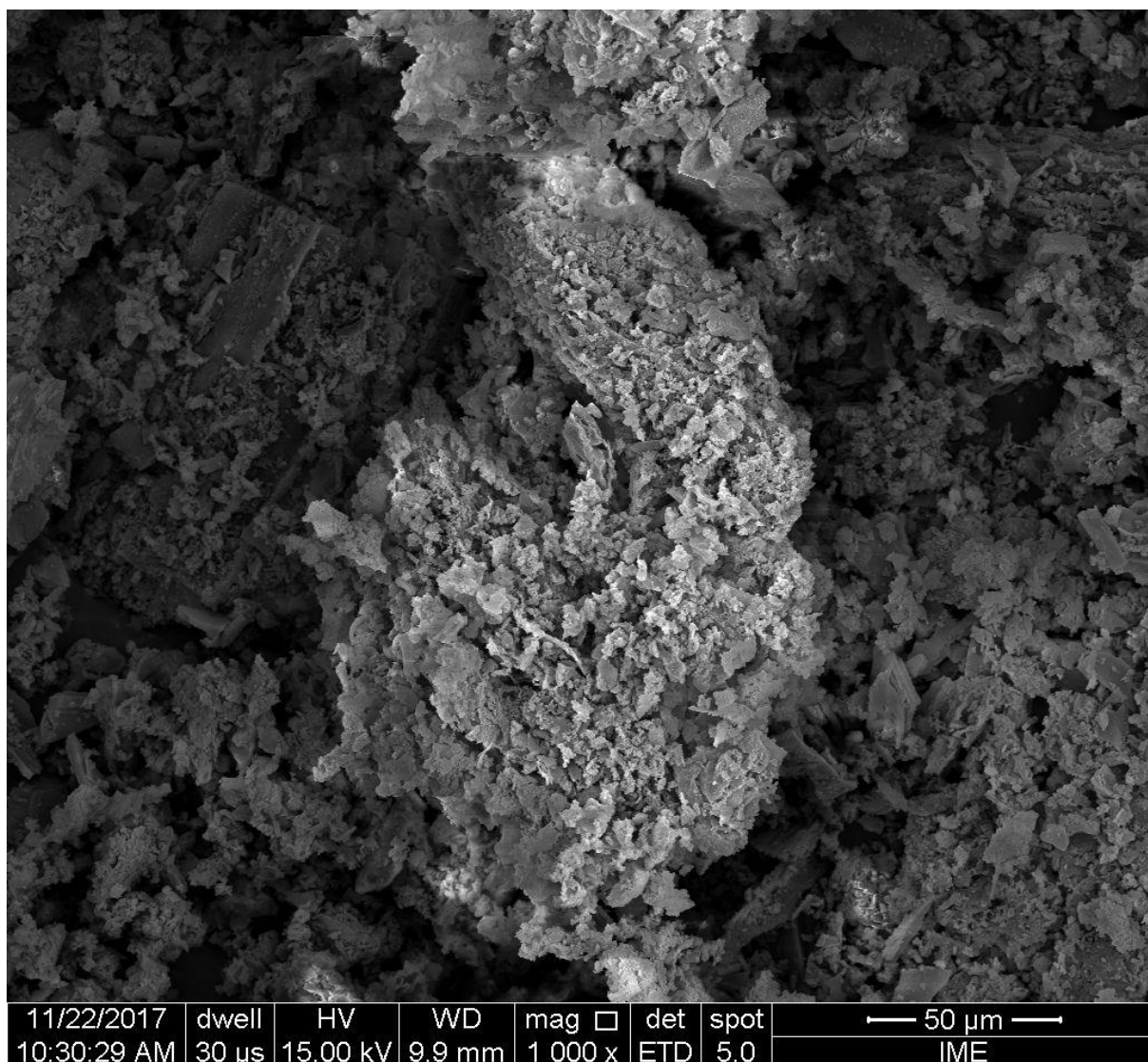


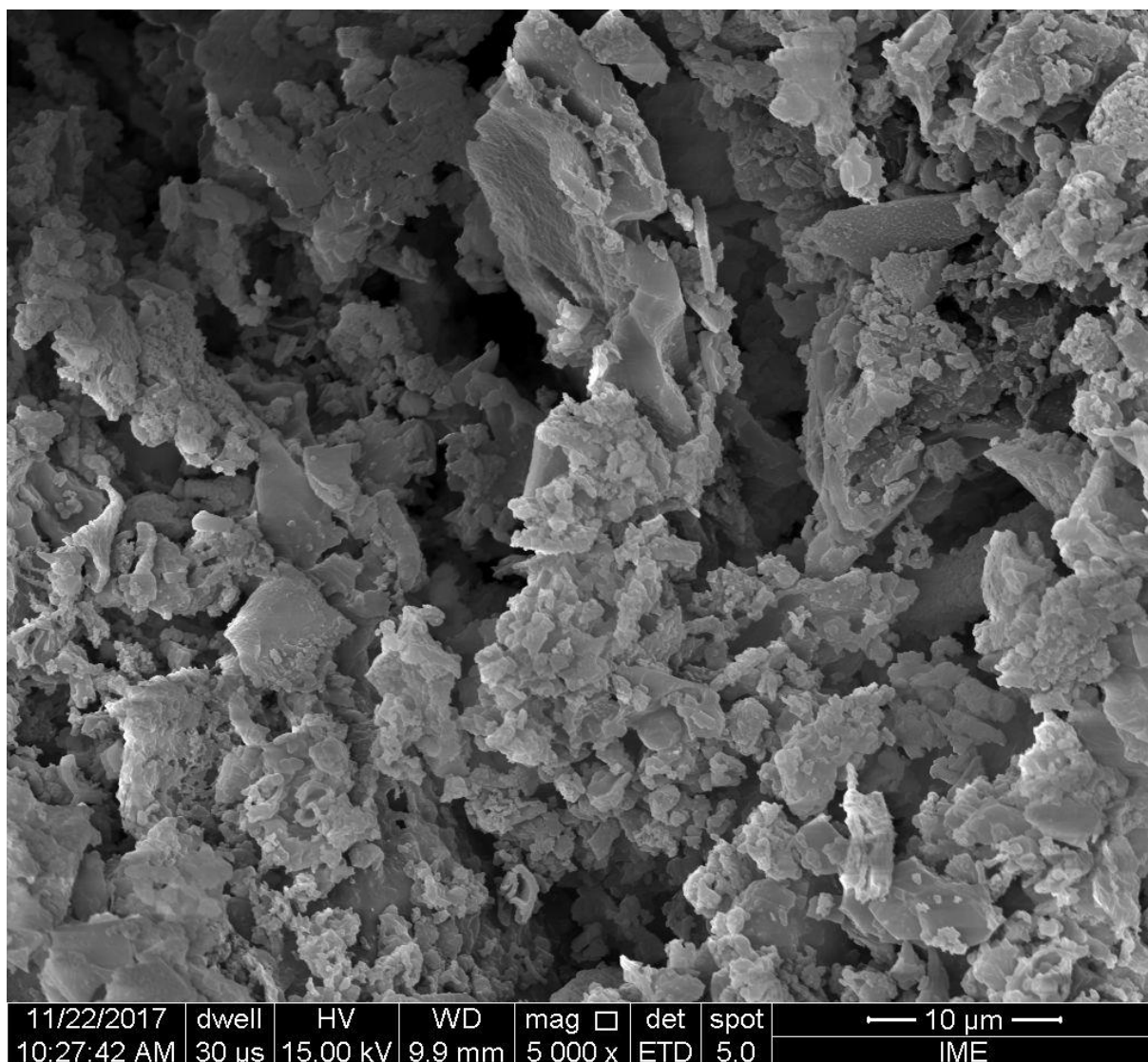
**Figure S1.** SEM of hydro-char obtained after hydrothermal processing of corn Stover at 250 °C (Mag: 1000×), 60 min, and biomass-to-H<sub>2</sub>O ratio of 1:10, using a pilot scale stirred tank reactor of 18.75 L.



