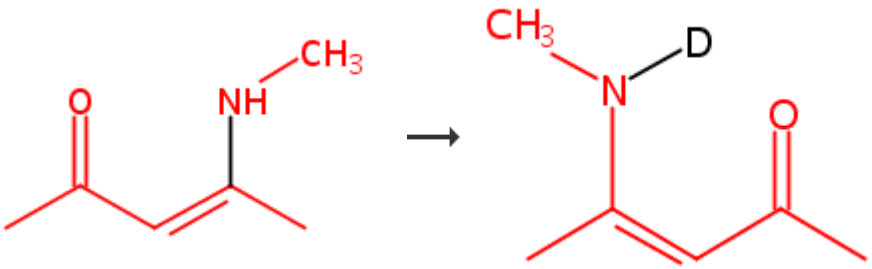
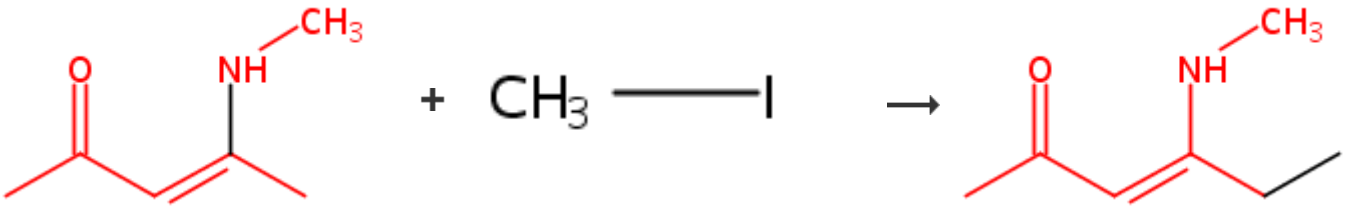
1. Single Step

