

Silica Immobilized Brønsted-Lewis Acidic Ionic Liquid : Heterogeneous catalyst for Condensation-Aromatization in the Synthesis of 2-(4-nitrophenyl)-1H-benzimidazole by cooperative catalysis

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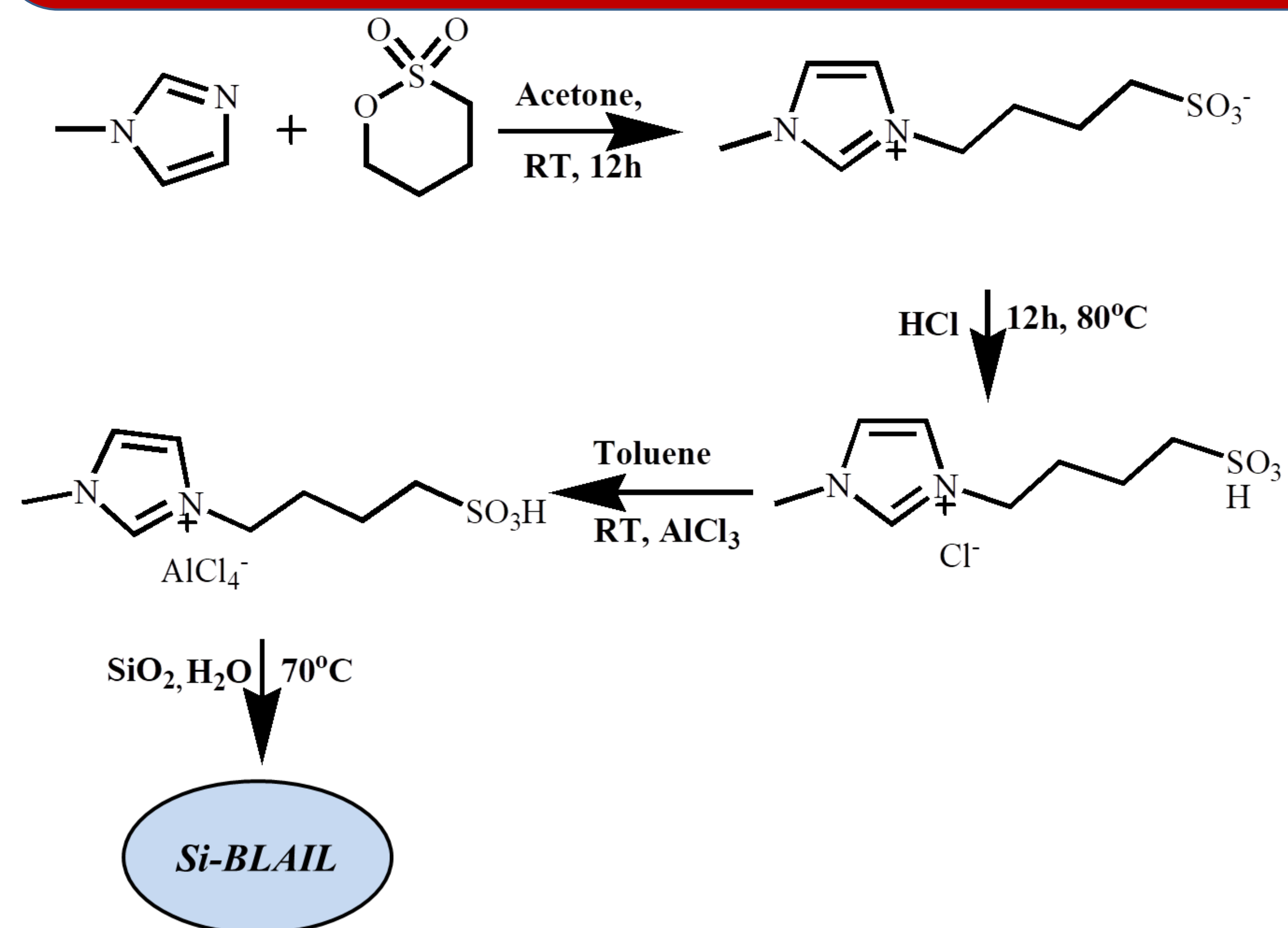
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HIGHLIGHTS