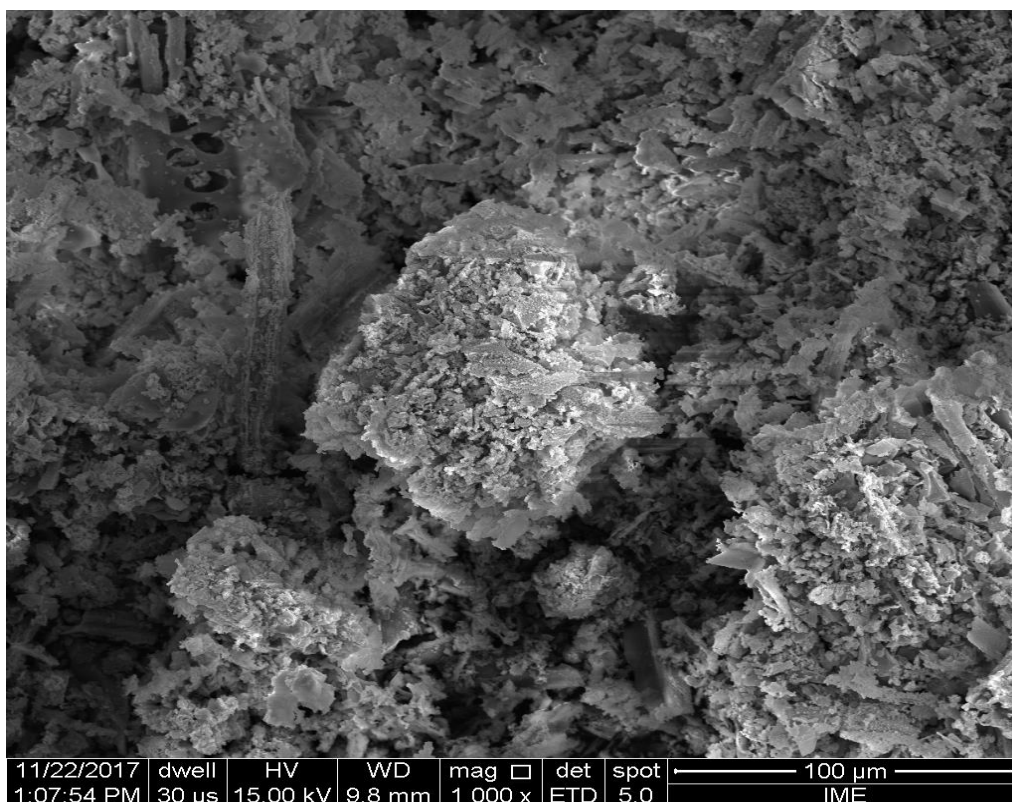
**Figure S2.** SEM of hydro-char obtained after hydrothermal processing of corn Stover at 250 °C (Mag: 5000×), 60 min, and biomass-to-H<sub>2</sub>O ratio of 1:10, using a pilot scale stirred tank reactor of 18.75 L.



