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Enantioselective Syntheses of Indanes: From Organocatalysis to C—H Functionalization

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Additional examples

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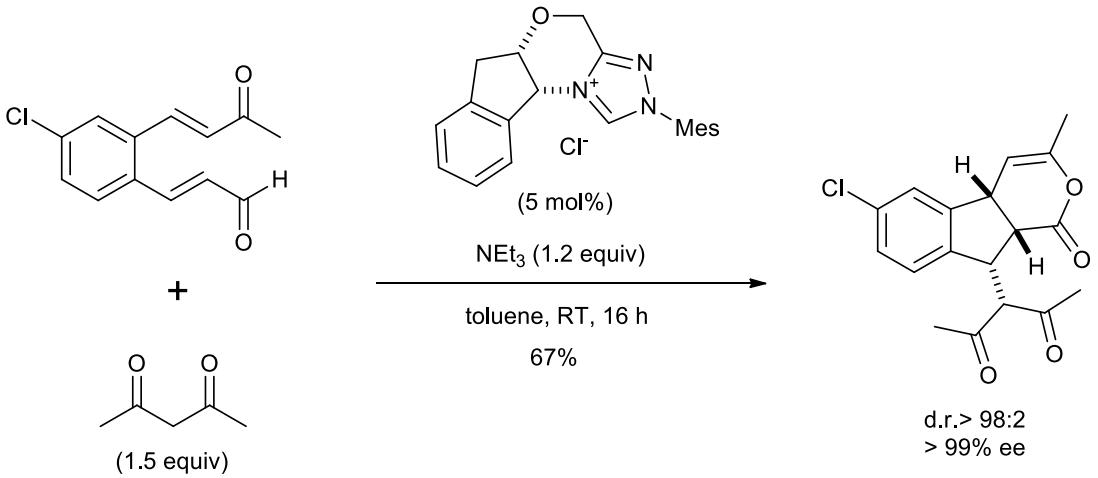
Enantioselective synthesis of the indanyl architecture through a carbocyclization

Highly Stereoselective Synthesis of 1,2,3-Trisubstituted Indanes via Oxidative N-Heterocyclic Carbene-Catalyzed Cascades



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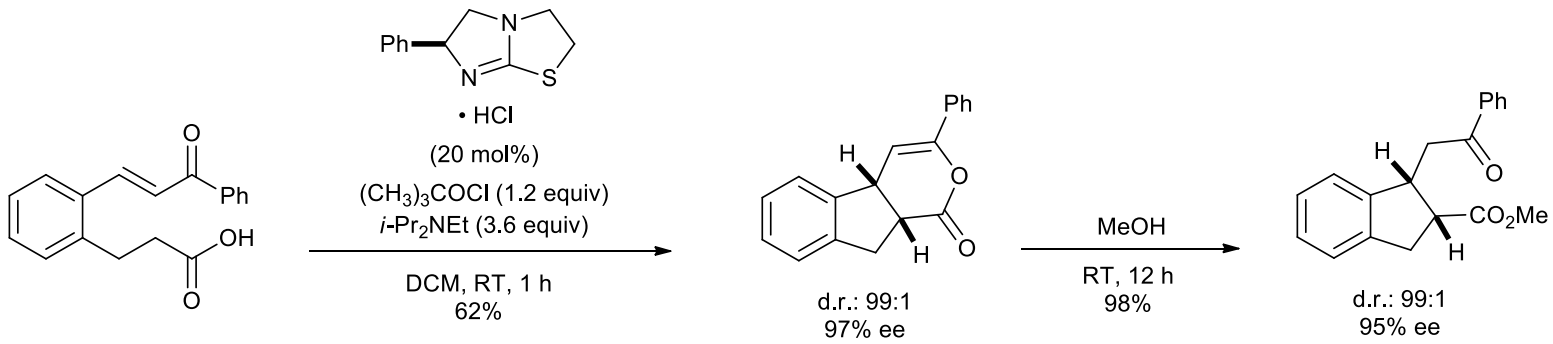
Organocatalytic Functionalization of Carboxylic Acids: Isothiourea-Catalyzed Asymmetric Intra- and Intermolecular Michael Addition–Lactonizations



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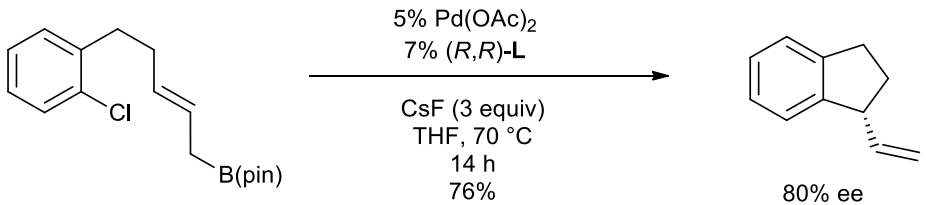
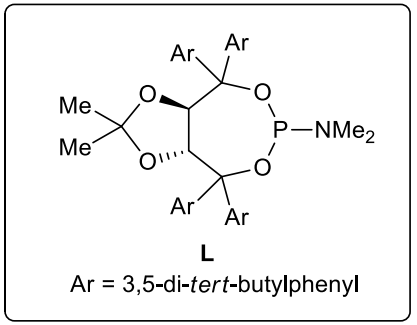
Enantioselective Carbocycle Formation through Intramolecular Pd-Catalyzed Allyl–Aryl Cross-Coupling





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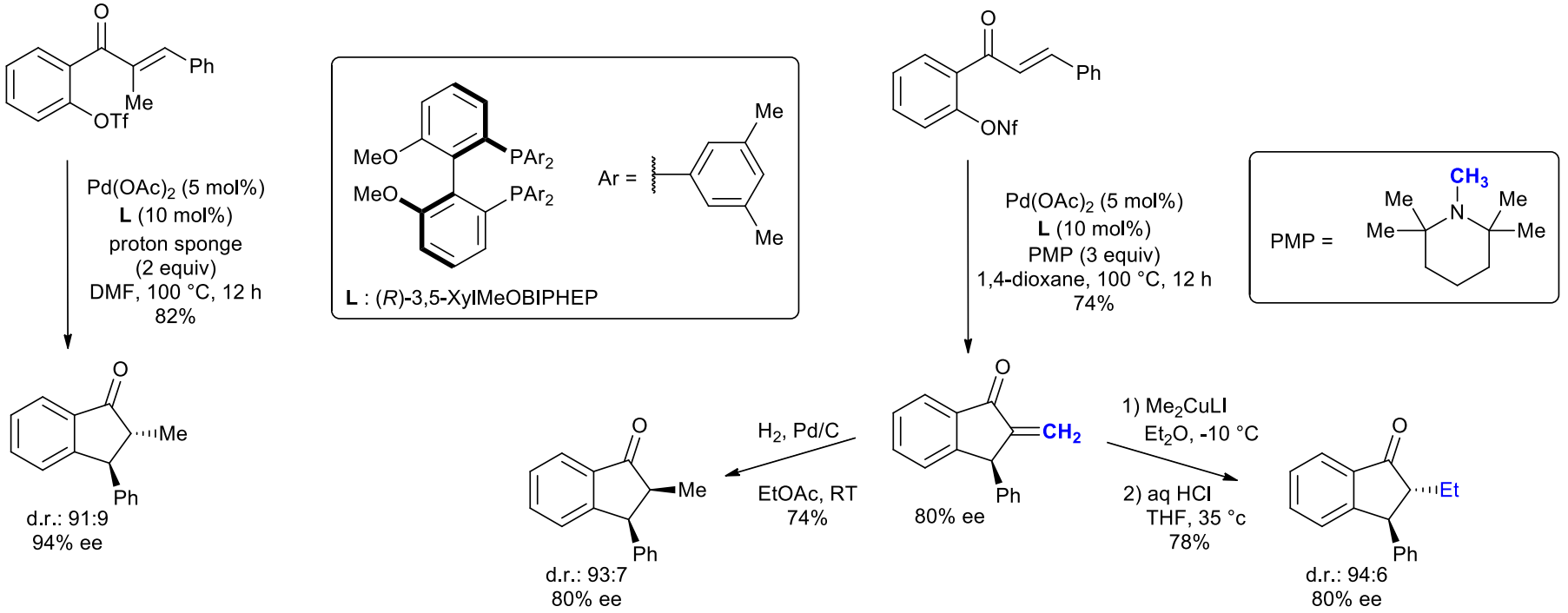
Synthesis of Chiral 3-Substituted Indanones via an Enantioselective Reductive-Heck Reaction