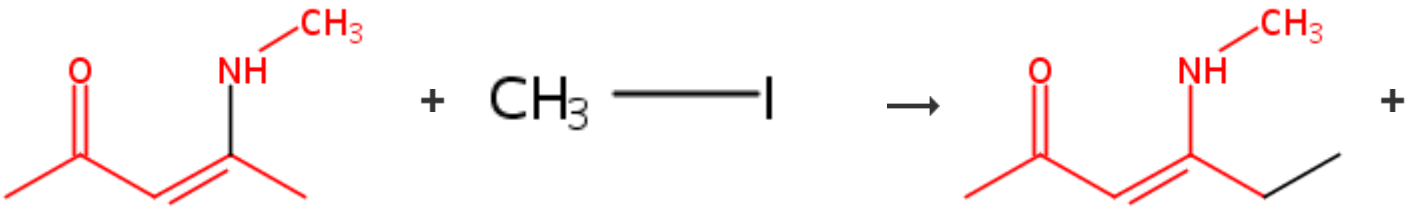


2. Single Step

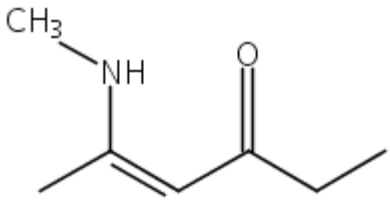


92%

3. Single Step

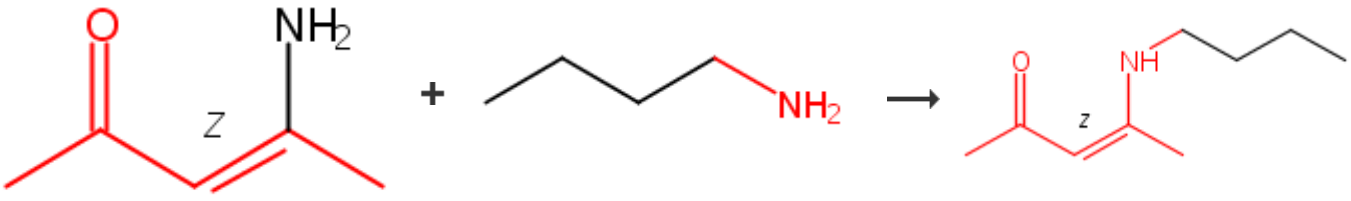


29%



54%

4. Single Step



96%

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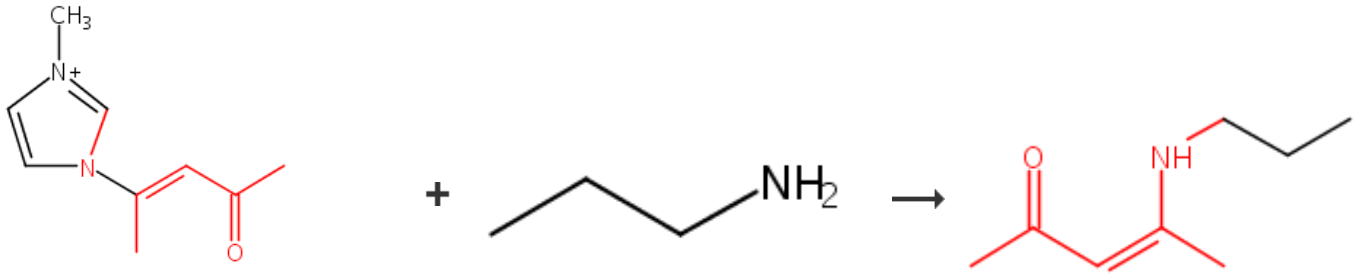
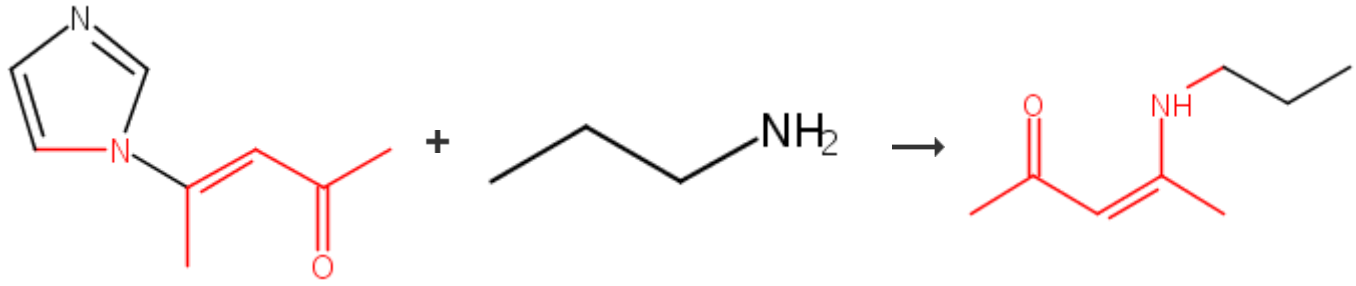


