Synthesis of Hypervalent CF_3 Tellurium Compounds

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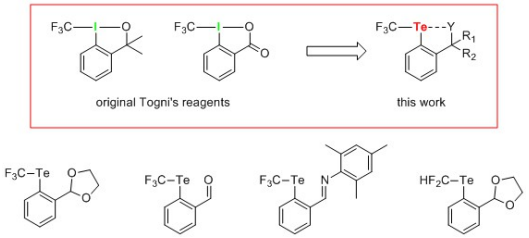
Hypervalent iodine (III) reagents are electrophilic trifluoromethylating agents commonly applied in organic syntheses. Since their introduction in 2006,[1,2] the parent structures have been subjected to numerous modifications. However to date, the central iodine atom has been retained in each instance.[3–5] Herein, we report for the first time a synthesis of unique compounds in which the iodine atom has formally been exchanged for tellurium. Thus, a series of CF_3 tellurium (II) species differing in the functional group coordinated to the central atom has been obtained. All products have been fully characterized using HRMS and NMR spectroscopy, including advanced $^{1}H^{125}Te$ and $^{19}F^{125}Te$ correlation measurements. Furthermore, selected modifications performed after installing the CF_3 group on the tellurium atom have been successfully carried out.[6]



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