

**Inverse Electron Demand Diels Alder Reaction of Pyrido[1,2-*a*]pyrimidine-
2-ones - Experimental and Theoretical Investigation and Antibacterial
Activity of Synthesized Adducts**

Submitted by

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80_Recommendation

- ✓ Enamines can be modified as one of the dienophiles which can be used in conducting the inverse electron-demand Diels-Alder reaction.
- ✓ Different Lewis acid catalysts and ionic liquids may be employed to increase the efficiency of the reaction by cancelling out the formation of by-products.
- ✓ Single Crystal X-ray Diffraction (XRD) can be performed to improve the confirmation of the compound's structure and its stereochemistry.
- ✓ Transition state calculations utilizing the Density Functional Theory (DFT) method can be performed for the remaining three adducts for further confirmation of the mechanistic pathway.
- ✓ Cytotoxicity studies could be performed to assess the important attribute of product quality and safety profiles.