**Figure S3.** SEM of hydro-char obtained after hydrothermal processing of corn Stover at 250 °C (Mag: 1000 $\times$ ), 120 min, and biomass-to-H<sub>2</sub>O ratio of 1:10, using a pilot scale stirred tank reactor of 18.75 L.

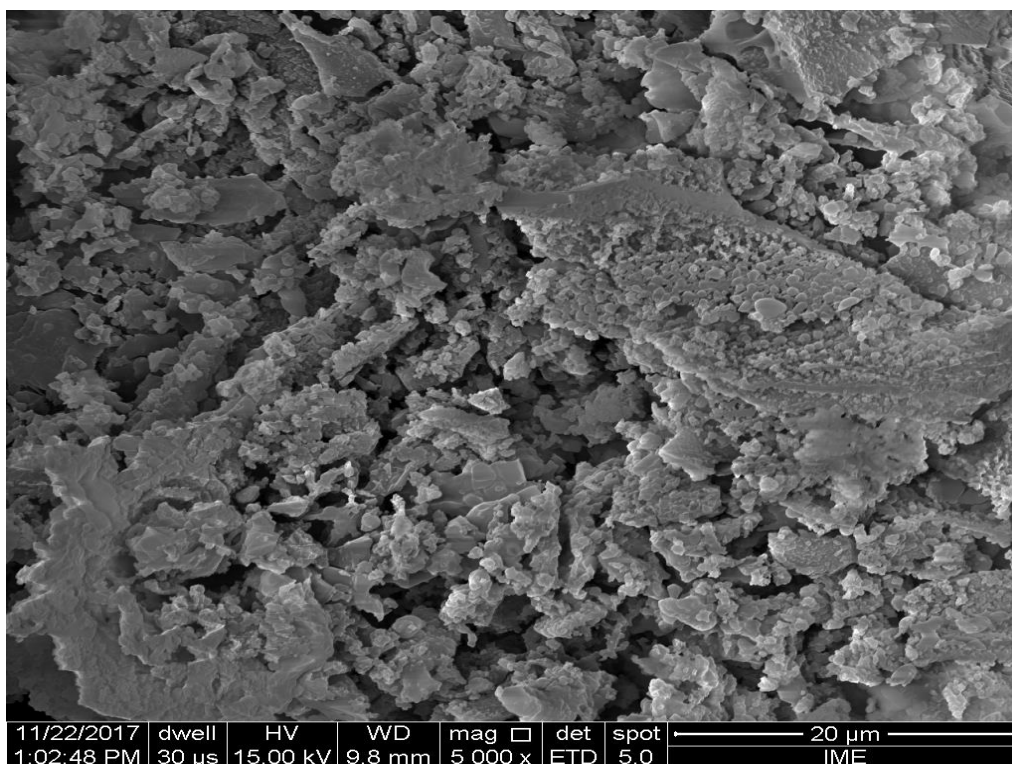


**Figure S4.** SEM of hydro-char obtained after hydrothermal processing of corn Stover at 250 °C (Mag: 5000 $\times$ ), 120 min, and biomass-to-H<sub>2</sub>O ratio of 1:10, using a pilot scale stirred tank reactor of 18.75 L.

