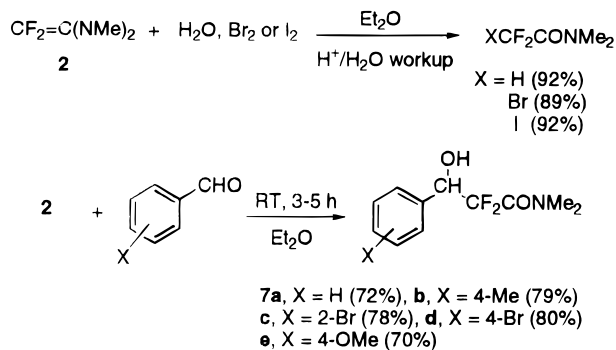




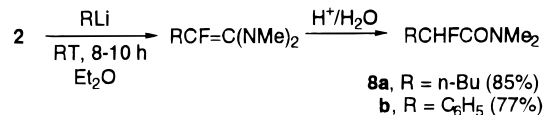
and electrophilic behavior. It undergoes virtually quantitative reaction with water, bromine, or iodine to give the respective *N,N*-dimethyldifluoroacetamide, -bromodifluoroacetamide, and -iododifluoroacetamides in isolated yields of 92, 89, and 92%, respectively,<sup>23</sup> and it was found to condense with various substituted benzaldehydes to give good yields of the respective *N,N*-dimethyl-2,2-difluoro-3-hydroxy-3-arylpropionamides **7a–e**.<sup>24</sup> However, in reactions with a number of ketones or aldehydes bearing an  $\alpha$ -hydrogen, such as acetophe-



none, acetone, or butyraldehyde, *no* condensation products analogous to **7** were observed. In each case, *N,N*-dimethyldifluoroacetamide was obtained as the only

product, a result which indicated that **2** must prefer to act as a base instead of a nucleophile in such reactions.

**2** was also found to undergo a facile addition–elimination process upon addition of 1 equiv of alkyl lithium at room temperature, with the net result that, upon hydrolytic workup one could obtain reasonable yields of the respective  $\alpha$ -fluoroacetamides **8**.<sup>24</sup>



In view of the ease of preparation of both **1** and **2**, it is likely that **2** will find considerable synthetic utility in the future.<sup>25</sup> We are presently investigating its reactivity with respect to various other nucleophilic and electrophilic reagents, and it indeed has a rich and diverse chemistry the full extent of which will be reported in due course.

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**Supporting Information Available:** Experimental procedures and characterization data for all new compounds (8 pages).

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(23) All given yields are based on **1a**.  
 (24) Products **7a–e** and **8a–b** were fully characterized by NMR, IR, HRMS, and CHN analysis.

(25) The syntheses of **1a–e** require an autoclave. Compound **1a** is commercially available from SynQuest Laboratories, Inc., Alachua, FL.