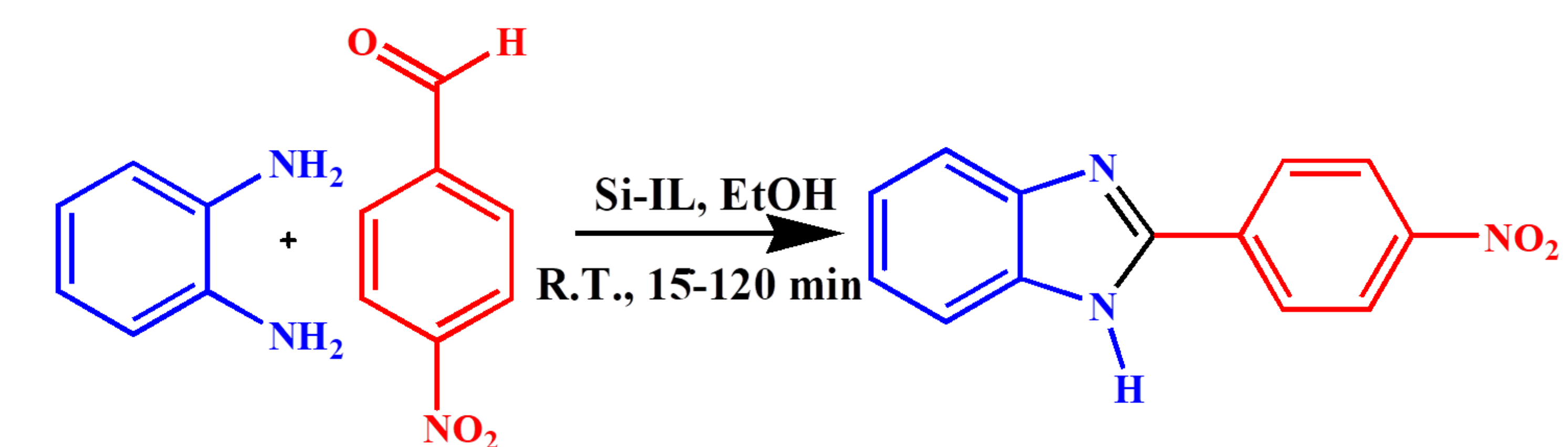
- Silica supported dual acidic ionic liquid
- Synthesis of pharmacologically important Benzimidazole
- Cooperatively catalysed condensation-aromatization
- Easy work-up, high yield, catalyst recyclability, simple catalyst loading method



