Abstract

Synthesizing Novel Fluorinated Molecules by Adding Fluorine and Removing Fluorine

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A plethora of perfluoroalkylation methods are available for introducing fluorine-containing groups into organic molecules. On the other hand, the selective cleavage and functionalization of C-F bonds in perfluorinated molecules can give access to partially fluorinated compounds with unique advantages. In this presentation, we will disseminate the recent findings in our research group for adopting a perfluoroalkylation-defluorination strategy to synthesize novel fluorinated molecules. Perfluoroalkylation, such as pentafluoroethylation, followed by defluorinative functionalization has proved to be an effective approach for constructing emerging fluorinated structures with high selectivities.