

4. Conclusion

We have synthesized a sulfonated carbon catalyst by chemical activation followed by the thermal treatment consisting of a hybrid structure containing the amorphous carbon with nanographite embedded in it. It was used for the C-N coupling reaction leading to the pyrrole nucleus formation by two different strategies. In the first strategy, the multicomponent reaction between benzoin, 2,4-dione and ammonium acetate was used for the synthesis of the tetrasubstituted pyrrole ring in the presence of a carbon catalyst. Secondly, the reaction between 2,5-dicarbonyl compound with amines in the presence of the same catalyst was used for making another series of N-substituted pyrrole derivatives. The reaction seems to proceed by the involvement of acidic functional groups, which probably helps in the activation of carbonyl moiety.

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