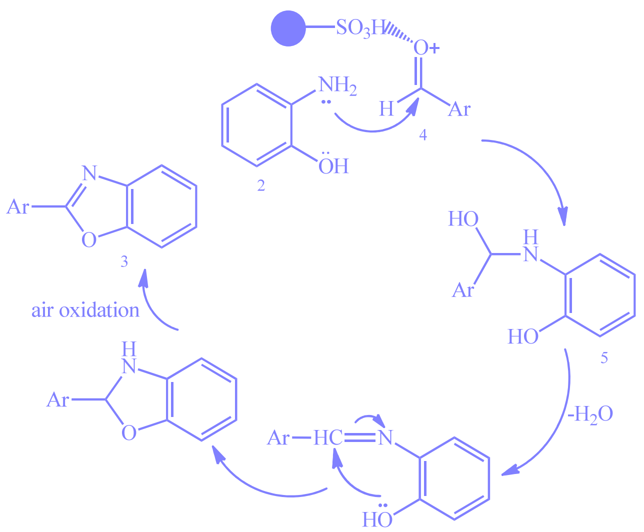


**Scheme 3.** Plausible mechanism for the synthesis of benzoxazole derivatives.

To study the reusability of the MNP@PPC-$SO_3H$, the recovered catalyst from the model reaction was washed with EtOH and dried in an oven at 110 °C for 2 h. The recovered catalyst was reused in the same reaction four times. The reaction proceeded smoothly with a yield of 82– 85%. Although a serious problem of solid support acid catalysts is migration of some of the active sites from the solid support to the liquid phase during the reaction process, the obtained results indicate that the catalyst does not have an appreciable change in its activity and shows only a slight decrease in the yield after the first run.

## 4. Conclusions

The present work describes [$Fe_3O_4$@$SiO_2$@Am-PPC-$SO_3H$] [$HSO_4$] as a promising nano-catalyst for the synthesis of benzoxazoles under mild conditions in high yields. This magnetic catalyst is separated by an external magnet. In addition, the catalyst is reusable for several cycles without any significant loss in catalytic activity. Further applications of this catalyst are under investigation in our laboratory.

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