

Supporting Info File

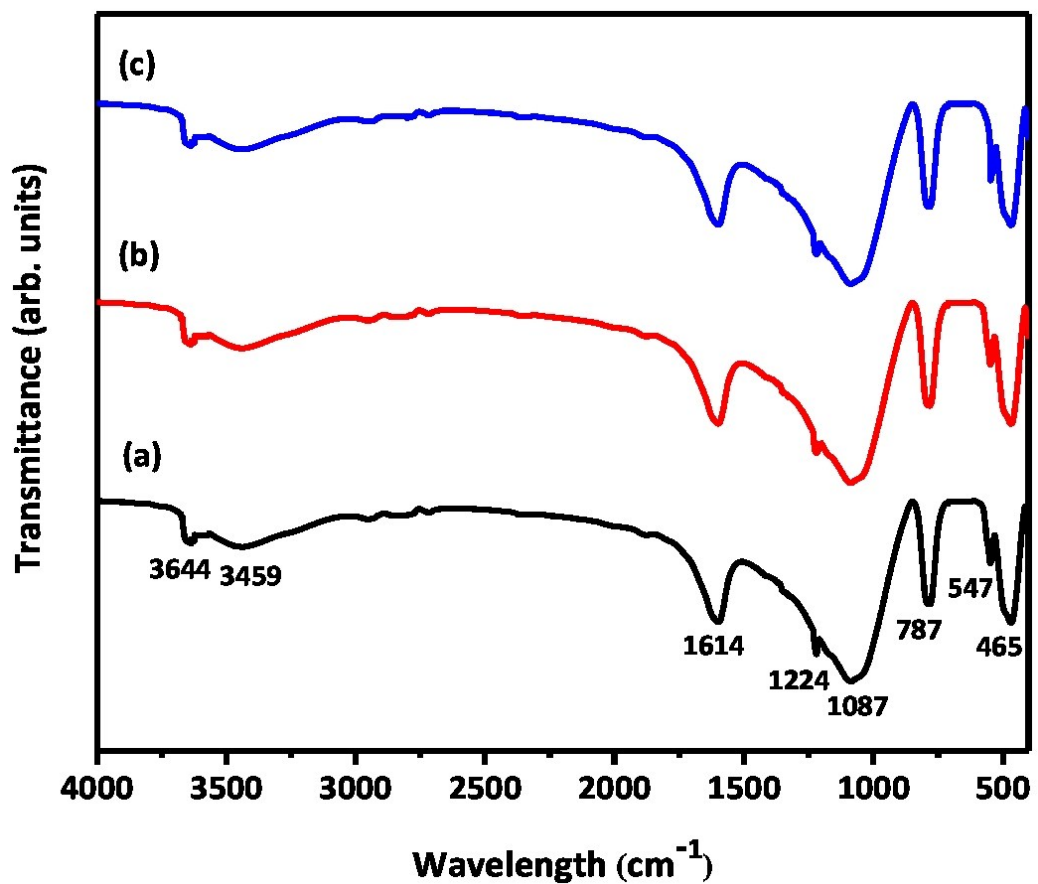


Fig. S1

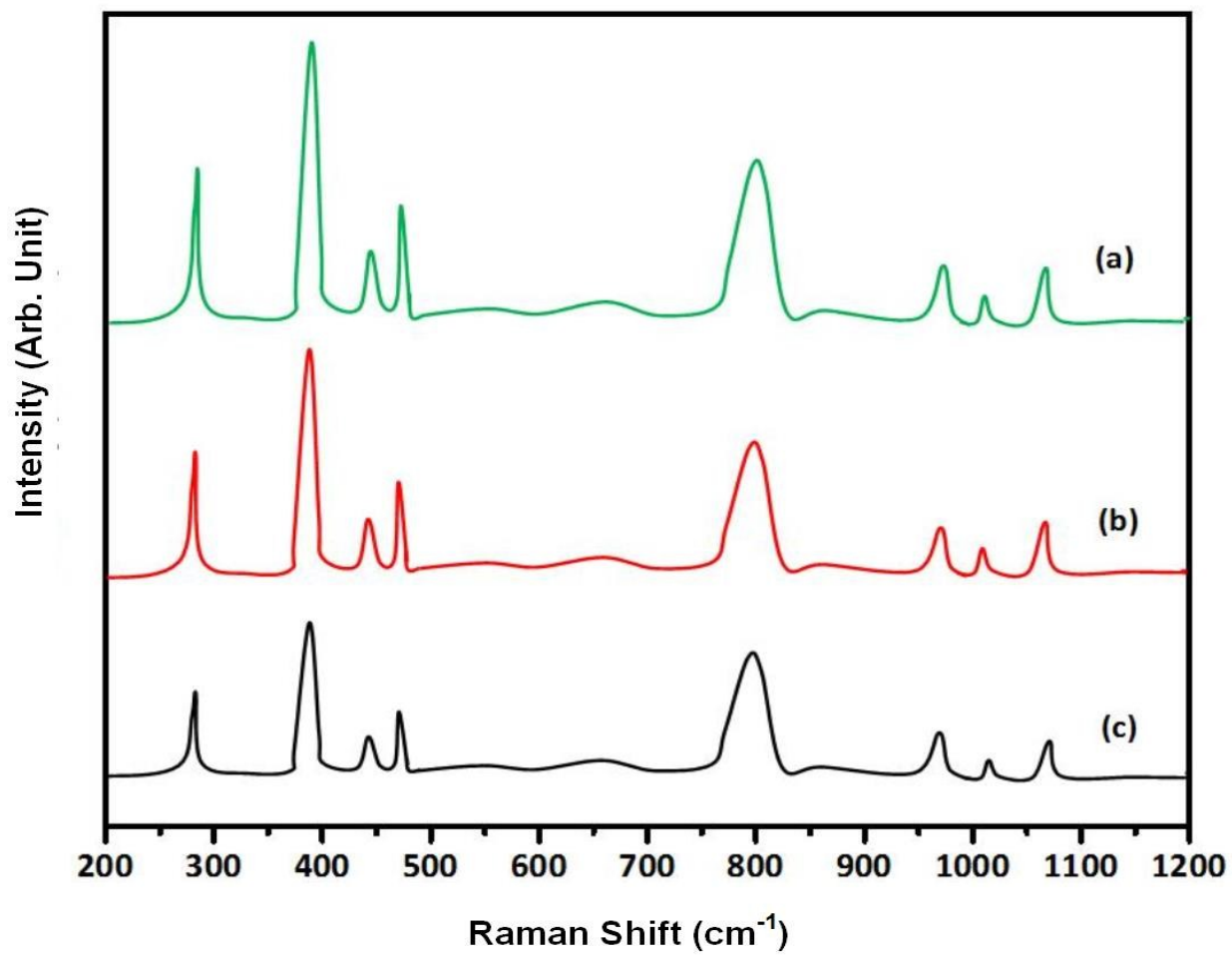


Fig. S2

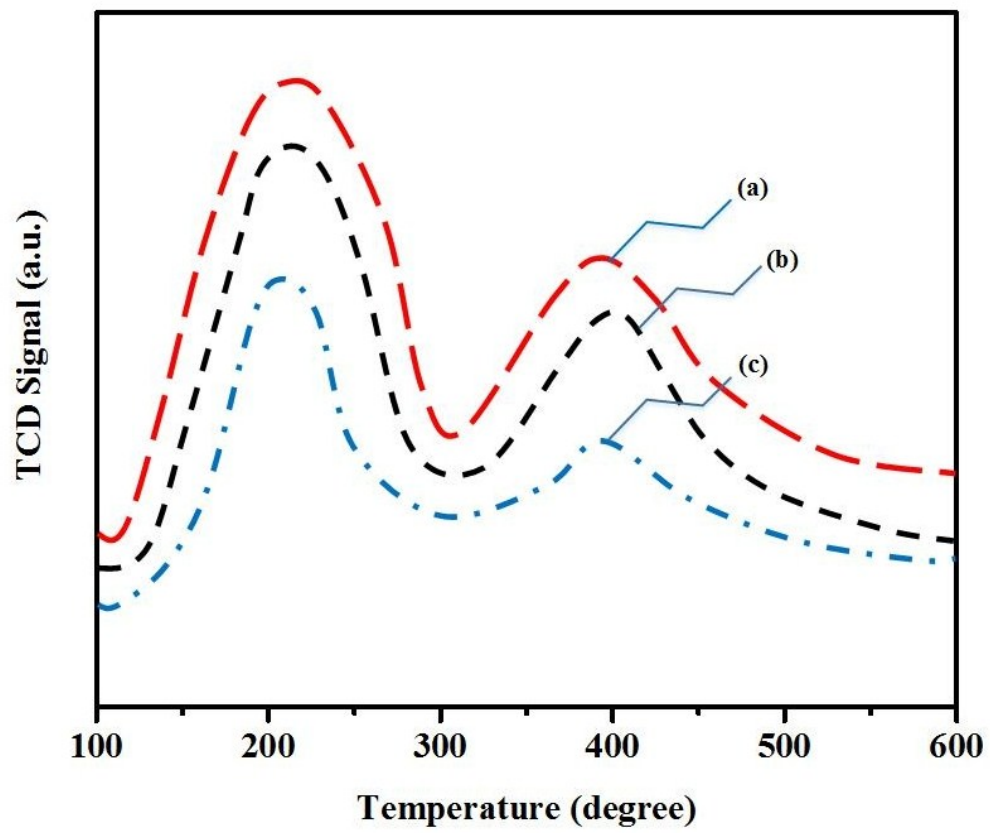


Fig. S3

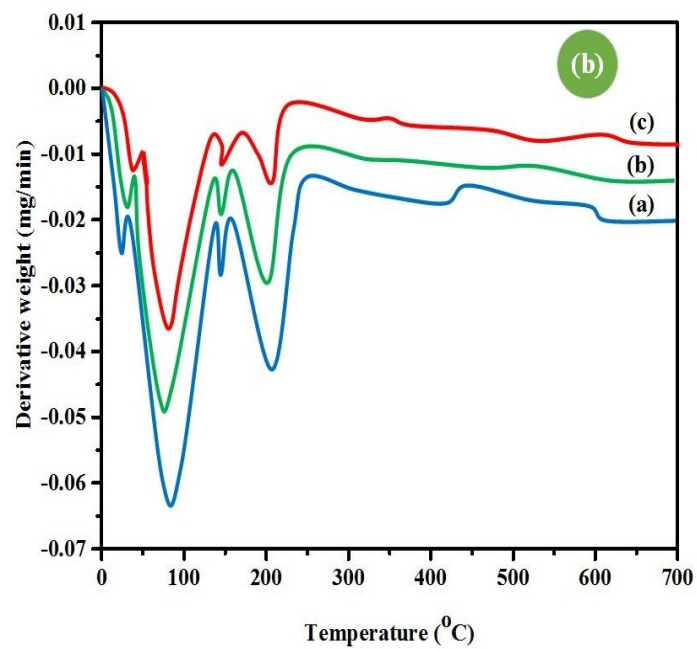
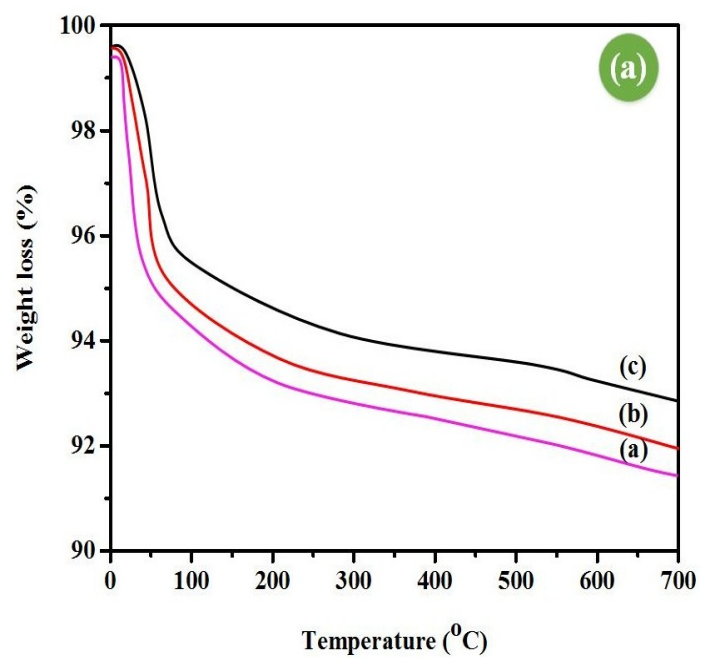


Fig. S4

Supporting Info file captions

Fig. S1 Infra-red spectral studies of hierarchical ZSM-5 zeolites (a) ZSM-5-RHA, (b) ZSM-5-RHuA, and (c) ZSM-5-RSA.

Fig. S2 Raman spectrum of hierarchical ZSM-5 zeolites (a) ZSM-5-RHA, (b) ZSM-5-RHuA, and (c) ZSM-5-RSA.

Fig. S3 NH₃-TPD analysis of hierarchical of ZSM-5 zeolites (a) ZSM-5-RHA, (b) ZSM-5-RHuA, and (c) ZSM-5-RSA.

Fig. S4 (a-b) TGA/DTA study of hierarchical of ZSM-5 zeolites (a) ZSM-5-RHA, (b) ZSM-5-RHuA, and (c) ZSM-5-RSA.