*CHEM 342 – Lecture 12 12/03/15*

Overheads: - Today’s Outline

Recap Tuesday:

Enolates:

1. C-alkylation *vs* O-alkylation

“bound” enolate “free enolate”

-Li, less polar solvents - Na, K, chelating solvents / crown ethers

- LG = halide - LG = sulfonate

1. kinetic *vs* thermodynamic

- least sub - most sub = most stable

- big base - small base

- cold - hot

Addition to -unsaturated carbonyls



Direct vs Conjugate Addition: depends on Nu–

1) Nu– = Grignard – usually adds conjugate





2) Nu– = R-Li – almost always adds direct



complementary

3) Nu– = organocuprate R-Cu – always adds conjugate



4) Nu– = enolate – usually adds conjugate \*\*Called Michael Reaction



Aldol Reaction: enolate adds to C=O of another molecule