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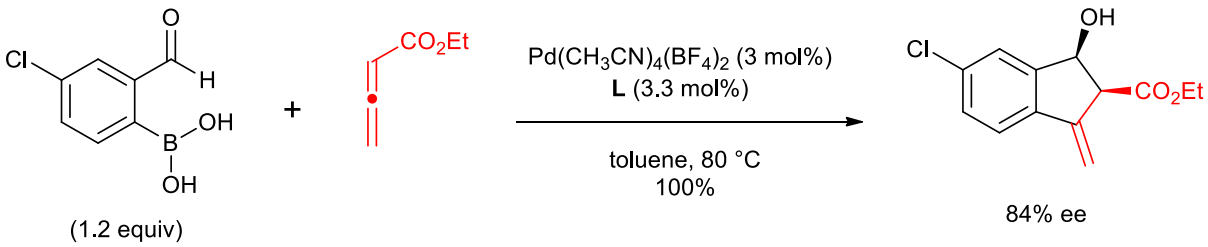
Cationic Palladium Complex Catalyzed Diastereo- and Enantioselective Tandem Annulation of 2-Formylarylboronic Acids with Allenoates



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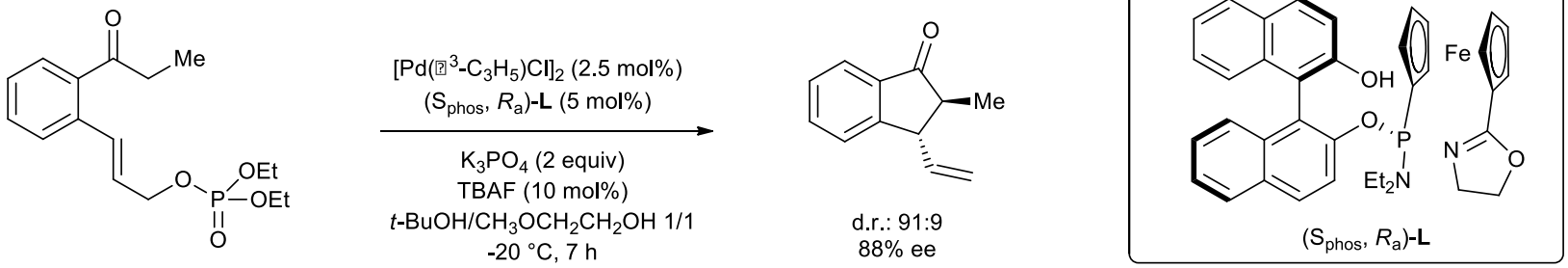
Enantioselective Synthesis of 2,3-Disubstituted Indanones via Pd-Catalyzed Intramolecular Asymmetric Allylic Alkylation of Ketones



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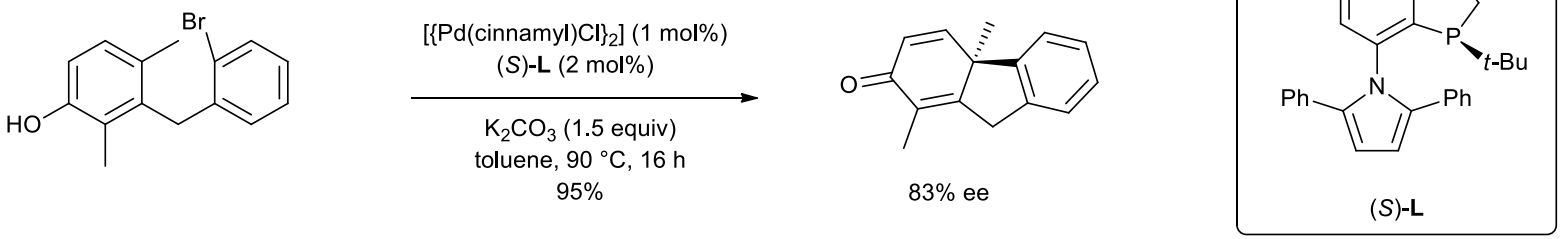
Enantioselective Palladium-Catalyzed Dearomative Cyclization for the Efficient Synthesis of Terpenes and Steroids



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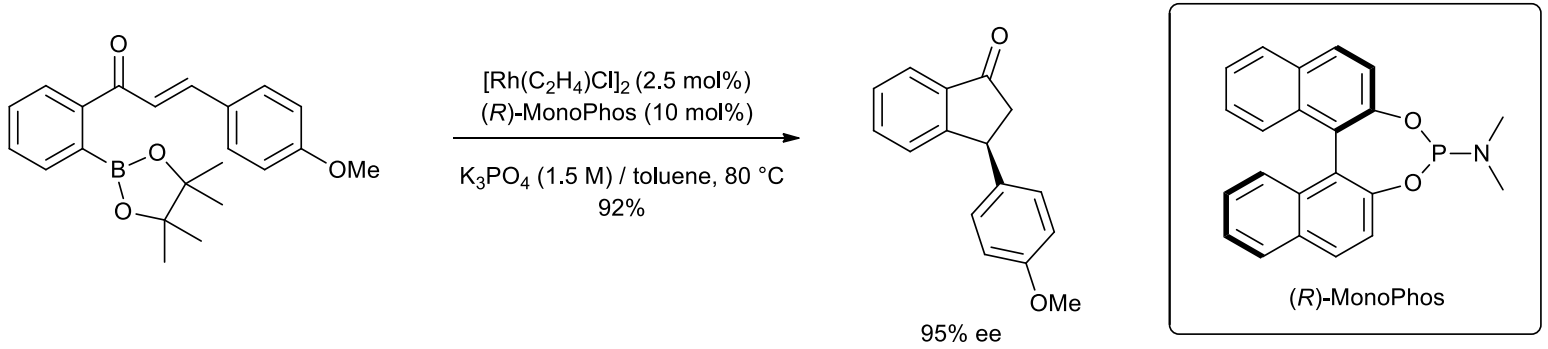
Enantioselective Synthesis of Chiral 3-Aryl-1-indanones through Rhodium-Catalyzed Asymmetric Intramolecular 1,4-Addition



