Curtis Seto

Prof. Mekonnen

Utilization of lignin for biocarbon production

Lignin is an abundant natural biopolymer that has long been the subject of many valorization attempts. Lignin's high carbon and aromatic content presents itself as an attractive precursor to carbonized materials, from which it can potentially substitute petroleum-sourced carbon blacks. In this work, a sonication and freeze-drying treatments were conducted to alter the structure of the dried lignin, prior to carbonization into char. The characterization of the untreated precursor and the freeze-dried lignin was performed, with respect to the change in morphology and functionality.