- I -

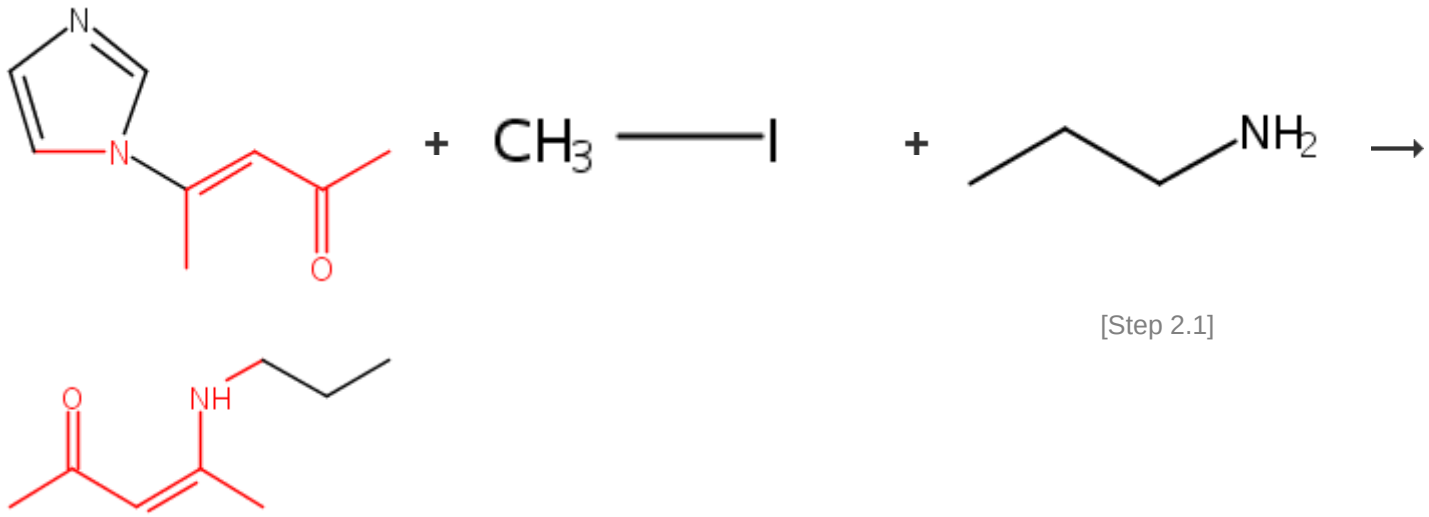
77%

6. Single Step



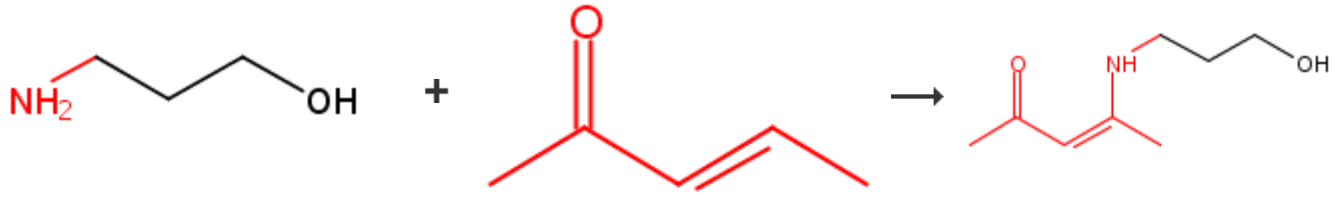
15%

7. 2 Steps

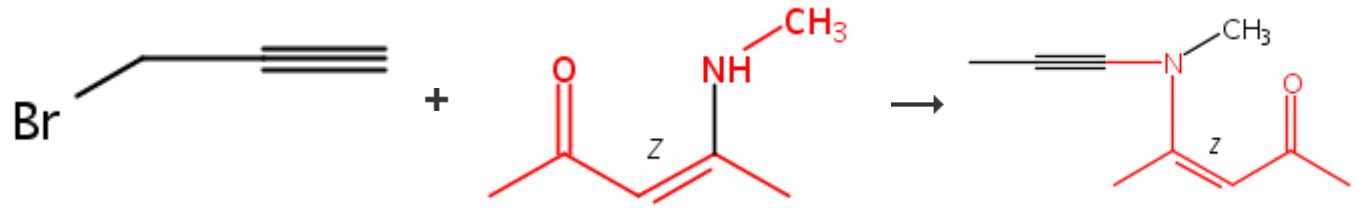


[Step 2.1]

8. Single Step



9. Single Step



16%

Reaction Protocol

Procedure

1. Add propargyl bromide (2 mmol) to a stirred solution of silver nitrate (2 mmol) in anhyd CH_3CN (10 mL) at ambient temperature.
2. Add the appropriate enaminone (1 mmol) immediately thereafter and stir the mixture overnight.

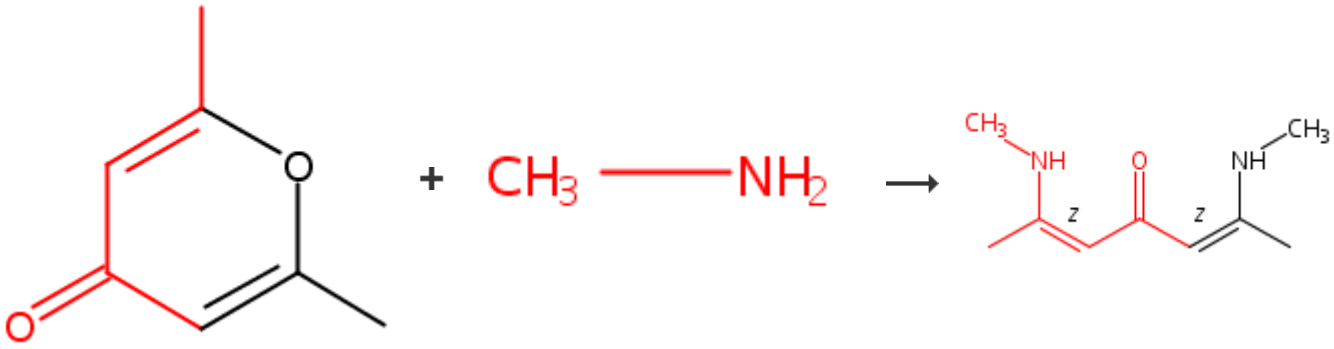
View more...