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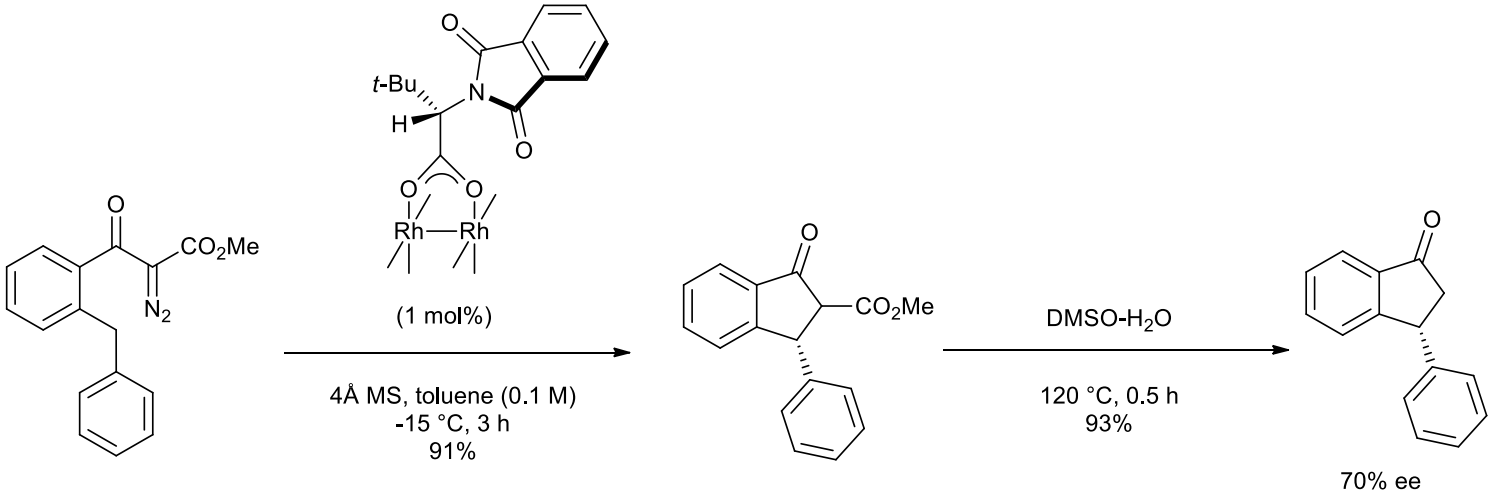
Enantioselective Synthesis of 3-Arylindan-1-ones via Intramolecular C-H Insertion Reactions of α-Diazo-β-Ketoesters Catalyzed by Chiral Dirhodium(II) Carboxylates



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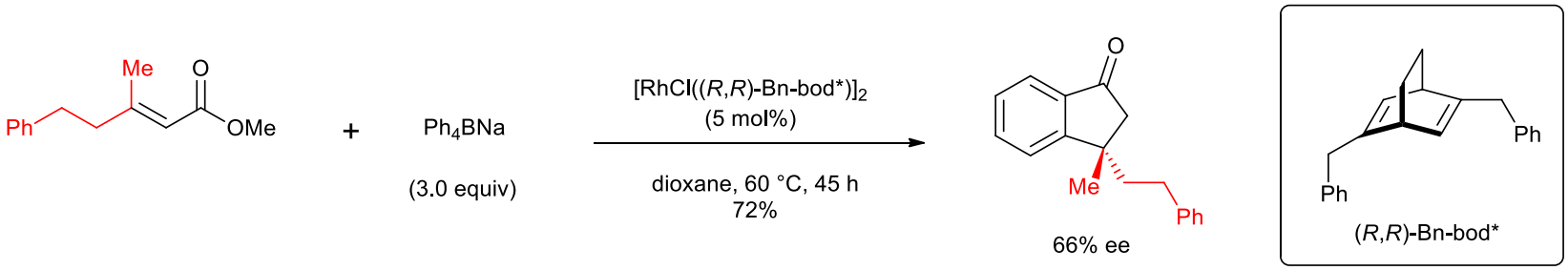
Rhodium-Catalyzed Asymmetric 1,4-Addition of Sodium Tetraarylborates to β,β-Disubstituted α,β-Unsaturated Esters



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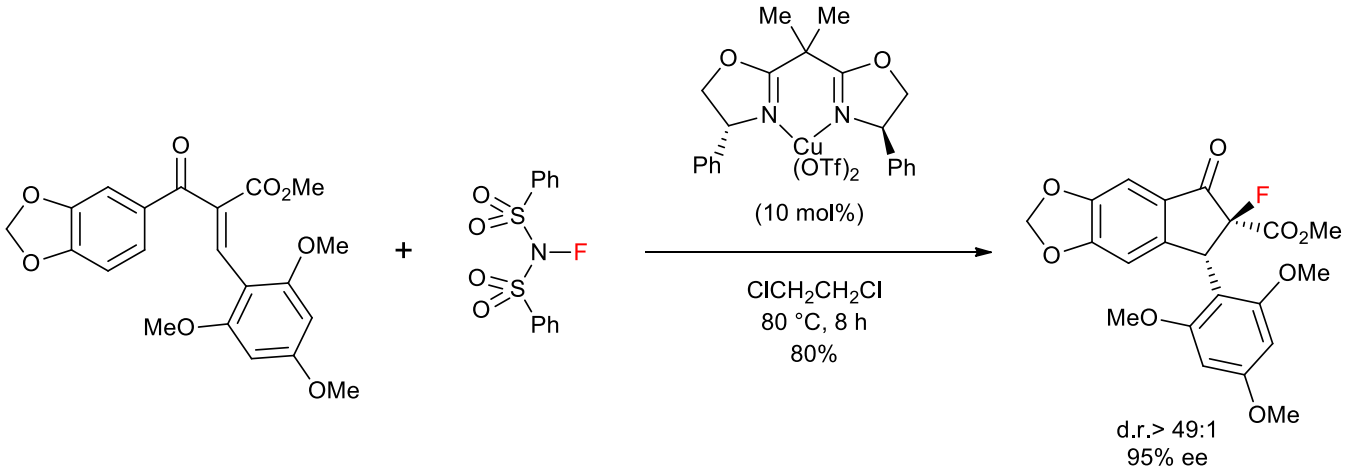
Catalytic Stereoselective Synthesis of Highly Substituted Indanones via Tandem Nazarov Cyclization and Electrophilic Fluorination Trapping



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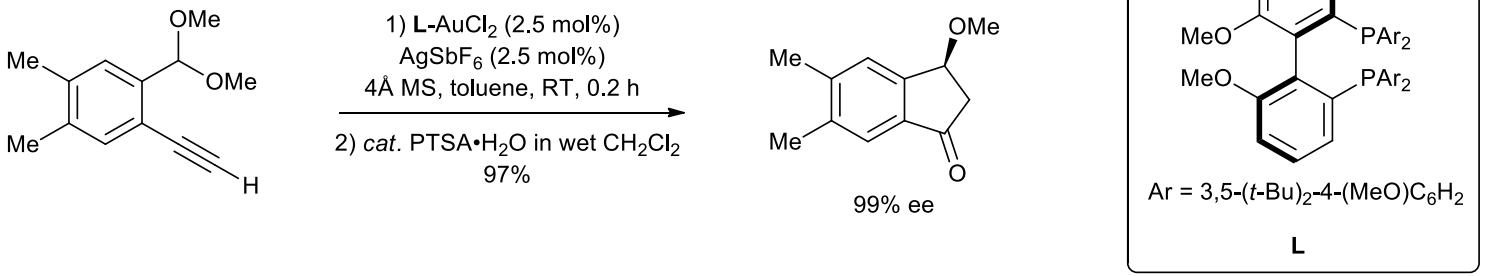
Gold(I)-Catalyzed Enantioselective Carboalkoxylation of Alkynes



