Towards Chemoselective Arylation Reactions of Peptides Using Triarylbismuthanes

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There is a need for general methods that lead to post-synthetic modification of peptides. Currently, few methods exist for the chemoselective arylation on specific amino acid residues. Organobismuth reagents have recently gained interest due to their versatility in bond formation, functional group tolerance, low cost and low toxicity related to the inorganic bismuth salt. Recently, our group has developed efficient arylation methods using highly functionalized trivalent arylbismuth reagents to form C□C, C□O and C□N bonds.[1] In particular, indoles, phenols and aminoalcohols have been successfully arylated in good to excellent yields via substoichiometric copper catalysis in mild conditions. As a result, this method will be further employed as a mean of selective arylation of polypeptides. In this poster, we will present our progress in the development of arylation methods of peptides using triarylbismuthanes.

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