Available Experimental Data

^1H NMR, ^{13}C NMR, IR, HRMS, Mass Spec, MP, R_f, State

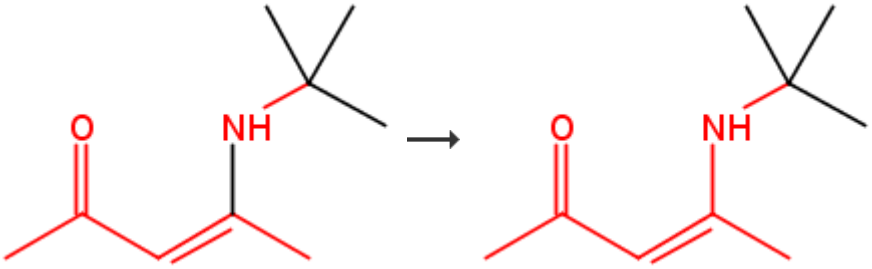
View with MethodsNow

10. Single Step



94%

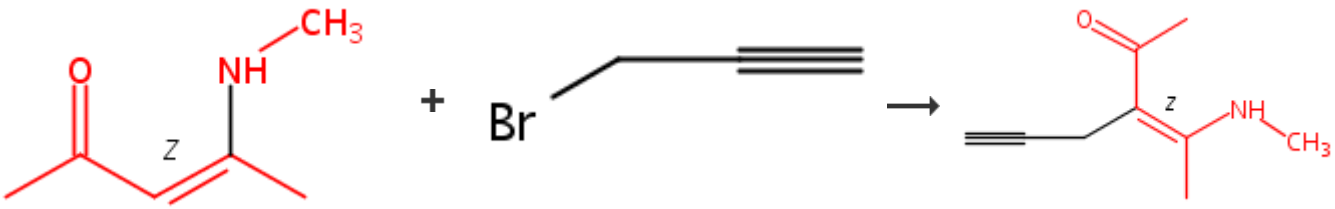
11. Single Step



sodium complex

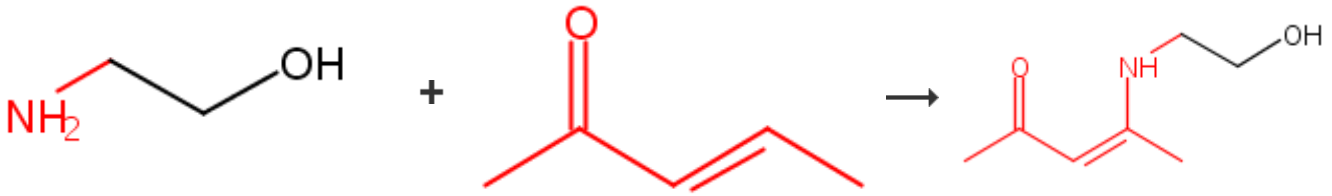
67%

12. Single Step

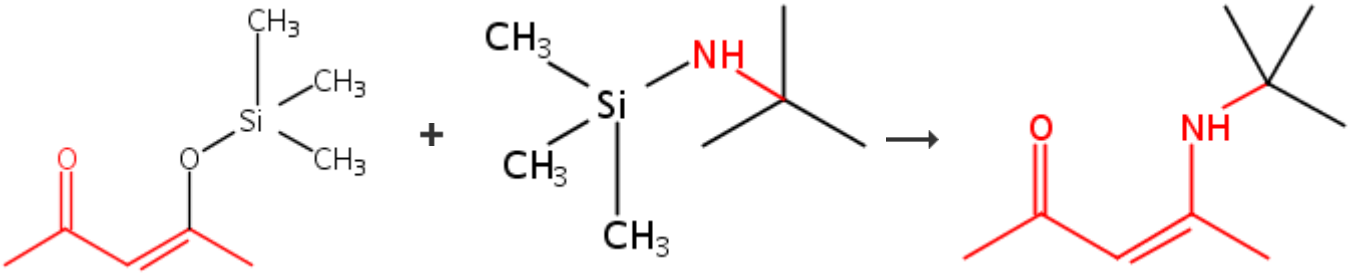


55%

13. Single Step