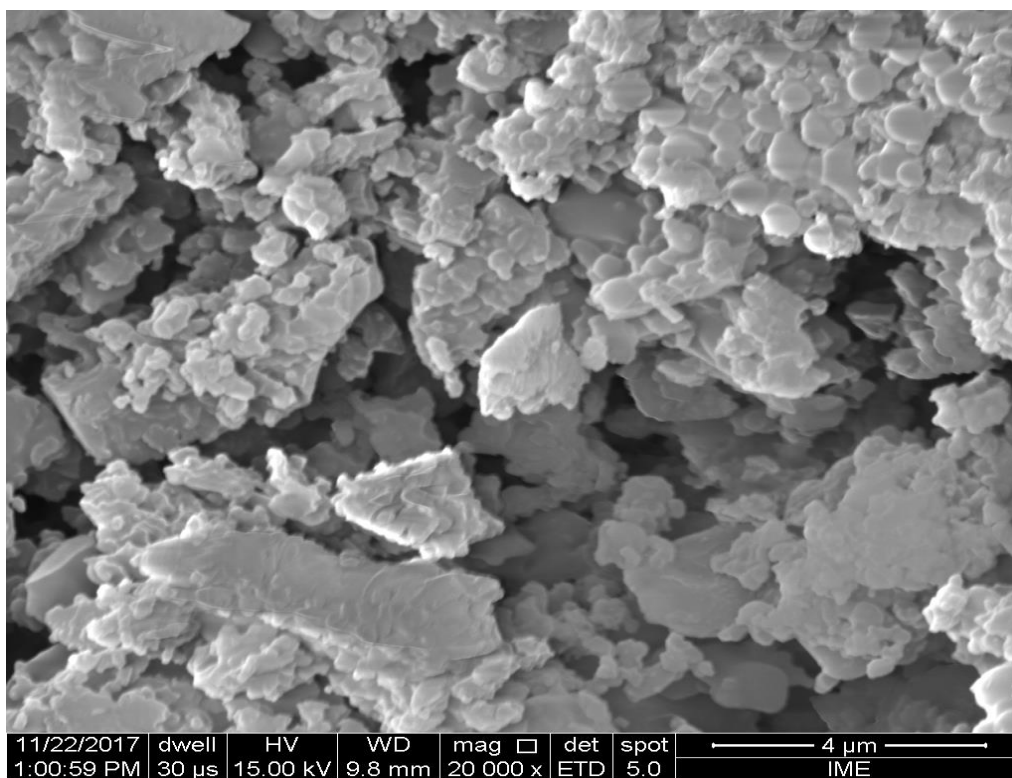


**Figure S5.** SEM of corn Stover after hydrothermal processing at 250 °C, 240 m, and biomass to-water ratio of 1:10, using a pilot scale stirred tank reactor of 18.75 L (Mag: 1000×).

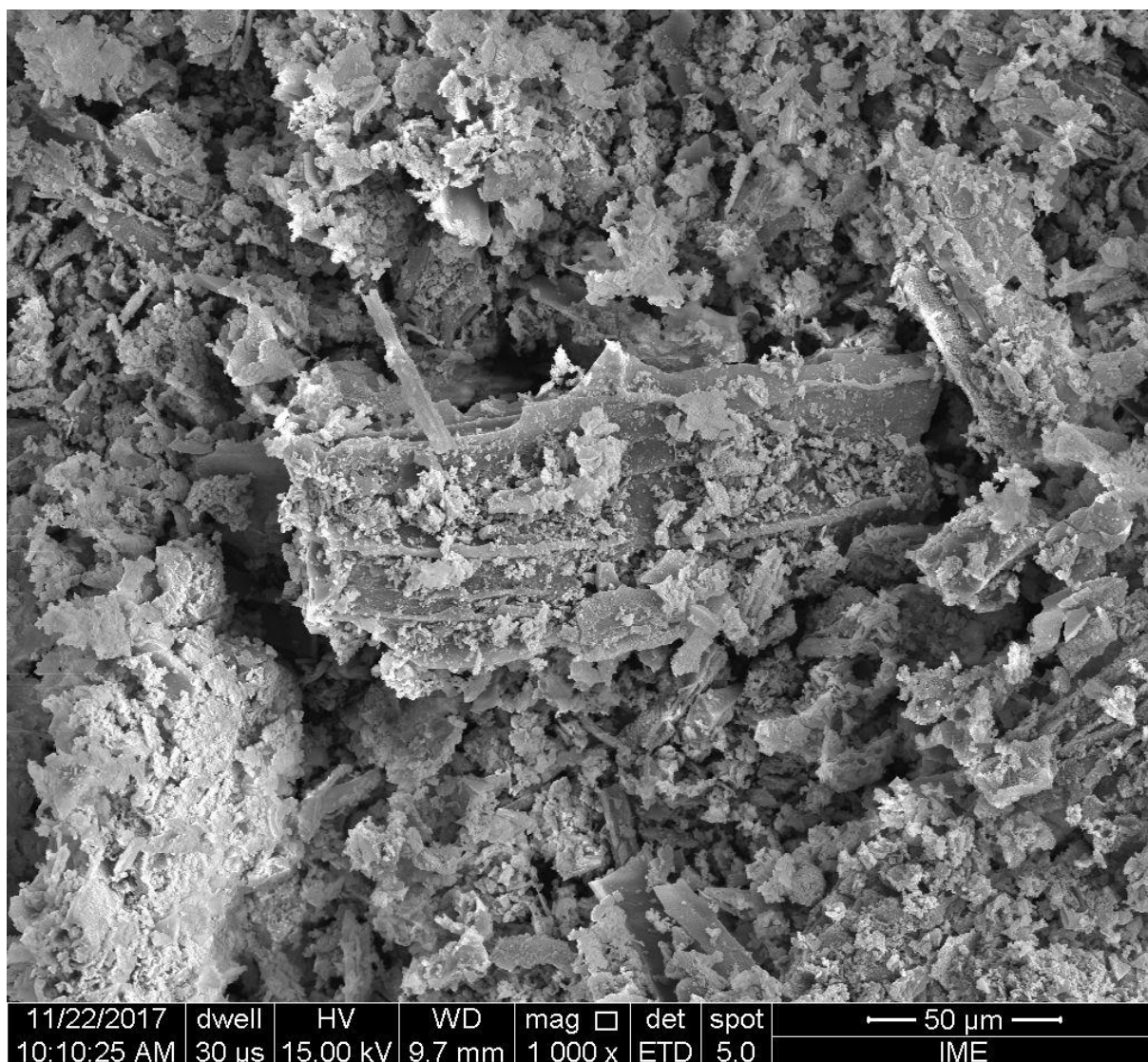




**Figure S6.** SEM of hydro-char obtained after hydrothermal processing of corn Stover at 250 °C (Mag: 5000×), 240 m, and biomass to-water ratio of 1:10, using a pilot scale stirred tank reactor of 18.75 L.