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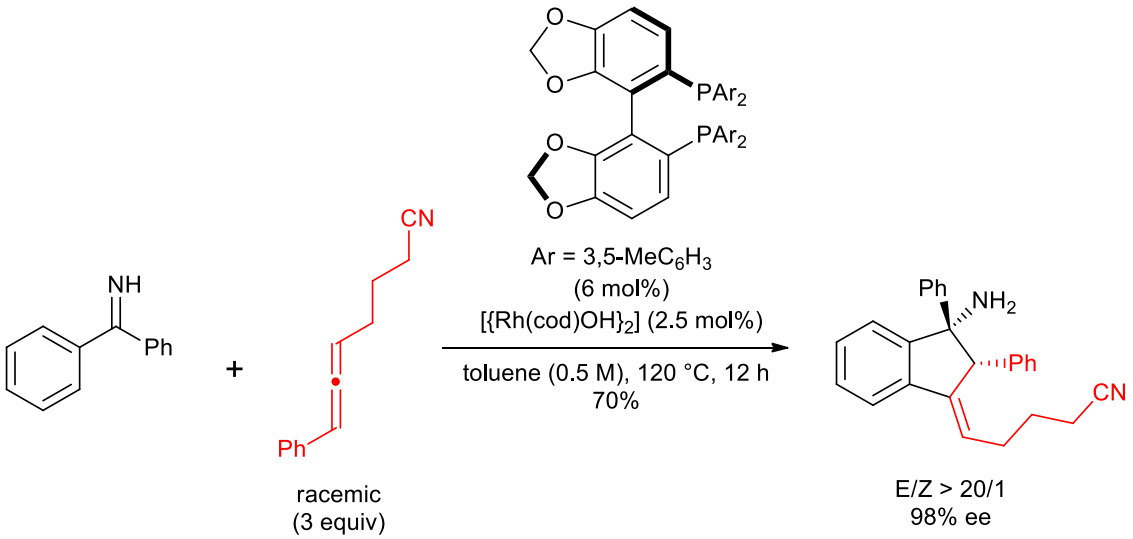
Rhodium-Catalyzed Dynamic Kinetic Asymmetric Transformations of Racemic Allenes by the [3+2] Annulation of Aryl Ketimines



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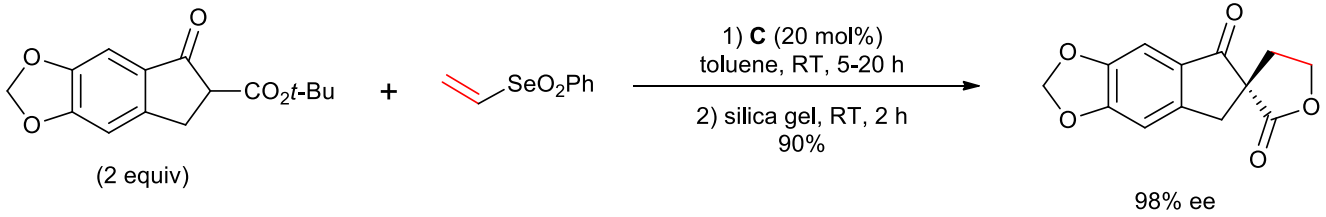
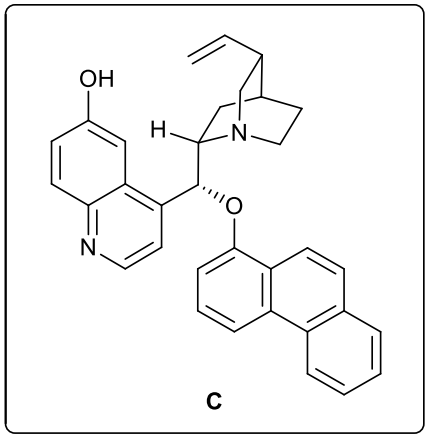
Asymmetric catalysis involving an existing indanyl scaffold

A Highly Enantioselective One-Pot Synthesis of Spirolactones by an Organocatalyzed Michael Addition/ Cyclization Sequence





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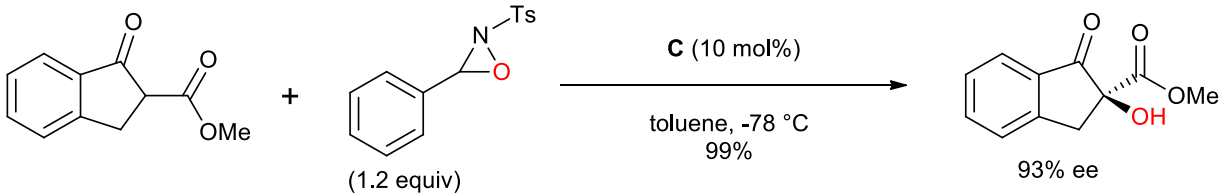
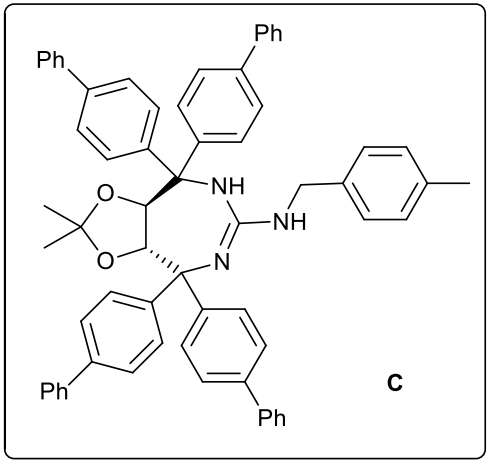
Development of Tartaric Acid Derived Chiral Guanidines and Their Application to Catalytic Enantioselective α-Hydroxylation of β-Dicarbonyl Compounds





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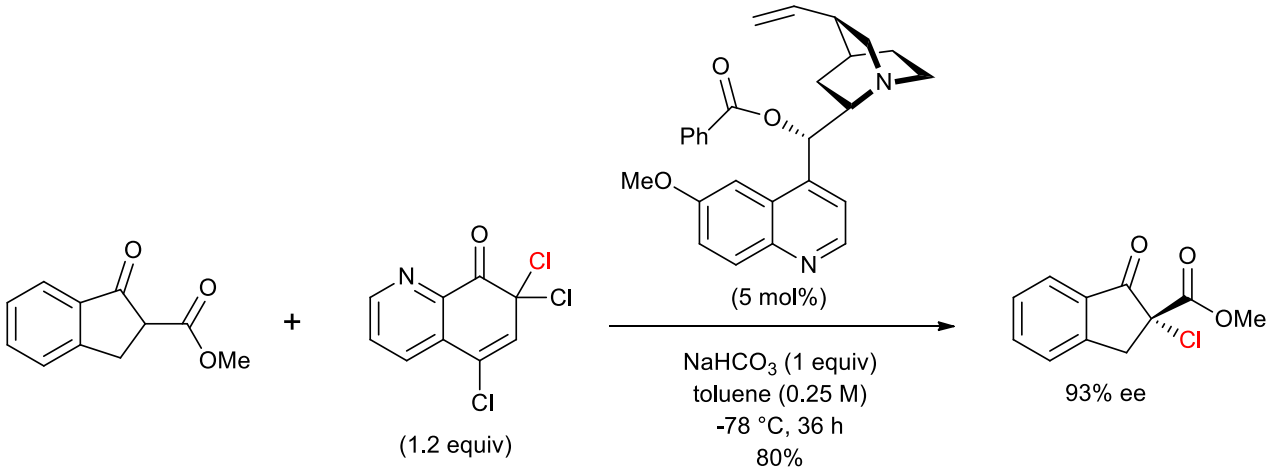
Organocatalytic Asymmetric α-Halogenation of 1,3-Dicarbonyl Compounds