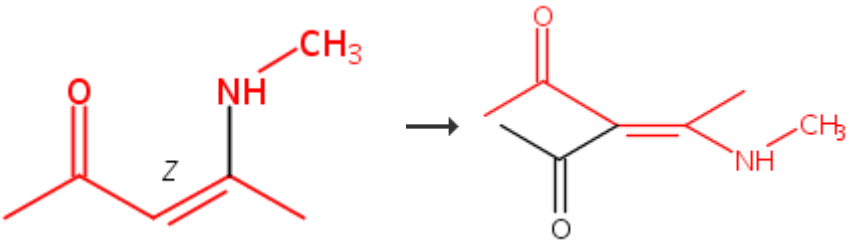


14. Single Step

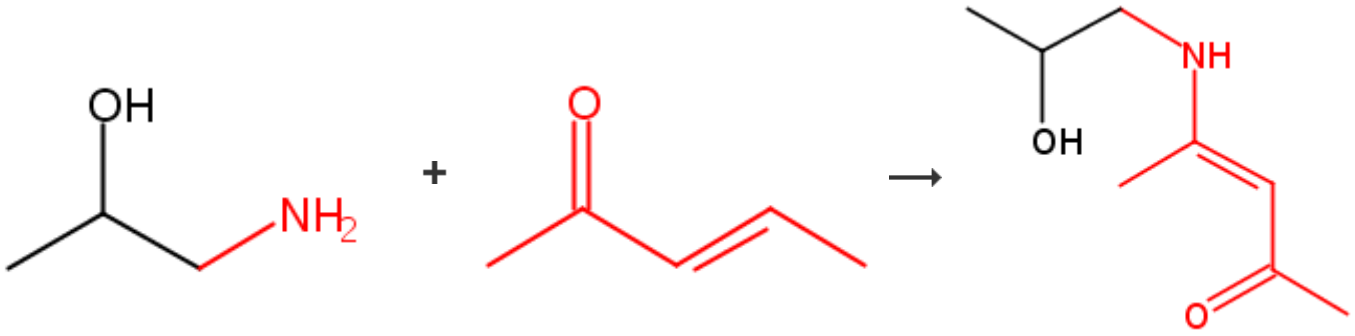


32%

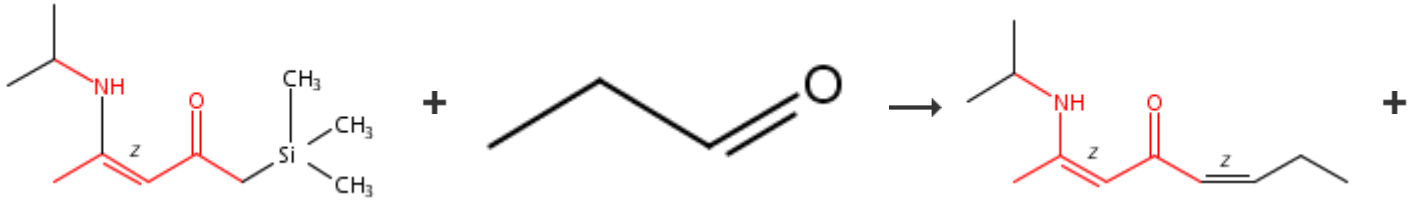
15. Single Step



16. Single Step



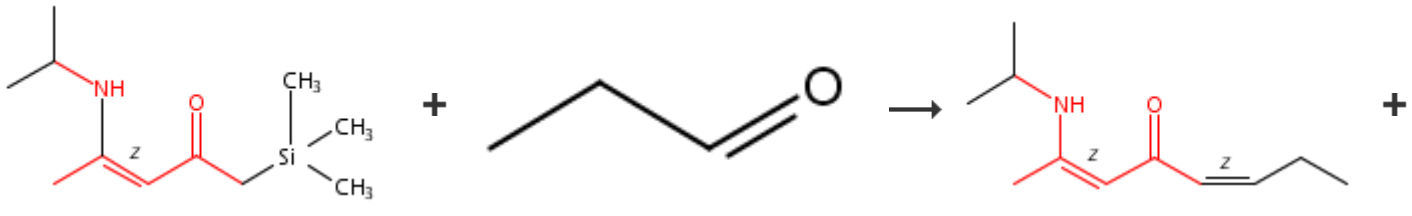
17. Single Step



7%

24%

18. Single Step



26%

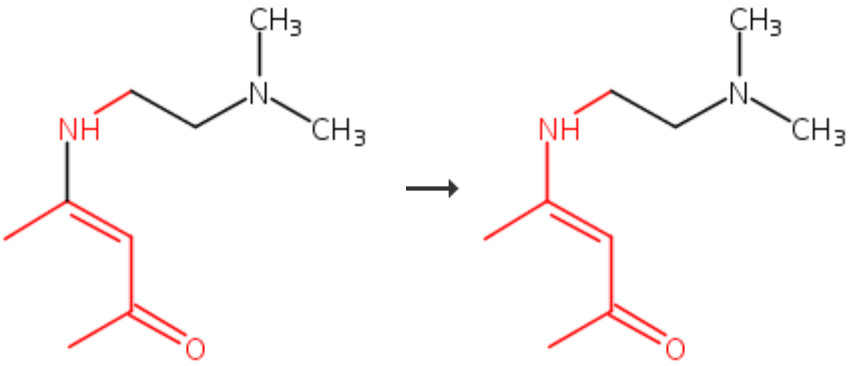
12%

19. Single Step

sodium complex

69%

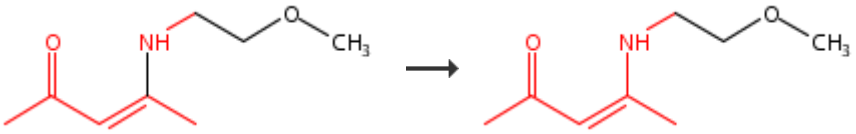
