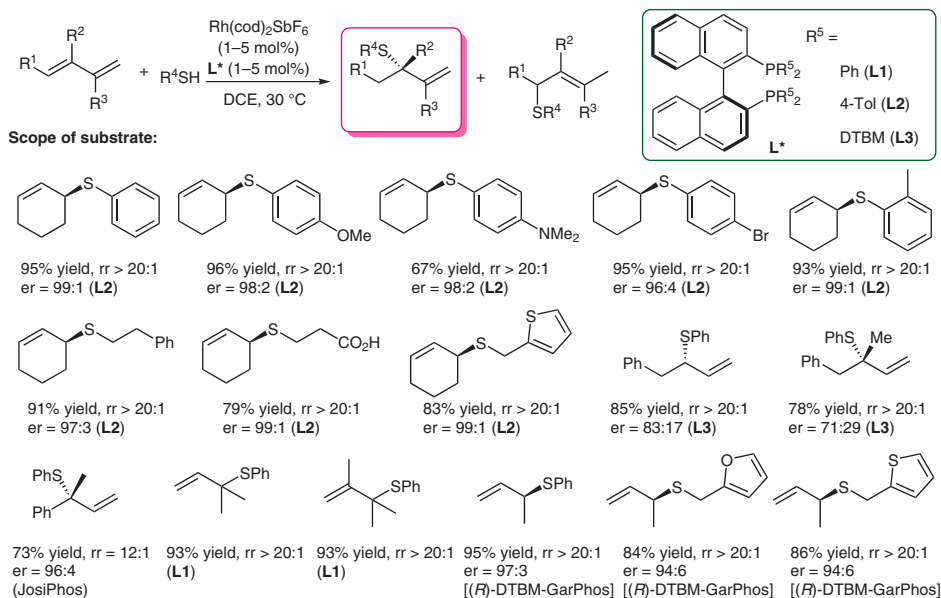


Rhodium-Catalyzed Hydrothiolation of 1,3-Dienes



Significance: The development of reactions for the construction of C–S bonds is important because molecules essential to life contain this linkage. The addition of thiols to alkenes is a direct and atom-economical method for the formation of C–S bonds. The authors have developed an enantioselective addition of thiols to 1,3-dienes catalyzed by a rhodium–chiral bisphosphine ligand complex to give chiral secondary or tertiary allylic sulfides in good to high enantioselectivities.

Comment: The enantioselective hydrothiolation proceeds selectively at the more-substituted double bond. A broad range of functional groups are tolerated in this reaction, and the catalyst loading can be lowered to 0.1 mol%.

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