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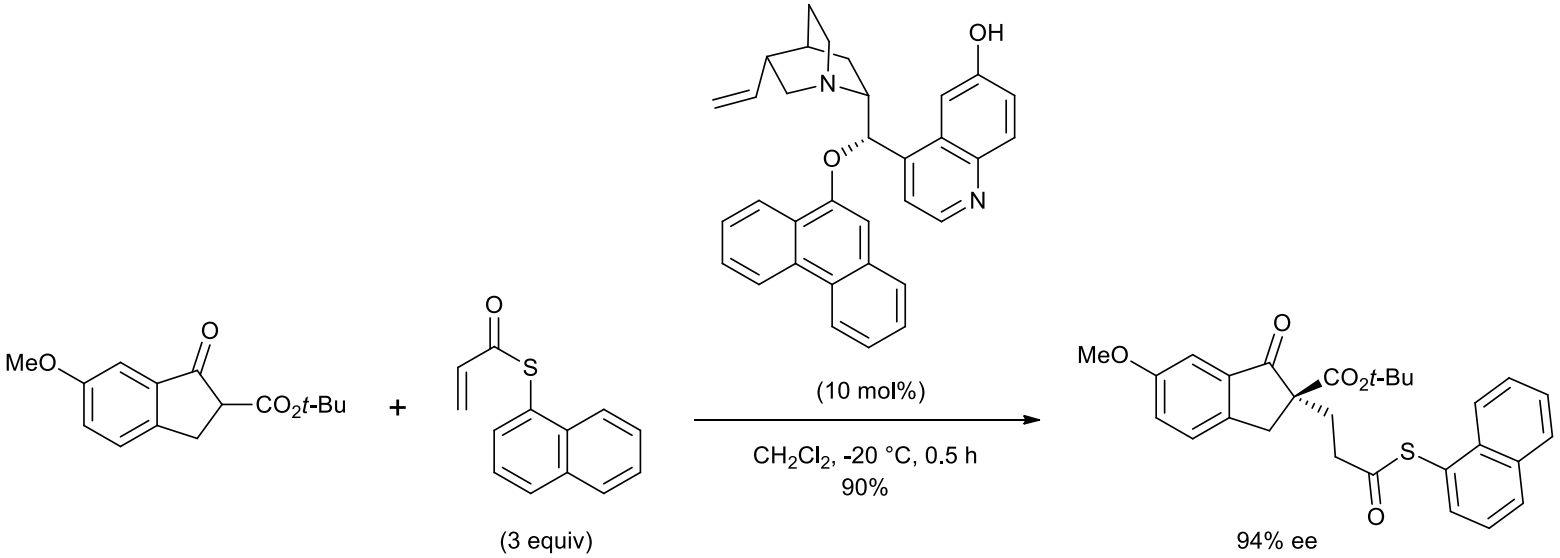
Enantioselective organocatalytic Michael additions to acrylic acid derivatives: generation of all-carbon quaternary stereocentres



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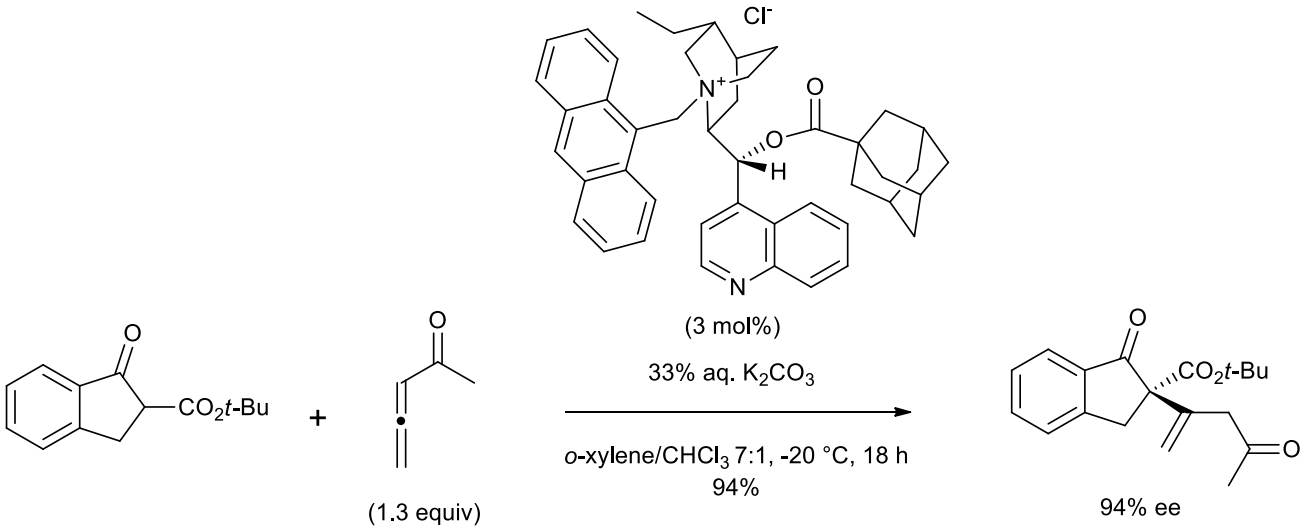
Organocatalytic Asymmetric Conjugate Addition to Allenic Esters and Ketones



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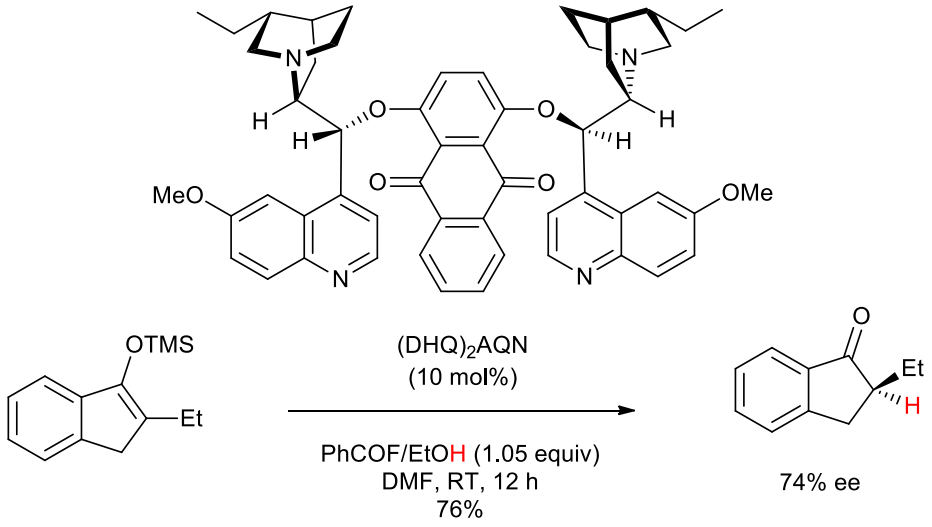
Organocatalytic Enantioselective Protonation of Silyl Enolates Mediated by Cinchona Alkaloids and a Latent Source of HF



