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## DESIGN OF S AND SE CONTAINING NUCLEOPHILIC CATALYSTS

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Pyridine and its derivatives are often used as effective nucleophilic catalysts for reactions such as the Baylis-Hillman reaction, acyl group transfer reactions and others. A noteworthy example is DMAP which is a widely known acylation reaction catalyst. Alcohol acylation reactions can also be catalysed by isochalcogenurea derivatives which exhibit a 1,5-O...Ch interaction in the acylated intermediates [1]. Similar chalcogen bonding interactions haven't been investigated in DMAP-type catalysts.

In this research chalcogen containing DMAP-type catalysts were synthesized. Activities of the newly obtained catalysts were determined by performing an acylation reaction of a sterically hindered secondary alcohol (Figure 1). Experiments show that introducing a substituent at the C-2 position significantly decreases the catalytic activity which was expected and has been previously reported [2]. Importantly, it was observed that the activity of sulfur-containing catalysts increases with increasing electron donating ability of the C-4 substituent of pyridine, but the opposite trend was observed for selenium-containing catalysts.

**Primary author:** FILIPSONS, Oto

**Co-author:** KINENS, Artis

**Presenter:** FILIPSONS, Oto

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