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N-BUTYLLITHIUM-INDUCED REACTIONS OF σ -METHYLARENESULFONATES AND σ -METHYLARENESULFONAMIDES

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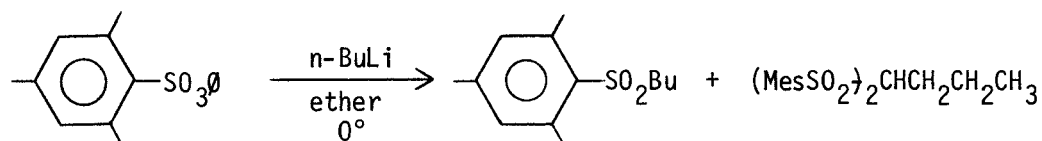
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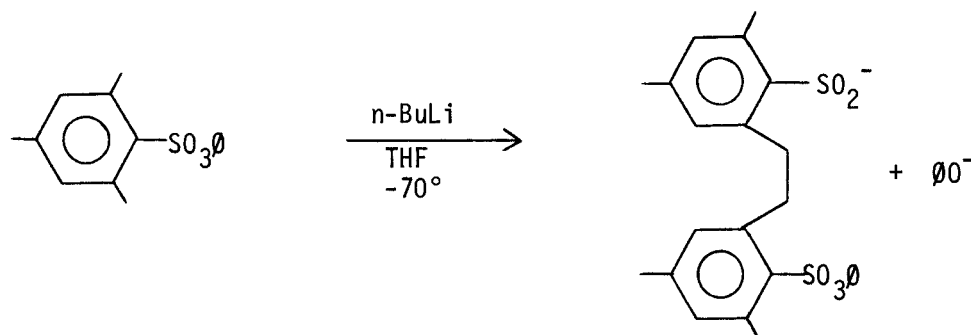
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σ -Methyldiaryl sulfones rearrange to isomeric sulfinic acids under the influence of strong base¹ (n-butyllithium in ether or potassium t-butoxide in dimethyl sulfoxide). Studies of the chemistry of arenesulfonyl systems, initially metalated at an ortho methyl substituent, have now been extended to appropriate aryl arenesulfonates and arenesulfonamides.

Treatment of phenyl mesitylenesulfonate with an equivalent of n-butyllithium in ether at 0° yielded products arising from displacement on sulfur.



At a lower temperature (-70°) in tetrahydrofuran (for solubility reasons), metalation occurs followed by a novel coupling reaction:



A like condensation occurs with N,N-disubstituted σ -methylarenesulfonamides if one of the substituents on nitrogen is aryl; the reaction fails with N,N-diethylmesitylenesulfonamide.

Several reasonable mechanistic pathways can be postulated. Work has been done, which considerably limits the possibilities. These results will be discussed.

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- (c) V. N. Drozd, Int. J. Sulfur Chem., **8**, 443 (1973).