aldol reaction

## Pentafluorinated β-Hydroxy Ketone Synthesis via Lithium-Mediated Aldol Reaction

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 $R^1 = Ph, 4\text{-}CIC_6H_4, Naph, (CH_2)_2Ph$  $R^2 = Ar, 2\text{-}thienyl, Bn$ 

Synthesis of Pentafluorinated β-Hydroxy Ketones

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## Selected examples:

**Significance:** A fast and mild synthesis of pentafluorinated  $\beta$ -hydroxy ketones has been disclosed. The reaction proceeds via a lithium-promoted aldol reaction of readily available difluoroenolate precursors with trifluoromethyl ketones furnishing the corresponding pentafluorinated  $\beta$ -hydroxy ketones in good to excellent yield. **Comment:** The described reaction is very versatile since it proceeds under ambient temperature and tolerates a broad range of functional groups. Furthermore, the authors show that the reduction of the pentafluorinated  $\beta$ -hydroxy ketones furnishes quantitatively the corresponding 1,3-diols favoring the syn-isomer.

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