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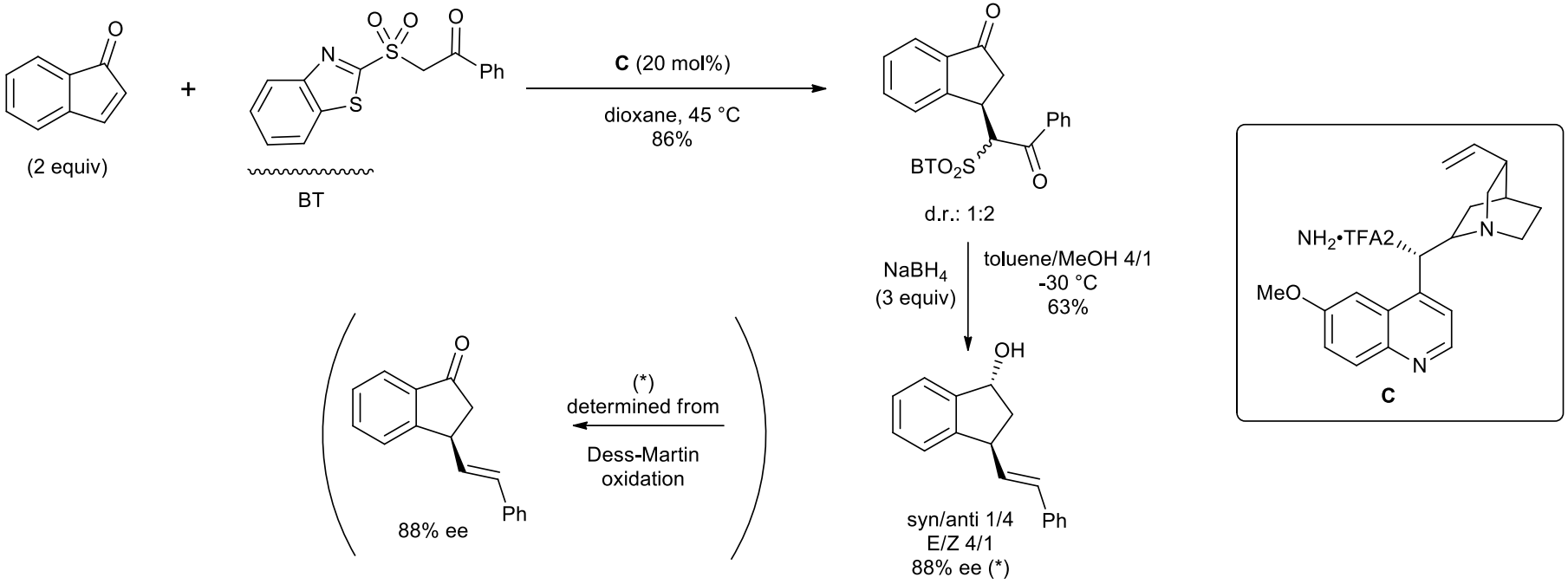
Trends in Organocatalytic Conjugate Addition to Enones: An Efficient Approach to Optically Active Alkynyl, Alkenyl, and Ketone Products



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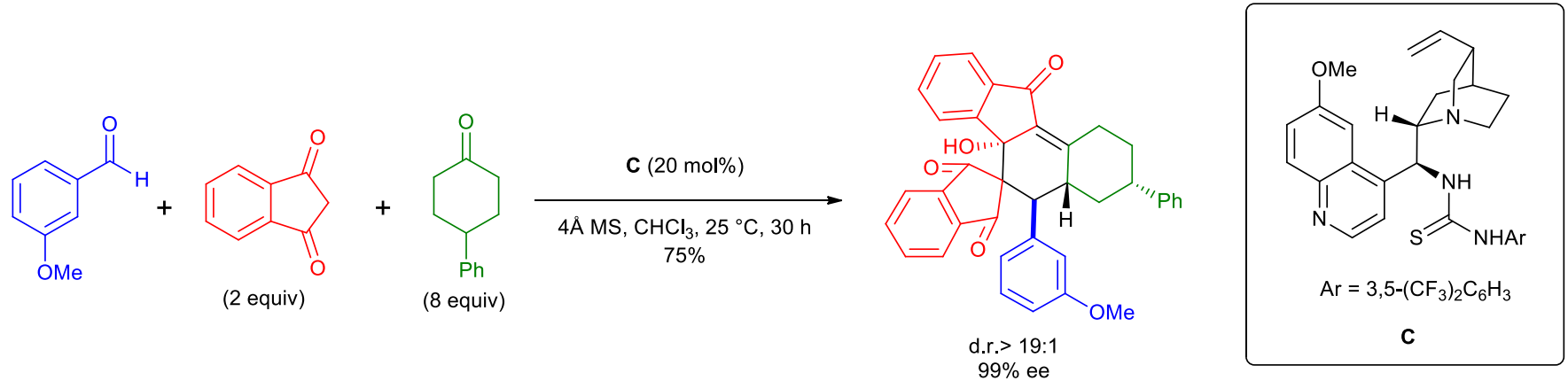
Enantioselective Synthesis of Functionalized Polycarbocycles via a Three-Component Organocascade Quadruple Reaction



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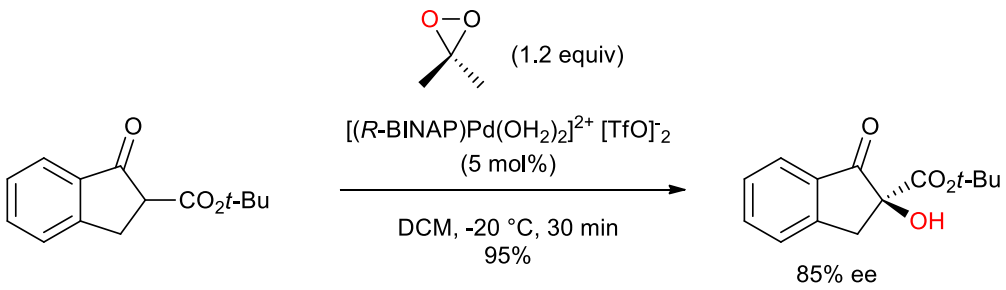
Palladium-catalysed enantioselective α-hydroxylation of β-ketoesters



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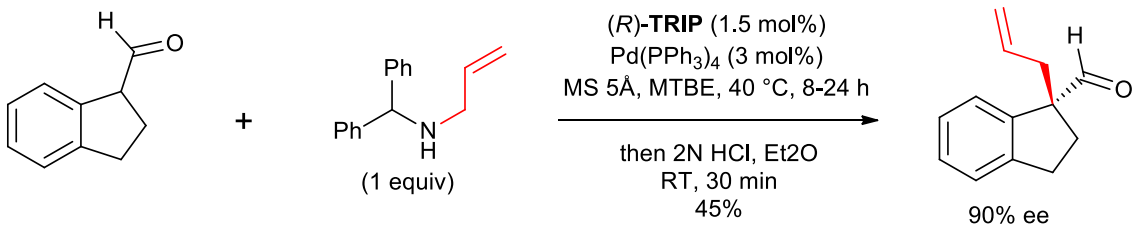
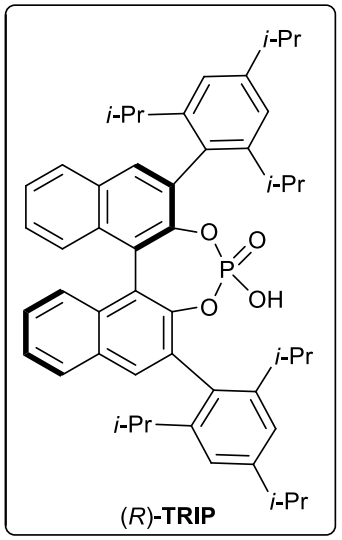
Chiral Counteranions in Asymmetric Transition-Metal Catalysis: Highly Enantioselective Pd/Brønsted Acid-Catalyzed Direct α-Allylation of Aldehydes