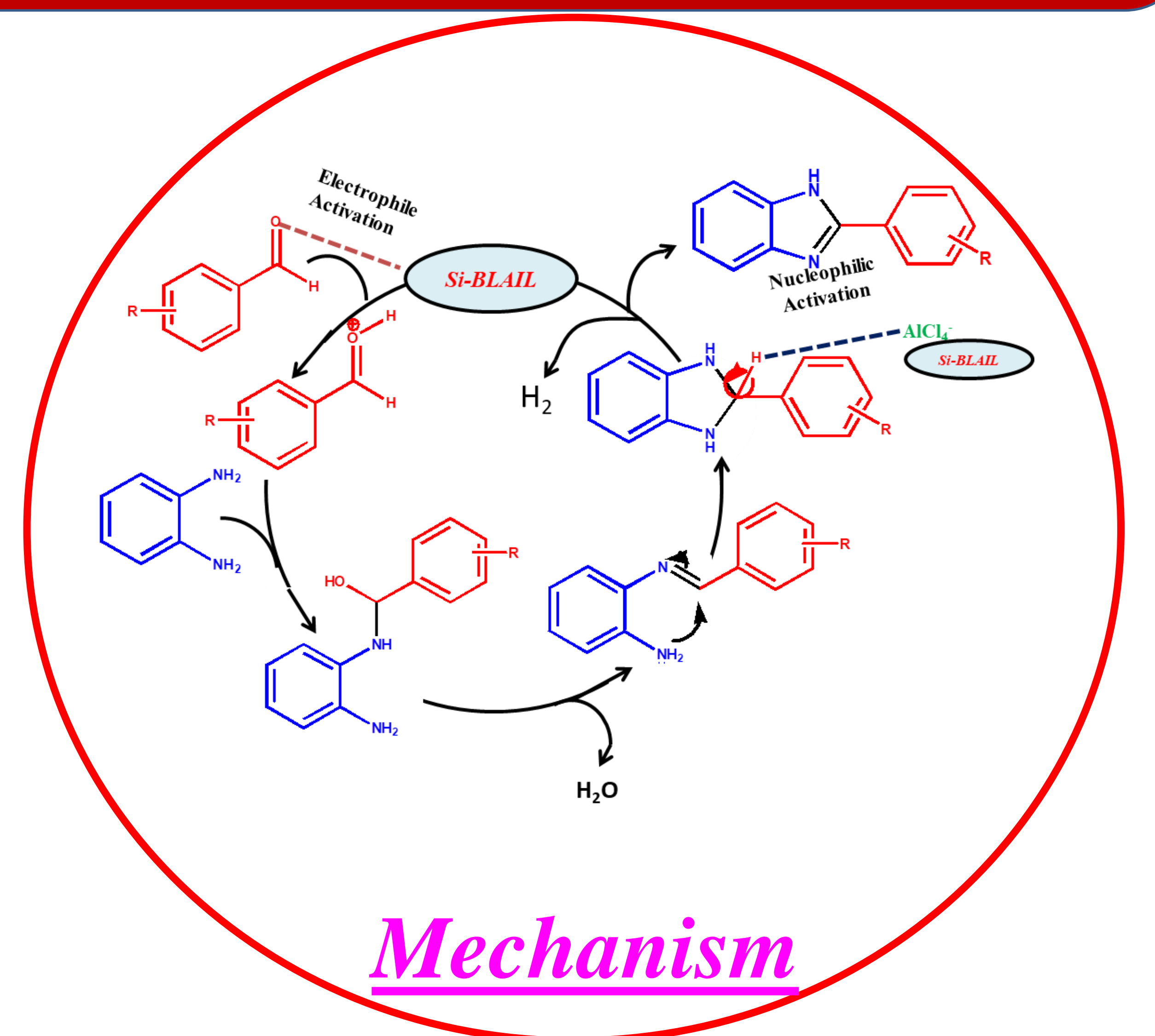
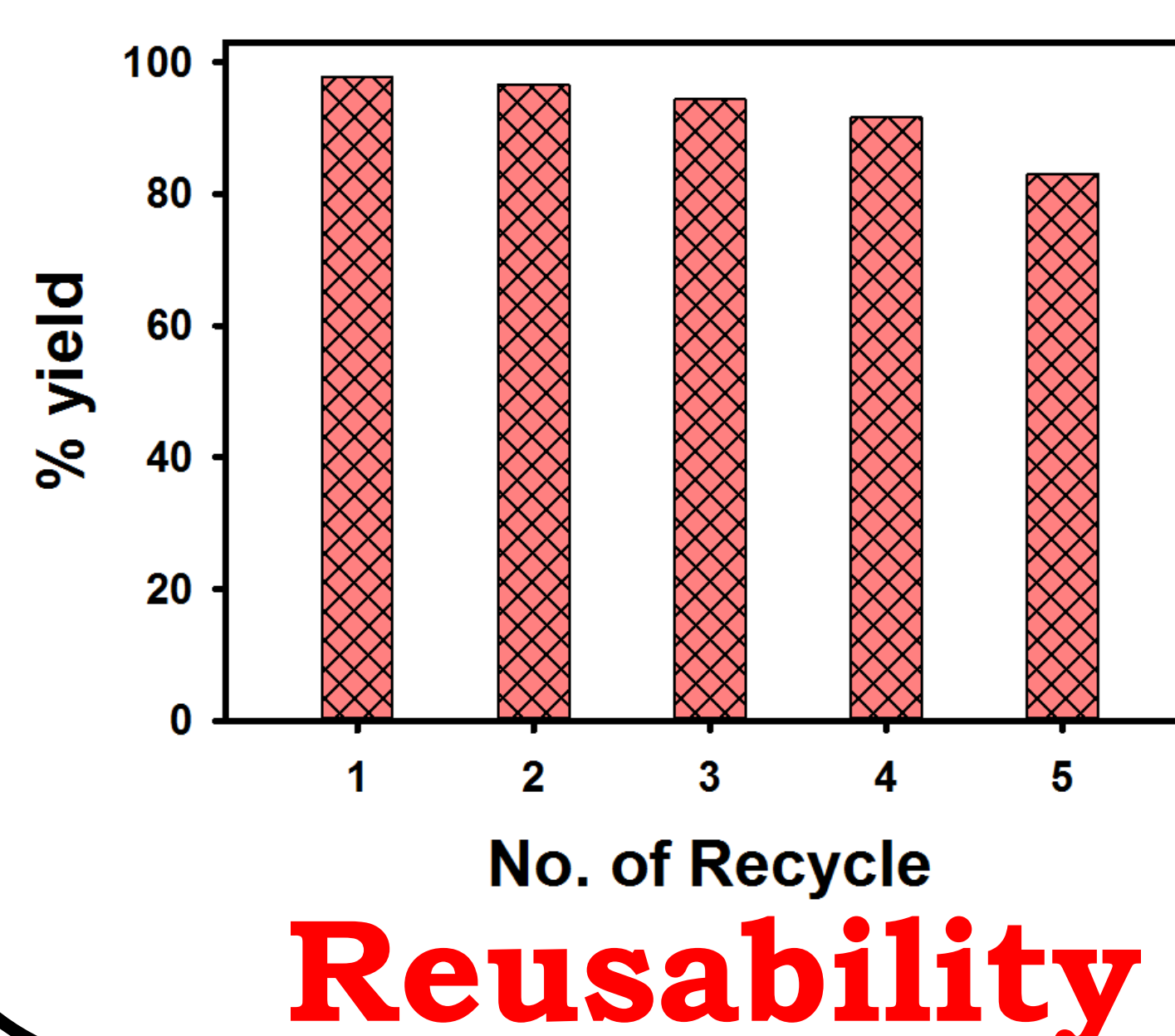
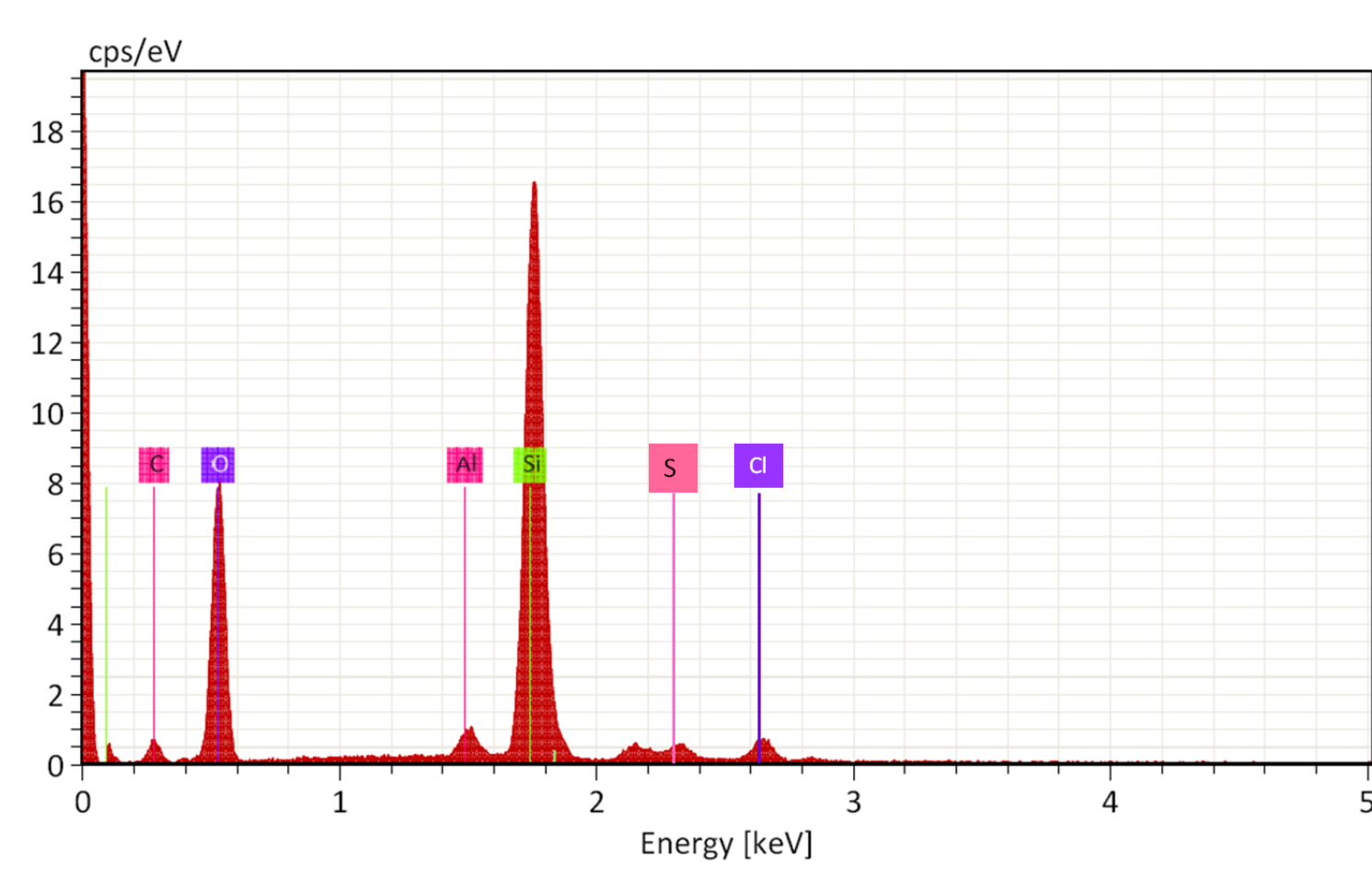
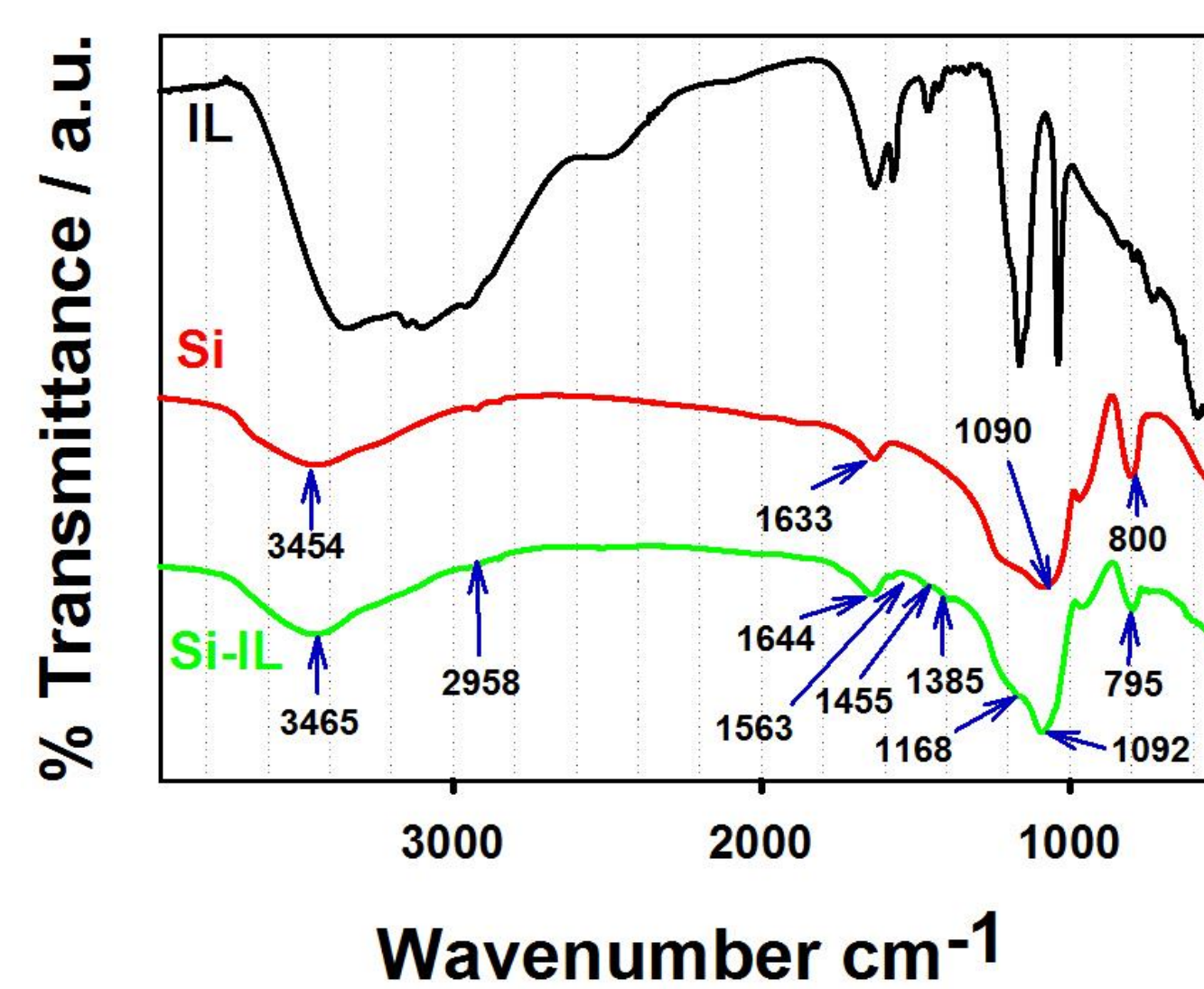
Silica Immobilized Brønsted-Lewis Acidic Ionic Liquid



Scheme 1: synthesis of catalyst



Scheme 2: Catalytic application



Conclusion:

- Simple catalyst loading
- Optimum reaction condition
- Easy work-up
- High yield
- Non-inertness of medium
- Catalyst reusability

Reference: *J Indian Chem Soc* 2022, 99:100550