

Adsorption of Bisphenol A on KOH-activated tyre pyrolysis char

R. Acosta, D. Nabarlatz, A. Sánchez-Sánchez, J. Jagiello, P. Gadonneix, A. Celzard, V. Fierro

Supplementary information

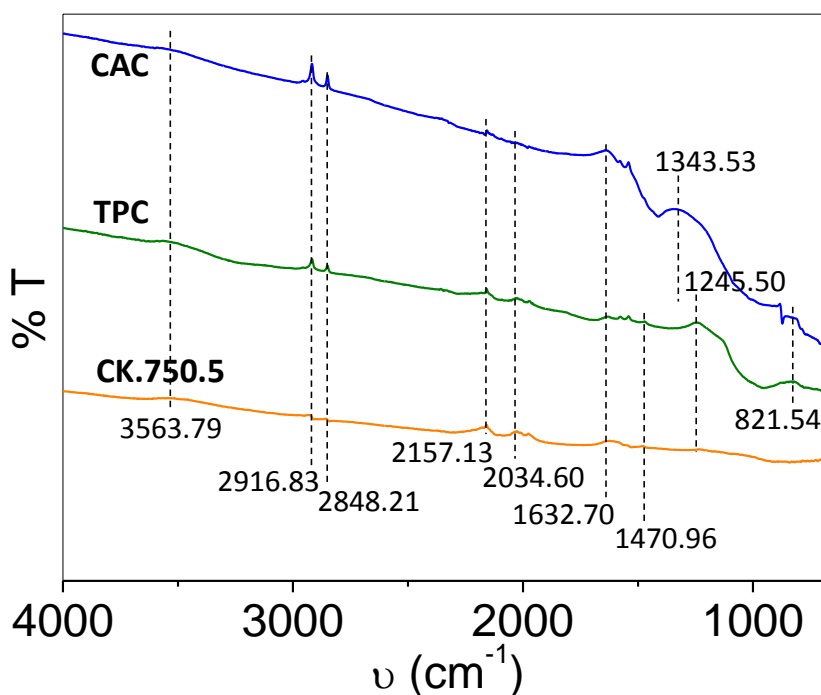
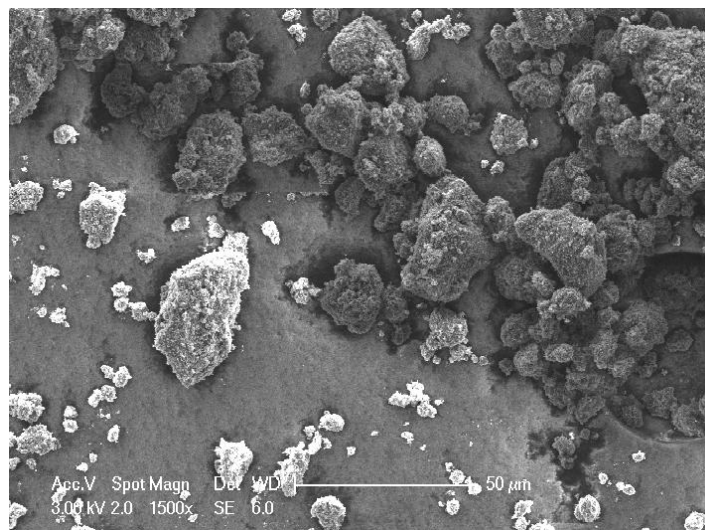


Figure S1 FTIR spectra for TPC, CAC and CK.750.5

The FT-IR spectra presented bands between 4000 and 650 cm^{-1} that can be attributed to different chemical bond vibrations. The broad bands located between 3563.79 and 2916 cm^{-1} are related to stretching of O–H bonds, asymmetrical and symmetrical stretching of $\text{C}_{\text{sp}2}$ –H bonds, stretching of C_{Ar} –H and asymmetrical stretching of C–H in methylene groups. The bands located between 2916.83 and 2848.21 cm^{-1} are assigned to symmetrical stretching of $\text{C}_{\text{sp}3}$ –H bonds and asymmetrical stretching of C–H in methylene groups. The bands found between 2157 and 1632.70 cm^{-1} can be assigned to stretching of C=C and C=O bonds, and those between 1632.70 and 1470.96 cm^{-1} to stretching of C–O bonds in –COOH groups, C=C stretching and C–H bending. The intense band located at 1632.70–1343.53 cm^{-1} , together with that at 3563.79 and 2916 cm^{-1} , found for TPC and CAC may indicate the presence of abundant –COOH and alcohol groups. The bands appearing in the range of 1470.96–1245.50 cm^{-1} can be related to C–H bending and C–C stretching vibrations, while those appearing below 1245.50 cm^{-1} indicate the presence of C–C in CH_2 groups and carbon

linked to oxygen in C–O–C epoxy and C–O containing-groups. TPC and CAC exhibited intense bands in the region of $1245.50\text{--}821.54\text{ cm}^{-1}$, which agrees with the presence of –COOH, alcohol and/or epoxy groups in these samples

CK.750.5



CAC