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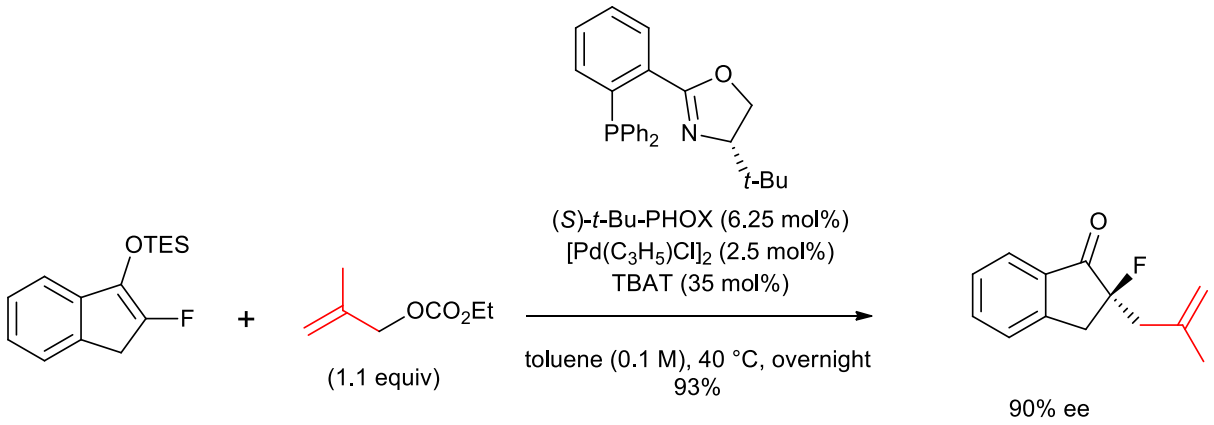
Enantioselective Pd-Catalyzed Allylation Reaction of Fluorinated Silyl Enol Ethers



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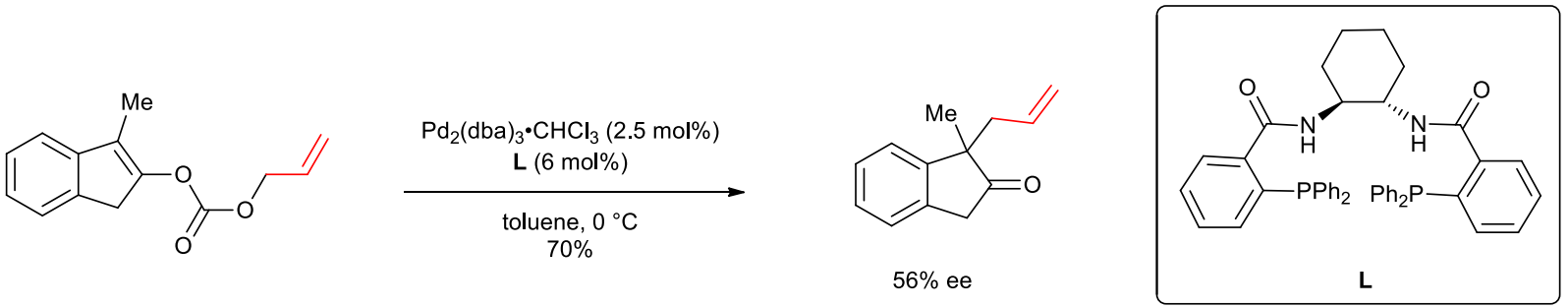
Regiodivergent Synthesis of Functionalized Indene Derivatives via Pd-Catalyzed Rautenstrauch Reaction of Propargyl Carbonates



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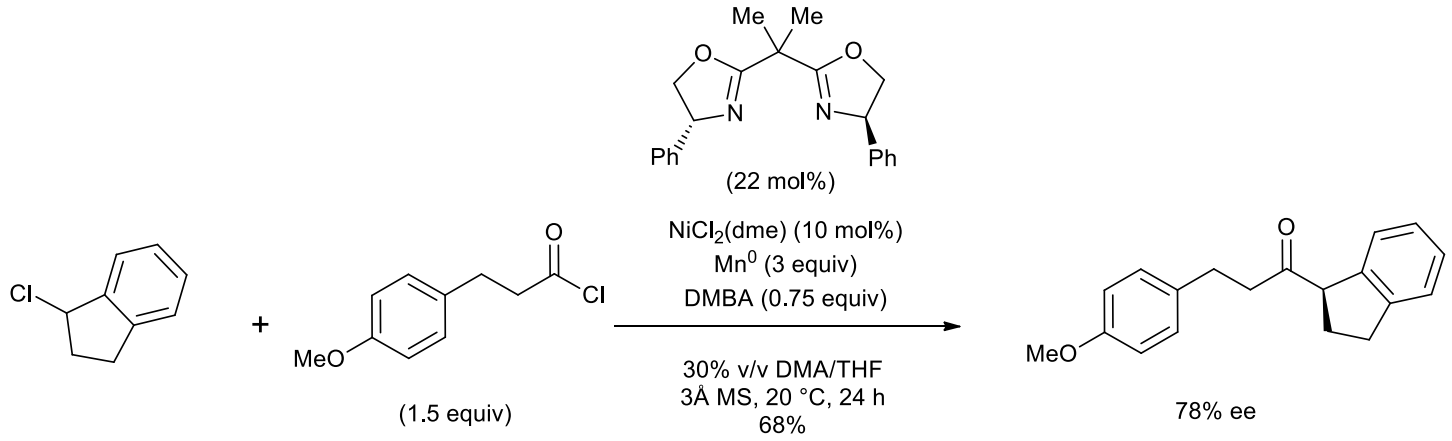
Catalytic Asymmetric Reductive Acyl Cross-Coupling: Synthesis of Enantioenriched Acyclic α,α-Disubstituted Ketones



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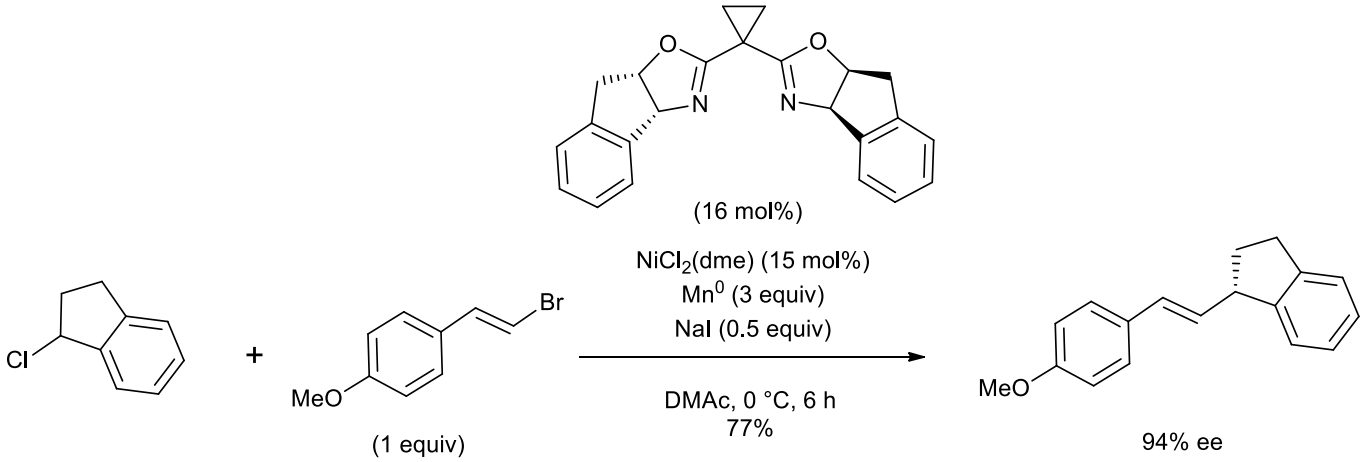
Nickel-Catalyzed Asymmetric Reductive Cross-Coupling Between Vinyl and Benzyl Electrophiles