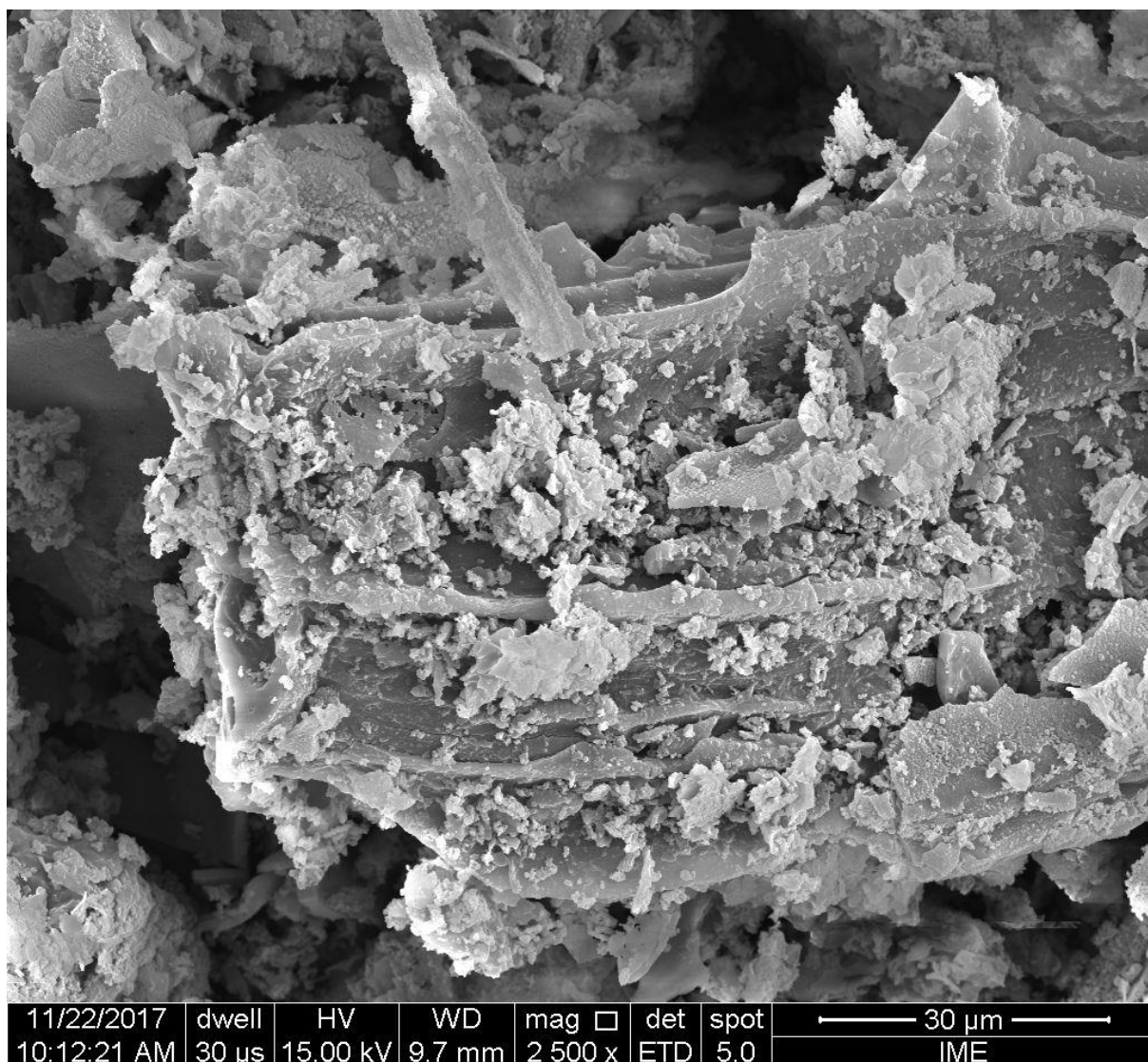


**Figure S7.** SEM of hydro-char obtained after hydrothermal processing of corn Stover at 250 °C (Mag: 20,000 $\times$ ), 240 min, and biomass-to-H<sub>2</sub>O ratio of 1:10, using a pilot scale stirred tank reactor of 18.75 L.

