

Figure SM1.

The XRD patterns of the calcined and used metal-modified diluted ZSM-5 catalysts and the corresponding pure metal oxide phases are shown in Figure S1. Figure S1 additionally shows the XRD patterns of the calcined Co/ZSM-5/A catalyst before and after the biomass pyrolysis tests in bench scale (Co_reactB) and pilot scale (Co_reactPP), while for comparison reasons the recirculated sample (after regeneration) in the pilot plant is also included (Co_equilPP). Due to the very low peak height of the Co-related peaks in all the catalysts after the biomass pyrolysis tests (Co_reactB, Co_reactPP and Co_equilPP), calculations of the mean particle size using the Scherrer method was not feasible.

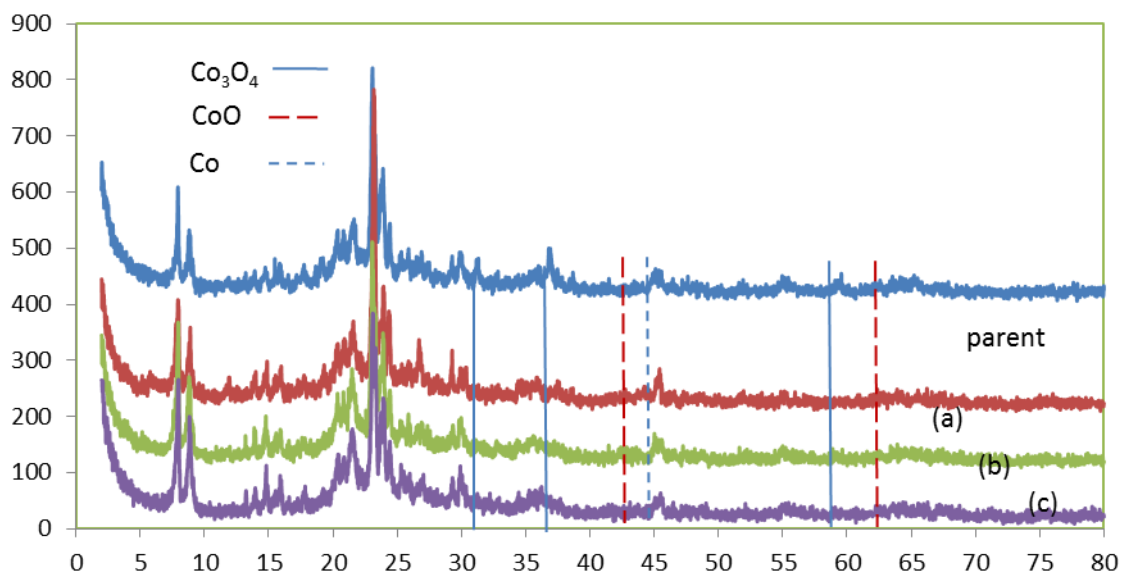


Figure SM1. X-Ray Diffraction patterns of Co/ZSM-5/A catalysts: fresh (parent) and used (reacted) samples: (a) Co_reactB, (b) Co_reactPP, (c) Co_equilPP.