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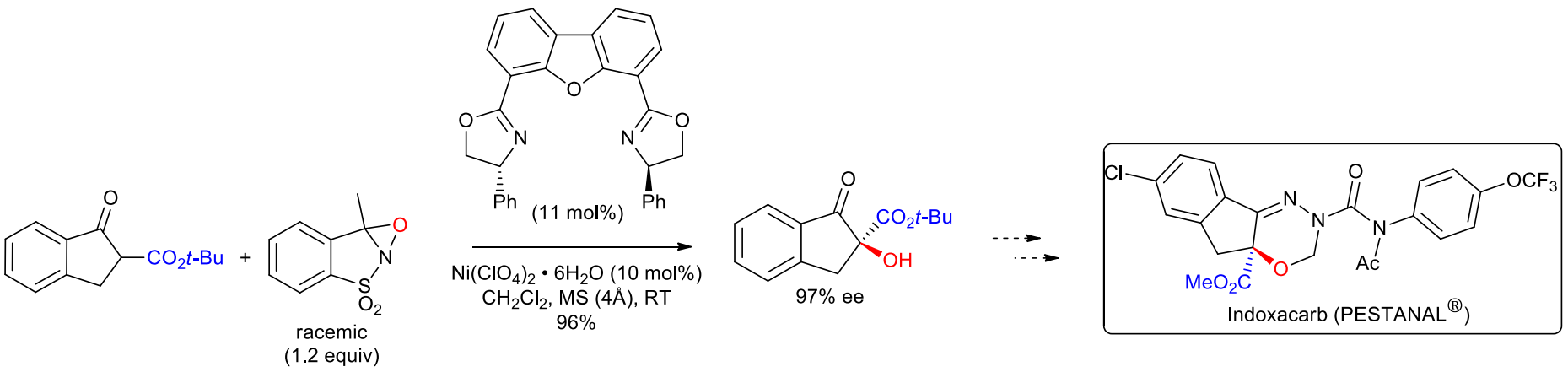
Lewis Acid-Catalyzed Enantioselective Hydroxylation Reactions of Oxindoles and β-Keto Esters Using DBFOX Ligand



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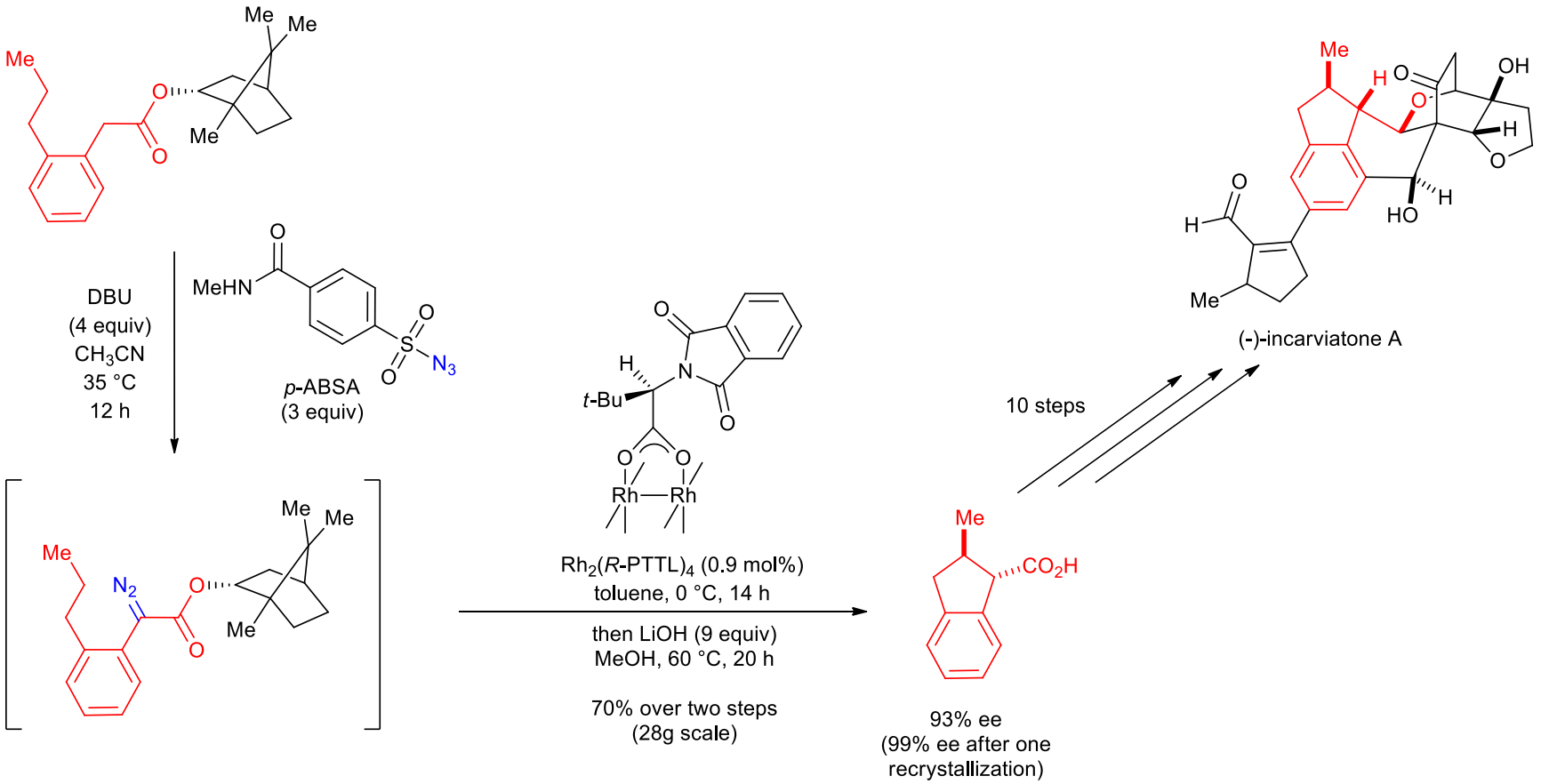
Total synthesis involving an indanyl scaffold

Enantioselective Total Synthesis of (−)-Incarviatone A



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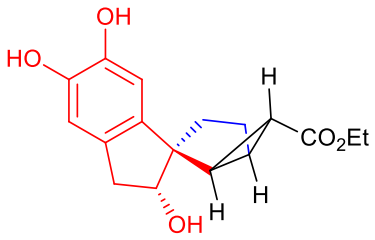
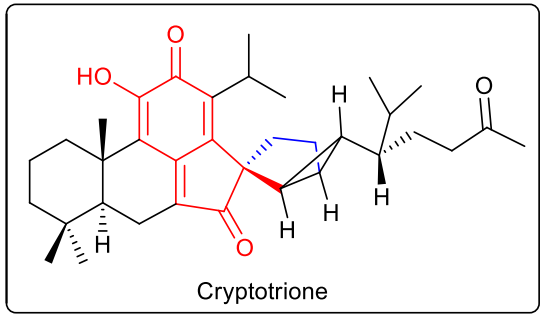
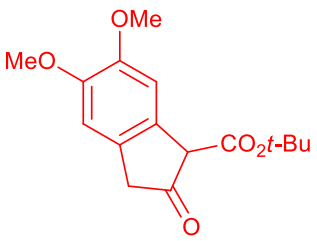
Stereoselective construction of the tetracyclic core of Cryptotrione



Cryptotrione core



Cryptotrione



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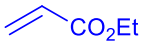
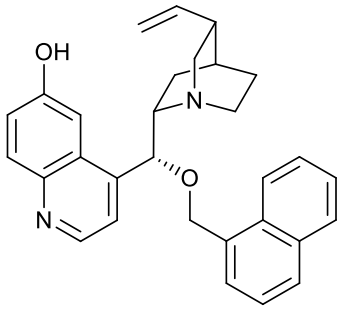


(3 equiv)



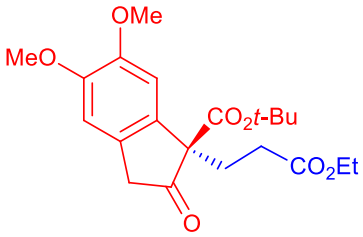
R = 1-naphthylmethyl

(10 mol%)

$CHCl_3$

72%

9 steps



90% ee

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