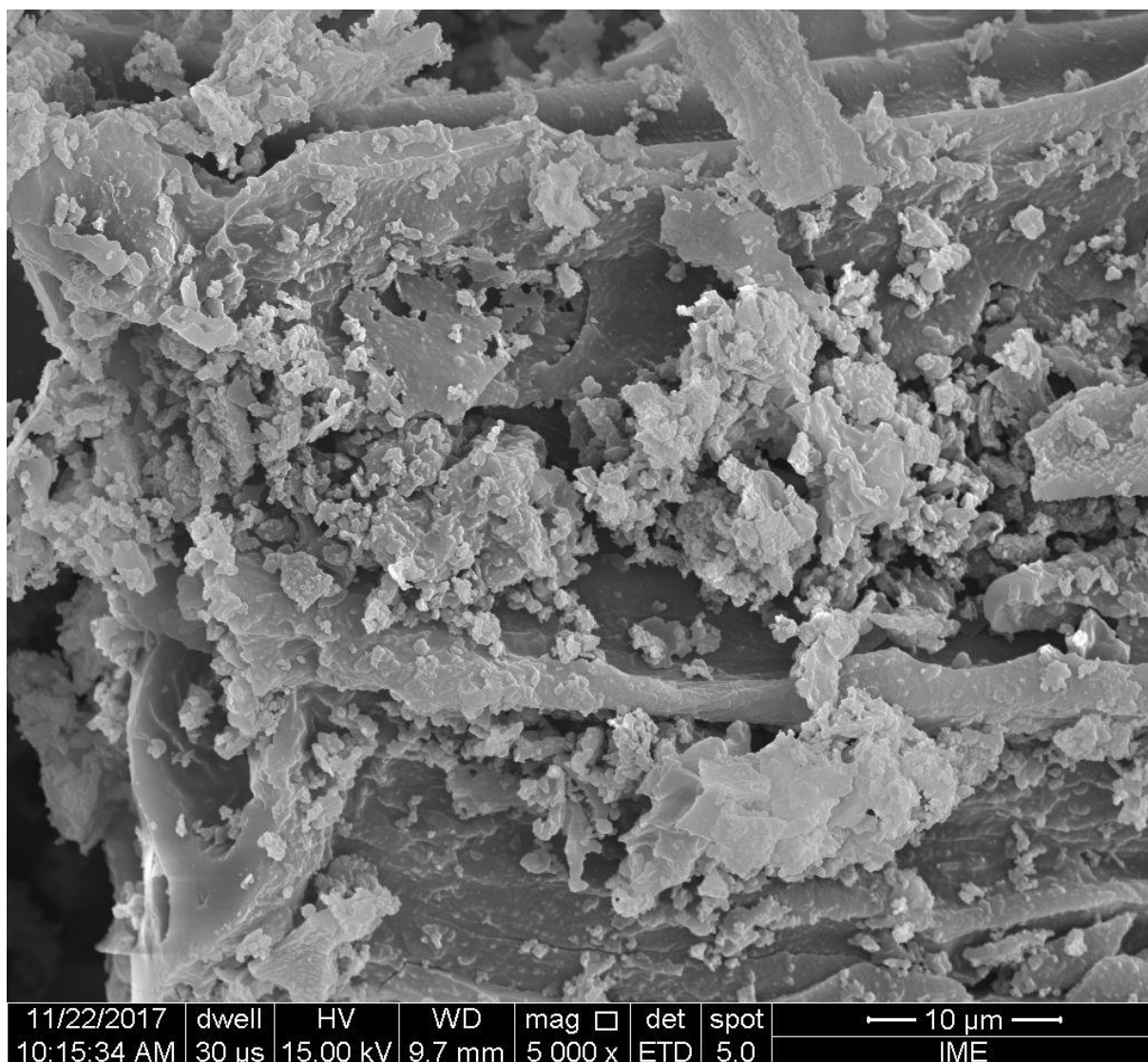


**Figure S8.** SEM of hydro-char obtained after hydrothermal processing of corn Stover at 250 °C (Mag: 1000 $\times$ ), 240 min, and biomass-to-H<sub>2</sub>O ratio of 1:15, using a pilot scale stirred tank reactor of 18.75 L.

