Public Abstract
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The synthesis of chiral ligands to tune the reactivity and stereoselectivity of many catalytic asymmetric reactions has been given considerable attention in synthetic organic chemistry over the past decade. This report shows the results of efforts toward the syntheses of several families of enantiomerically pure 2,1-benzothiazine ligands containing a chiral sulfoximine. A new optimized Buchwald Hartwig N-arylation is also presented herein. This new synthesis provides a thermal, air tolerable preparation of 2,1-benzothiazines from aryl chlorides. The metalation and trappig of 2,1-benzothiazines is also shown with a variety of substrates. The ability to trap electrophiles in up to 3 position is shown about the benzothiazine structure. Lastly, the synthesis of a hydroxy benzothiazine was developed.