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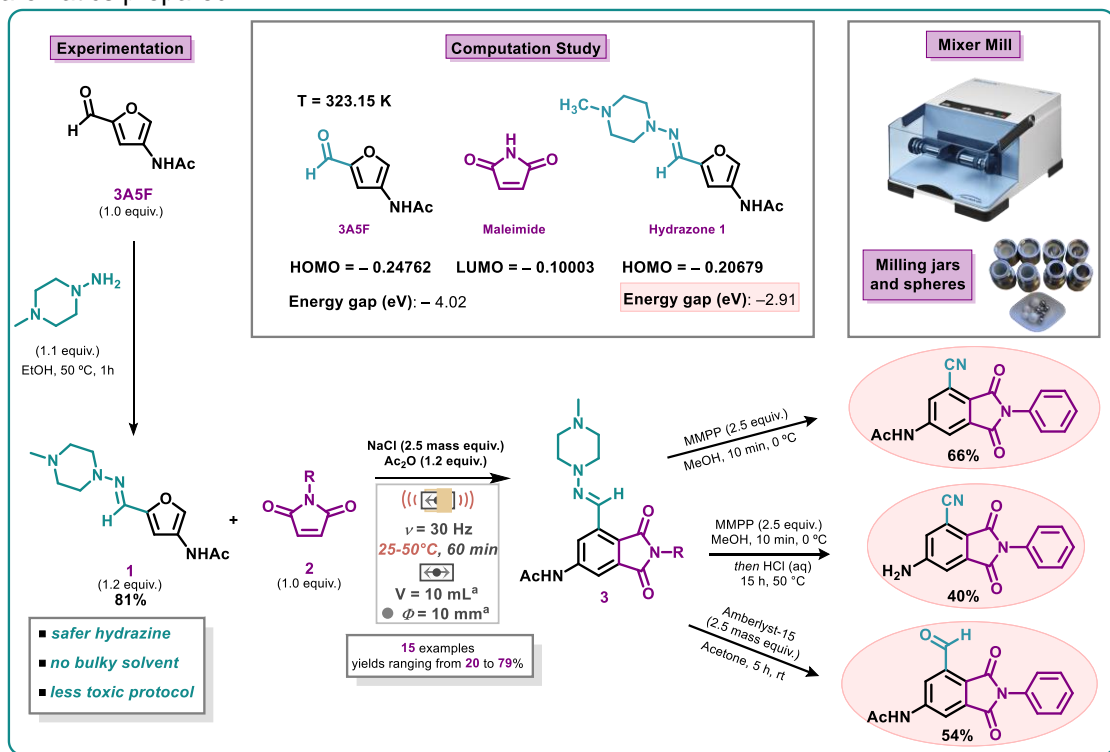
## New Aromatics from a Chitin-based Nitrogenated Furanic Platform

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### ABSTRACT

Chitin biomass is a rich renewable resource that widely exists in crustacean shells and arthropod exoskeleton, being the second most abundant natural polysaccharide after cellulose. Recently, the use of furans derived from chitin has become a promising source for nitrogen fixation in high added-value compounds. In this context, we explored the mechanochemical synthesis of aromatic compounds from renewable sources, in agreement with many of the principles of Green Chemistry. Herein, we address the challenge of using the chitin-derived furan 3-acetamido-5-furfural aldehyde (**3A5F**) to favour the formation of 4-acetylaminothalimides, using the hydrazone approach. Theoretical calculations confirmed that hydrazone (**1**) is more reactive than **3A5F** in the Diels-Alder reaction with maleimide as dienophile. Under optimized conditions, Diels-Alder reaction followed by spontaneous aromatization afforded 4-acetylaminothalimides in up to 79% yield. Further derivatizations were also performed to showcase the synthetic potential of the new aromatics prepared.



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