Conference Proceedings – Volume 864, Issue 1, IOP Conference Series: Materials Science and Engineering, Page 1 – 7

Effect on Product Yield and Tar Composition through Co-Gasification of Pretreated Palm Kernel Shell and Mukah Balingian Coal

Abstract

In this study, co-gasification of palm kernel shell (PKS) and Mukah Balingian (MB) coal was carried out in a fixed bed reactor. The effect of sample pretreatment of both samples were explored via co-gasification towards product yields and tar composition. Results indicated that, pretreated blending samples produced higher gas yield with lower tar and char yield than the untreated blending samples. This was due to low moisture and oxygenated components of the pretreated samples prior to co-gasification. The tar composition of the pretreated blending samples showed increasing in the aromatic and aliphatic alkane, whereas, noticeable decreasing of phenol and carbonyl. Thus, pretreated of PKS and MB coal have prominence influence on the distribution of product yields and tar composition through co-gasification.