20. Single Step



sodium complex

86%

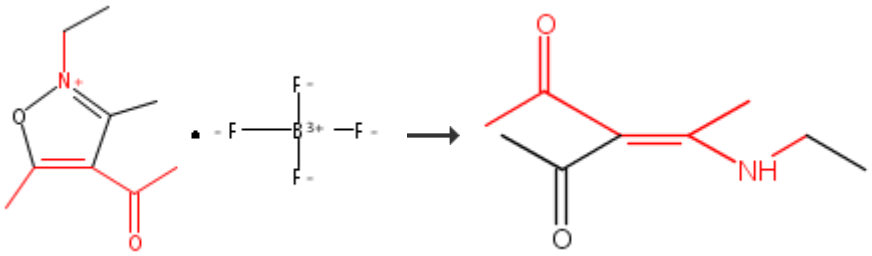
21. Single Step



sodium complex

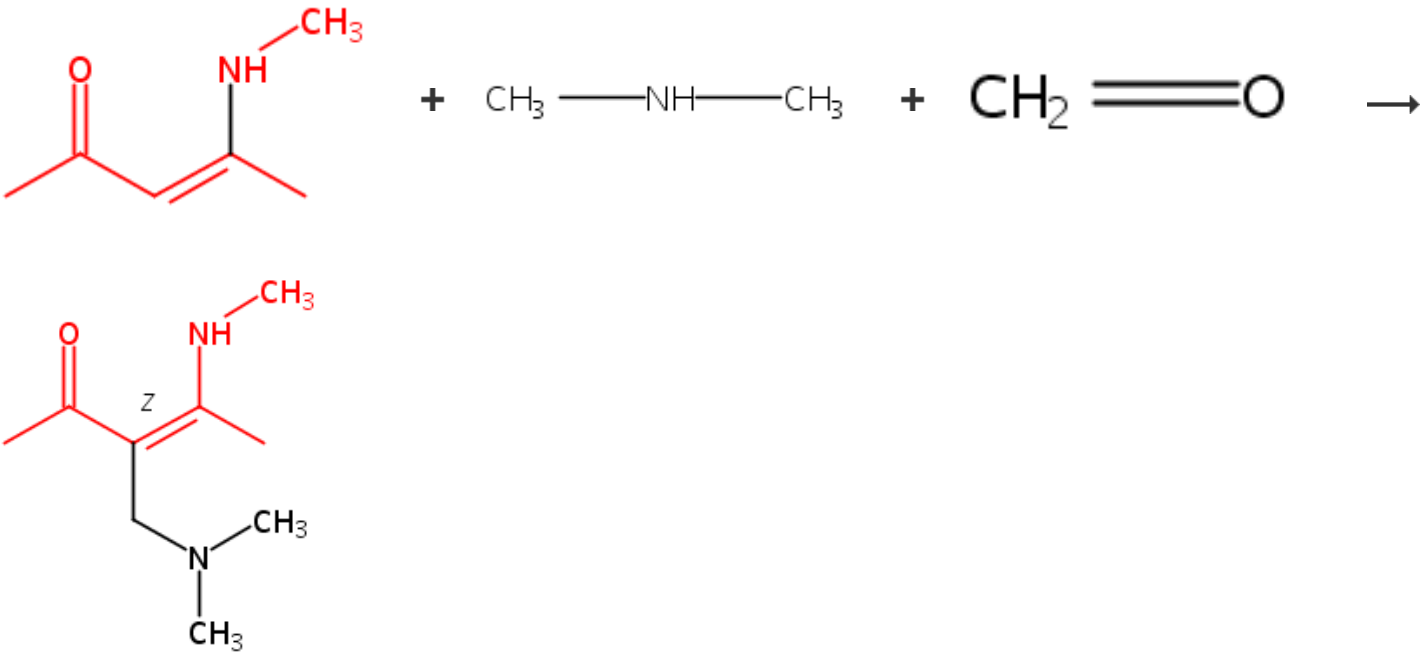
72%

22. Single Step



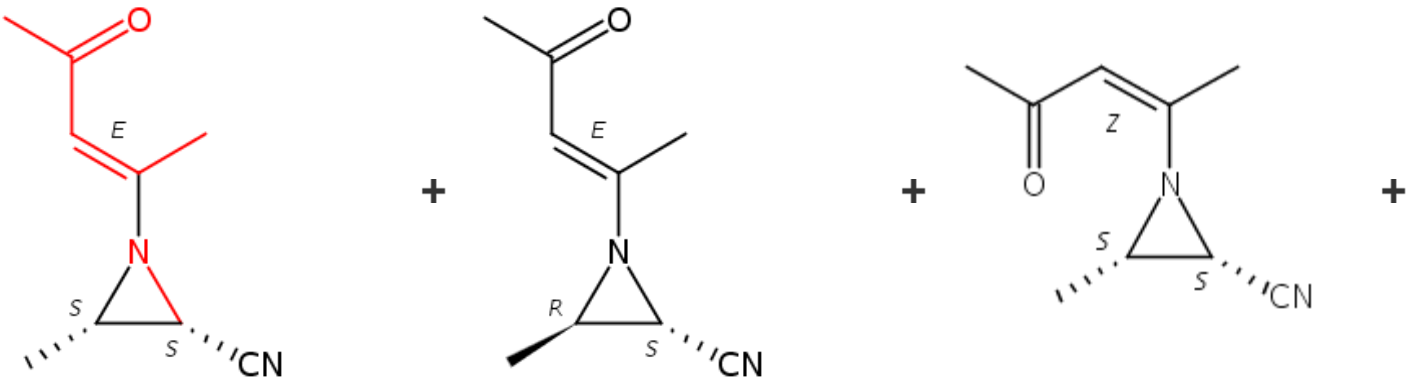
74%

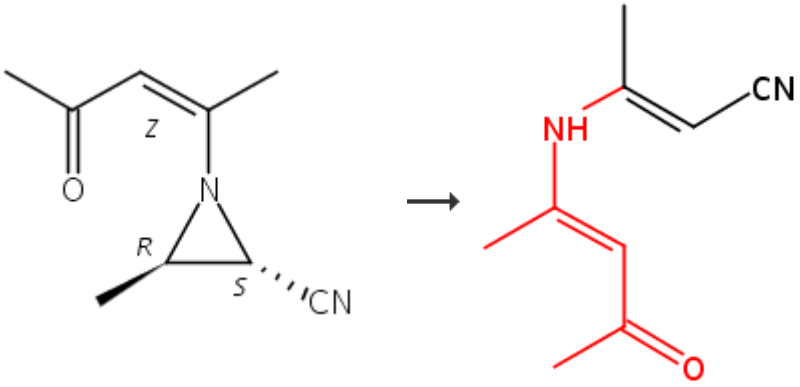
23. Single Step



70%

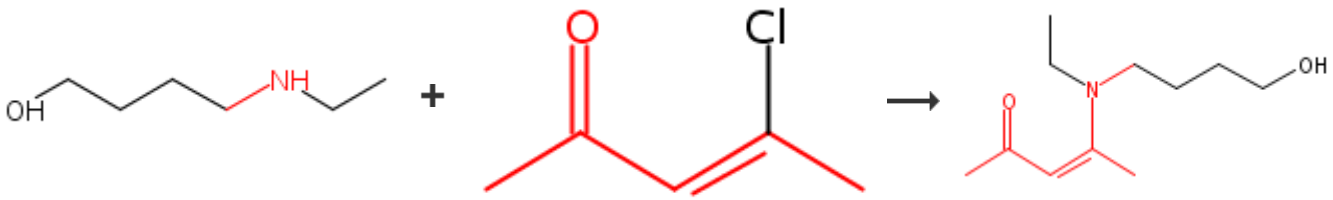
24. Single Step





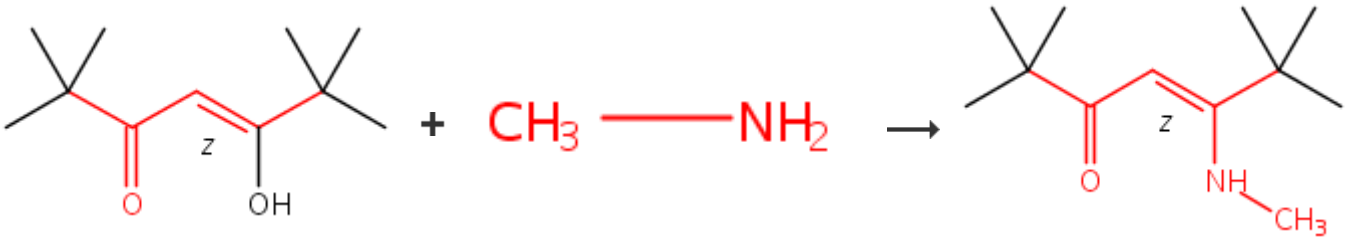
