

Investigation into the 1, 3-butadiene and other bulk chemicals formation from bioethanol over Mg-Al catalysts

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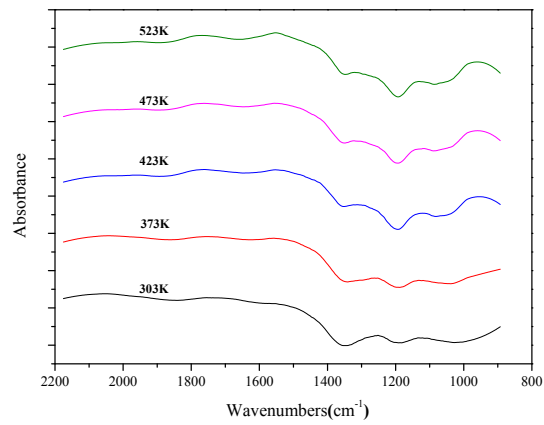
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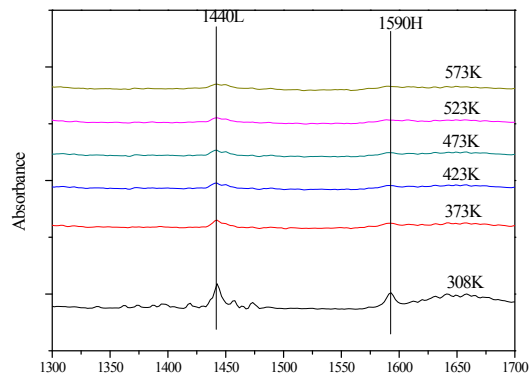
(1) Pyridine adsorbed FTIR was tested without vacuum-treatment, that is, remaining water physical adsorbed on the surface of Mg-Al catalysts.

(2) After the vacuum-treatment, some content water was injected to the catalyst systems, then pyridine adsorbed test was carried out.

In the first scheme, no peaks can be detected. The reason may be that no pyridine adsorbed site was exposed for the catalyst sample without vacuum-treatment. While the second scheme proved that the acid sites within the Mg-Al solids were not water tolerant solid-state acid.



(1)



(2)

As shown in the following figure, the MgO samples content of 60wt%, 80wt% and pure MgO have also been studied. The characteristic diffraction peaks of MgO has been detected when the content increase to 60wt%. That is, the preparation methods used in this work did not make the materials periclase.