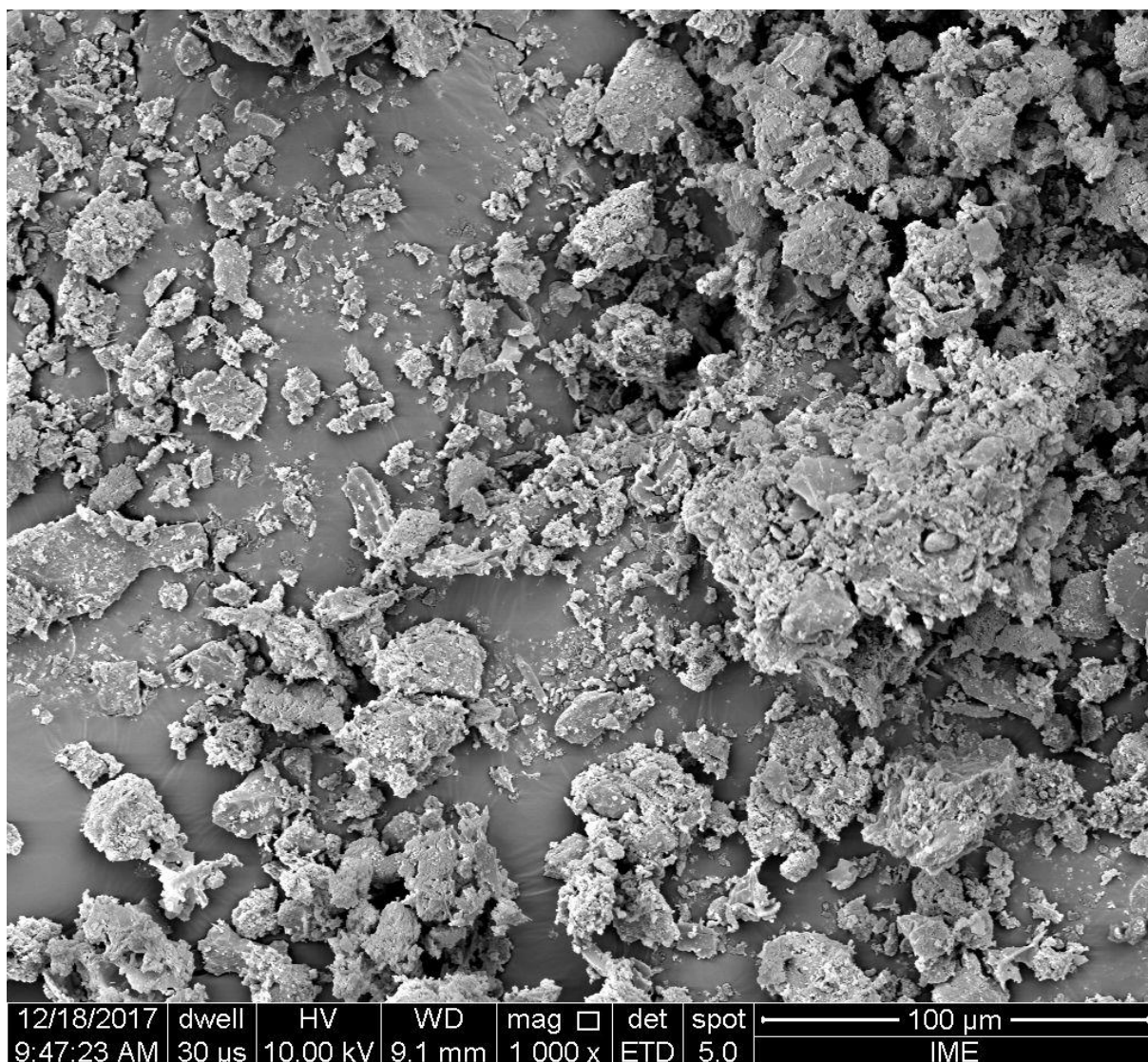




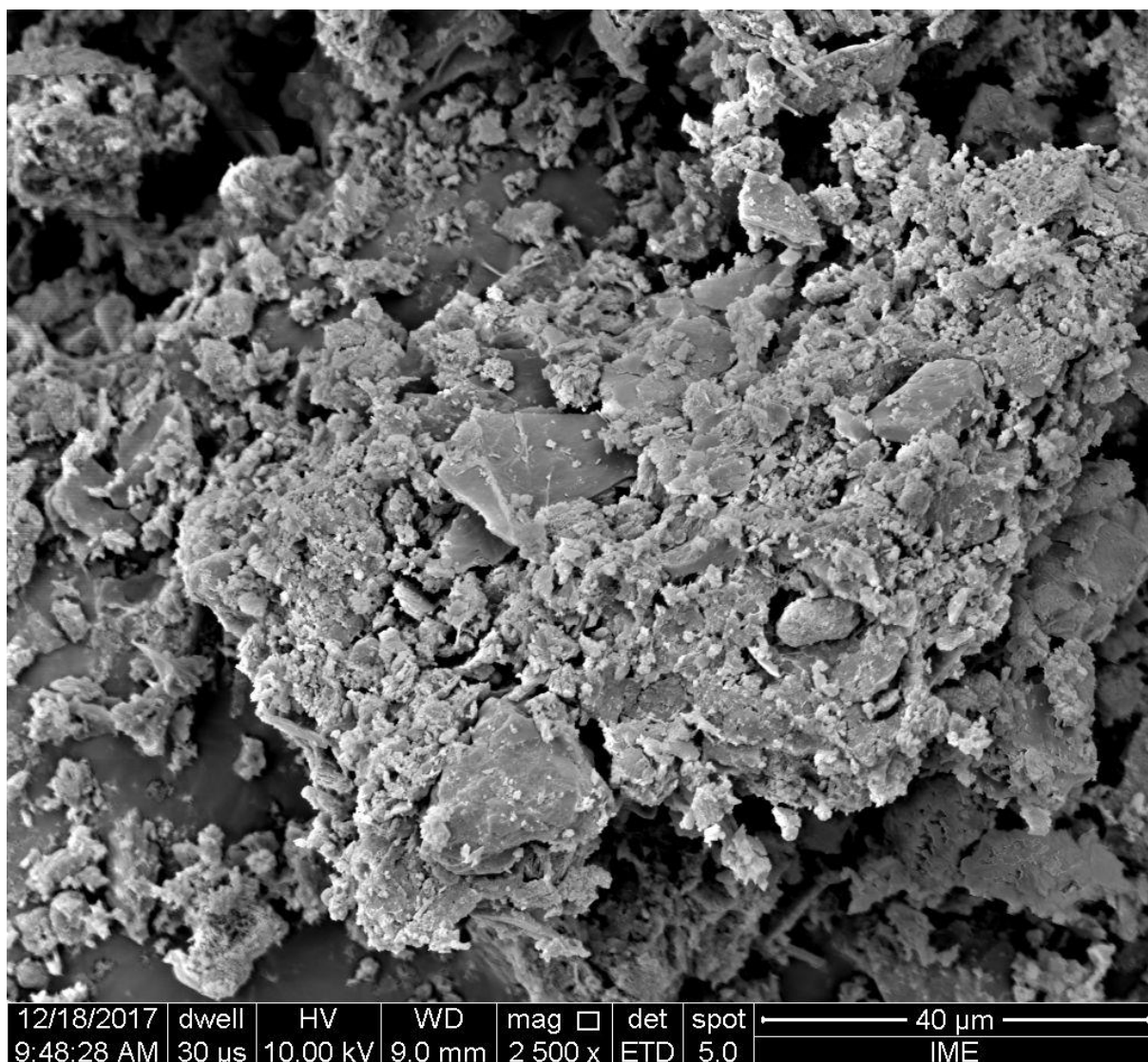
**Figure S9.** SEM of hydro-char obtained after hydrothermal processing of corn Stover at 250 °C (Mag: 2500×), 240 min, and biomass-to-H<sub>2</sub>O ratio of 1:15, using a pilot scale stirred tank reactor of 18.75 L.



