Application of Fe3O4@Silica Sulfuric Acid as a Magnetic Nanocatalyst for the Synthesis of Rhodamine Derivatives

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Abstract:

- A green protocol for the synthesis of novel rhodamine derivatives employing a highly efficient and recyclable magnetic Fe3O4@silica sulfuric acid nanocatalyst in greener solvent ethylene glycol is demonstrated.
- In comparison with the known methods for the synthesis of rhodamines, our method offers several benefits such as mild reaction conditions, short reaction time (5 h), and high yield (up to 79%) of the products.
- Interestingly, the magnetically separable nanocatalyst was reused at least five times without significant loss in catalytic activity.
- All the novel derivatives are well characterized by 1HNMR, 13CNMR, and mass spectrometry.

Figure/Scheme (if any):

References and Notes:

1. Shailesh N. Vajekar[b] and Ganapati S. Shankarling*[a],” Application of Fe3O4@Silica Sulfuric Acid as a Magnetic Nanocatalyst for the Synthesis of Rhodamine Derivatives”, ChemistrySelect 2018, 3, 5848– 5852 doi:- 10.1002/slct.201801127