

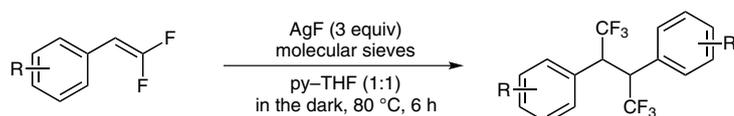
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AgF-Mediated Fluorinative Homocoupling of *gem*-Difluoroalkenes

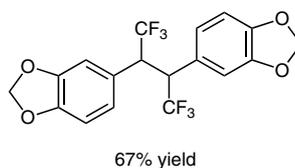
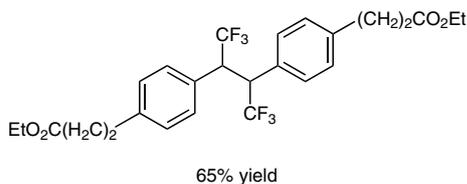
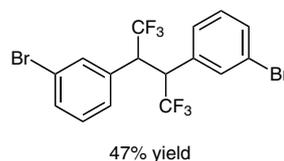
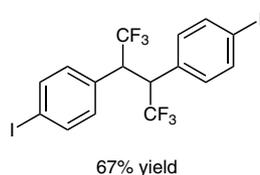
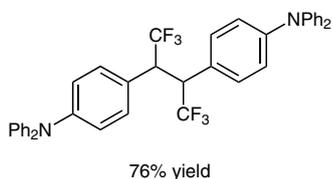
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## AgF-Mediated Homocoupling Reaction of $\beta,\beta$ -Difluorostyrene Derivatives



R = H, Ph, NPh<sub>2</sub>, OMe, SMe, I, Br, -OCH<sub>2</sub>O-, CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Et

### Selected examples:



**Significance:** A novel procedure for a fluorinative homocoupling reaction of *gem*-difluoroalkenes is reported by Hu and co-workers. The reaction is mediated by silver(I) fluoride and proceeds via nucleophilic addition of silver(I) fluoride to  $\beta,\beta$ -difluorostyrenes, which is followed by dimerization of the respective benzylsilver intermediates.

**Comment:** When three equivalents of 2,2,6,6-tetramethyl-1-piperidinol (TEMPO) were added to the reaction mixture, the homocoupling was completely inhibited, which may support a free radical pathway. Interestingly, AgF can be replaced by a combination of cesium(I) fluoride and AgBF<sub>4</sub>.

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Category

Metal-Mediated  
Synthesis

Key words

silver

homocoupling

difluoroalkenes

silver fluoride