**Figure S10.** SEM of hydro-char obtained after hydrothermal processing of corn Stover at 250 °C (Mag: 5000 $\times$ ), 240 min, and biomass-to-H<sub>2</sub>O ratio of 1:15, using a pilot scale stirred tank reactor of 18.75 L.

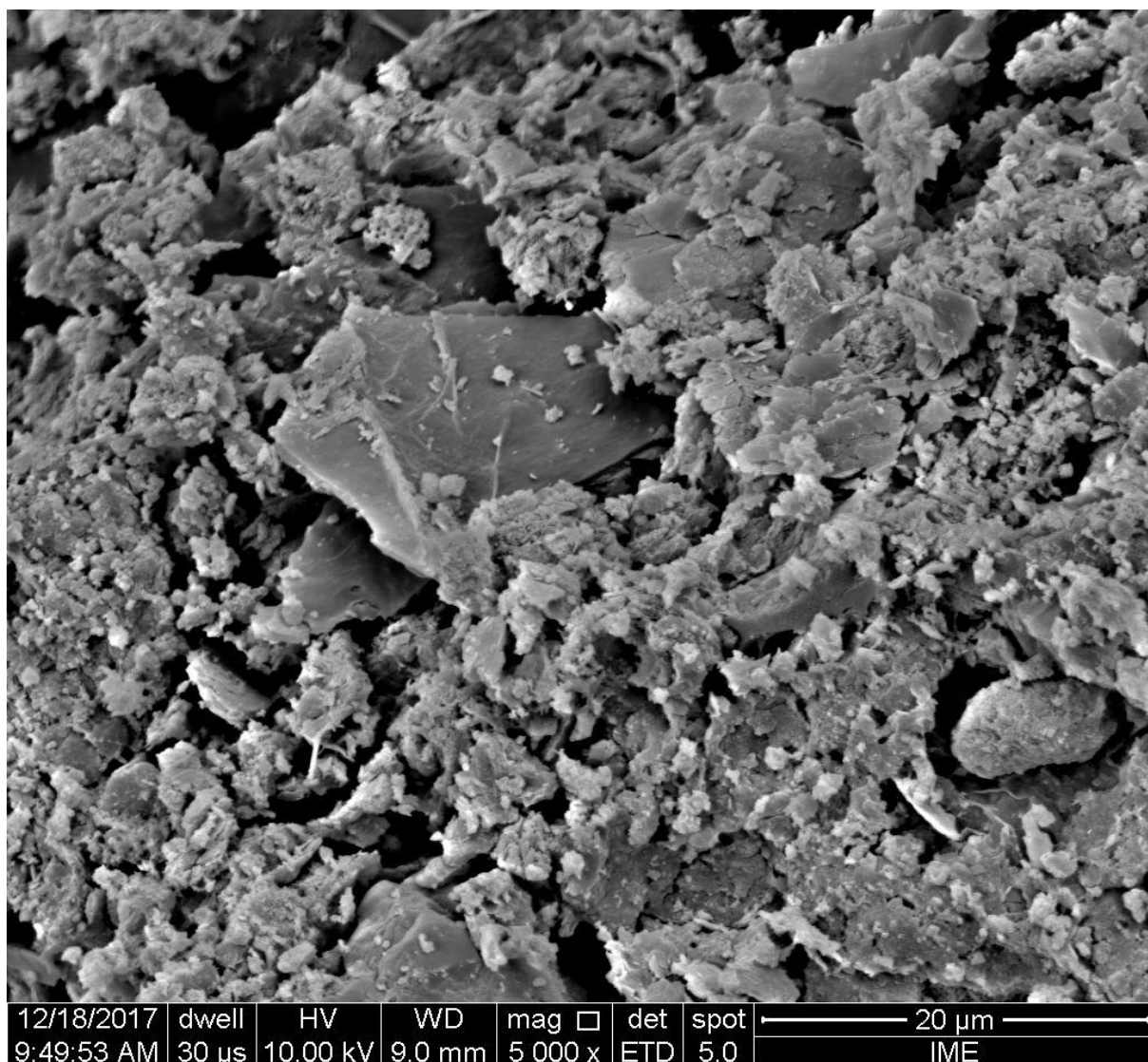


**Figure S11.** SEM of hydro-char obtained after hydrothermal processing of corn Stover at 250 °C (Mag: 1000×), 240 min, and biomass-to-water ratio of 1:20, using a pilot scale stirred tank reactor of 18.75 L.



**Figure S12.** SEM of hydro-char obtained after hydrothermal processing of corn Stover at 250 °C (Mag: 2500×), 240 min, and biomass-to-water ratio of 1:20, using a pilot scale stirred tank reactor of 18.75 L.





**Figure S13.** SEM of hydro-char obtained after hydrothermal processing of corn Stover at 250 °C (Mag: 5000×), 240 min, and biomass-to-water ratio of 1:20, using a pilot scale stirred tank reactor of 18.75 L.