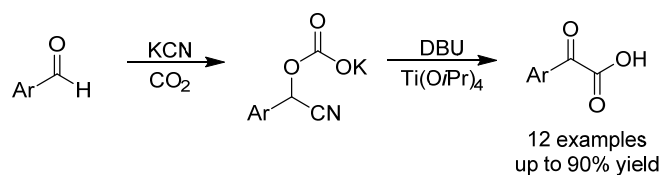


# UMPOLUNG MEDIATED CARBOXYLATION OF ALDEHYDES

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A mild and direct carboxylation reaction of aldehydes using CO<sub>2</sub> is presented. An umpolung strategy was employed and through mechanistic investigations a detailed understanding of the reaction was achieved. Furthermore, the α-keto acid product proved to be a valuable substrate in the synthesis of amino acids.



[1] M. Juhl, J.-W. Lee. *Angew. Chem. Int. Ed.* **2018**, *57*, 12318.

[2] M. Juhl, M. J. Kim, H.-Y. Lee, M.-H. Baik, J.-W. Lee. *Synlett.* **2019**, *30*, A-J