



**Figure S3.** Plots of O:C vs. mass and H:C vs. mass for BSF0 (a,b) and BSF40 (c,d) SOM samples. Distributions of O:C and H:C as functions of mass for the BSF reveal a positive correlation between O:C and mass and a simultaneous negative correlation between H:C and mass above  $m/z$  600 in the BSF.