Synthesis of a Retinoic Acid Receptor Agonist

**Significance:** The target molecule \( \text{I} \) is a retinoic acid receptor \( \gamma \) (RAR\( \gamma \)) agonist that is of interest for the treatment of acne, psoriasis and melanoma. The synthesis depicted features the first nickel-catalyzed stereospecific Negishi alkyl–alkyl cross-coupling reaction of secondary benzylic \( \alpha \)-(methylthio)acetate esters with dimethylzinc.

**Comment:** The mild reaction conditions are compatible with a variety of functional groups including alkenes, protected alkynes, acetals, and esters. Heterocycles, amines, and imides are also well tolerated. Cross-coupling with diethylzinc is also possible but the reaction is more complex owing to additional competitive reaction pathways.