

Nickel-catalyzed sustainable synthesis of 2-(*N*-benzoylamino)benzothiazoles through intramolecular *C*-*S* coupling

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ABSTRACT The nickel-catalyzed intramolecular *C*-*S* cyclization of various *N*²-(2-bromophenyl)-*N*¹-benzoylthioureas was efficiently accomplished, affording 2-(*N*-benzoylamino)benzothiazoles in good to excellent yields under mild reaction conditions. The methodology demonstrated broad substrate scope and functional group tolerance. Control experiments revealed that the transformation proceeds through an intramolecular *C*-*S* cross-coupling pathway, highlighting the role of iron as an effective and economical catalyst for benzothiazole construction.

KEY WORDS Intramolecular *C*-*S* coupling reaction, Nickel catalyst, 2-(*N*-benzoylamino)benzothiazoles, *N*²-(2-bromophenyl)-*N*¹-benzoylthioureas.

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