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**ABSTRACT**

In this study, silica was extracted from rice husk via washing rice husk many time with distilled water, and then treated with 1.0 M of Nitric acid; finally, it was burned in an oven at 800 oC. The ash was converted to sodium silicate and reacted with chloropropyltriethoxysilane to form RHACCl. Imidazole with *p*-xylylene dichloride was loaded onto RHACCl in the form of *p*-xylylbisimidazole to form solid catalyst donated RHAPrIM. Various analytical techniques were well characterize the catalyst including CHN analysis, TGA/DTA, FT-IR, N2-adsorption desorption study, 29Si &13C MAS NMR spectra TEM, SEM and EDX. According to the CHN results, it was noticed that the carbon percentage increased from (11.70%) in RHACCl to (16.704%) in RHAPrIM; also the results were showed a present of nitrogen in RHAPrIM which was not present in RHACCl. Silicon solid-state nuclear magnetic resonance showed Q4, Q3, T3, and T2 chemical shifts at expected position. 13C spectrum showed different peaks at different chemical shifts related to the carbon structures of the organic moieties. Thermal analysis showed that the catalyst could be used safely up to 277 ºC. TEM images of RHAPrIM showed regularly shaped particles with an estimated size 5 nm. Some particle seems to be smooth in shape, while the others showed a porous shape. The catalytic activity of RHAPrIM was examined in–situ preparation of nitrous acid which was used in the preparation of diazonium salt. The RHAPrIM was used to produce nitrous acid via it’s reaction with nitrite ions. Nitrous acid is the key start materials for dyes preparation via diazonium salt. Coupling reaction of aromatic compounds was carried out with a diazonium salt to yield a mono azo dye. All dyes were characterized by elemental analysis, FT- IR, and UV–Visible spectra. Both calculated and found results of elemental analysis of prepared azo compound were match with each other. The catalyst was stable and regenerated within a simple experimental procedure.

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