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Asymmetric copper-catalyzed alkylations and autocatalysis

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Asymmetric copper-catalyzed alkylations and autocatalysis

Tilde Pellegrini

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List of abbreviations

ACA: asymmetric conjugate addition

API: active pharmaceutical ingredient

BINAP: 2,2'-bis(diphenylphosphino)-1,1'-binaphthyl

BINOL: 1,1'-bi-2-naphthol

Boc: *tert*-butyl carbamate

CA: conjugate addition

CBS reduction: Corey-Bakshi-Shibata reduction

CSP-HPLC: chiral solid phase high performance liquid chromatography

DMAE: 2-dimethylaminoethanol

ee: enantiomeric excess

EWG: electron withdrawing group

GC/MS: gas chromatography/mass spectroscopy

HMBC: heteronuclear multiple bond correlation spectroscopy

HMPA; hexamethylphosphoramide

HRMS: high resolution mass spectroscopy

HSQC: heteronuclear single quantum coherence spectroscopy

LA: Lewis Acid

M: metal

MTBE: methyl-*tert*-butylether

NMR: nuclear magnetic resonance

o.n.: overnight

rt: room temperature

TFA: trifluoroacetic acid

THF: tetrahydrofuran

TLC: thin layer chromatography

TM: transition metal

TMEDA: tetramethylethylenediamine

TMSBr: trimethylsilyl bromide

TMSCl: trimethylsilyl chloride

TMSOTf: trimethylsilyl trifluorosulfonate