60%

25. Single Step

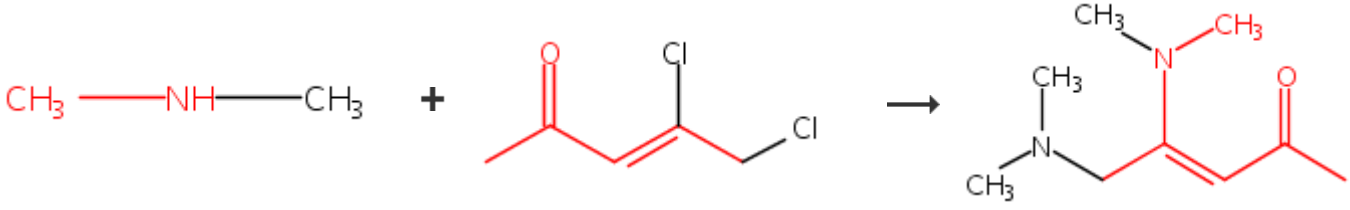


78%

26. Single Step

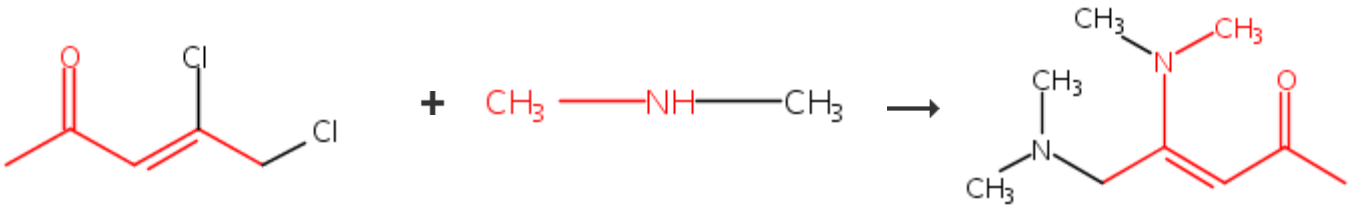


27. Single Step

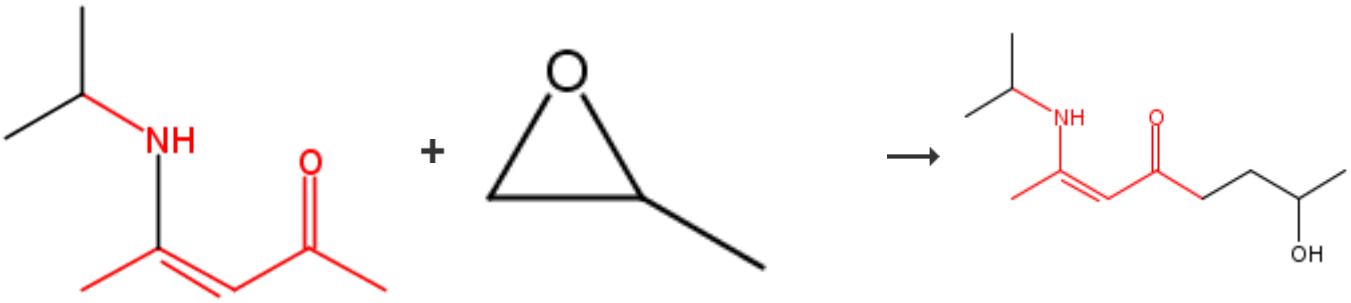


90%

28. Single Step

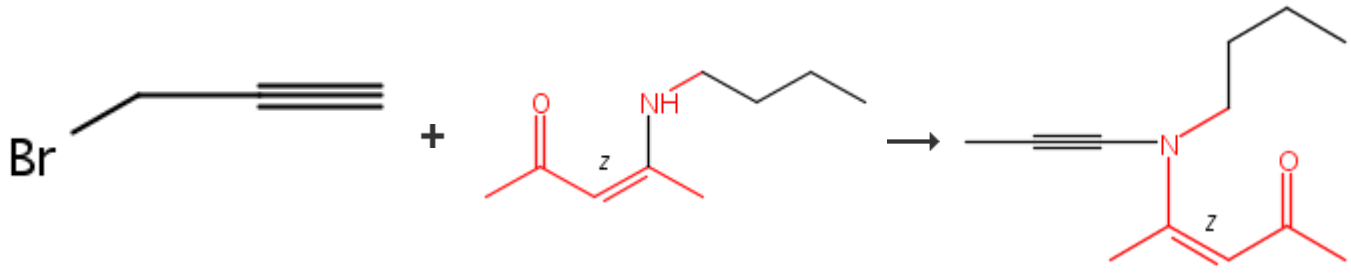


29. Single Step



61%

30. Single Step



24%

Reaction Protocol

Procedure

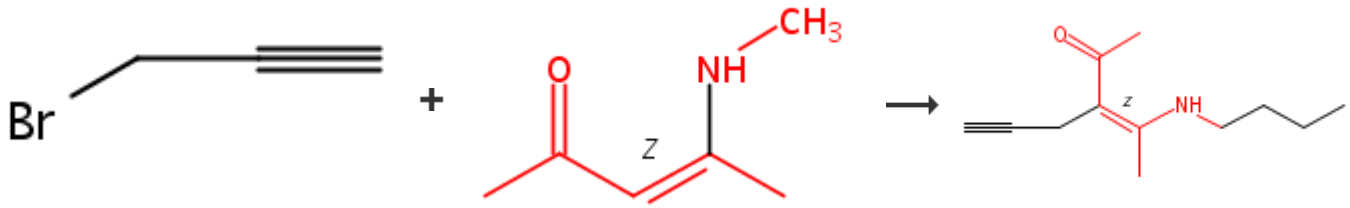
1. Add propargyl bromide (2 mmol) to a stirred solution of silver nitrate (2 mmol) in anhyd CH_3CN (10 mL) at ambient temperature.
2. Add the appropriate enaminone (1 mmol) immediately thereafter and stir the mixture overnight.

View more...

Available Experimental Data ^{1}H NMR, ^{13}C NMR, IR, HRMS, Mass Spec, R_f, State

View with MethodsNow

31. Single Step



68%

Reaction Protocol

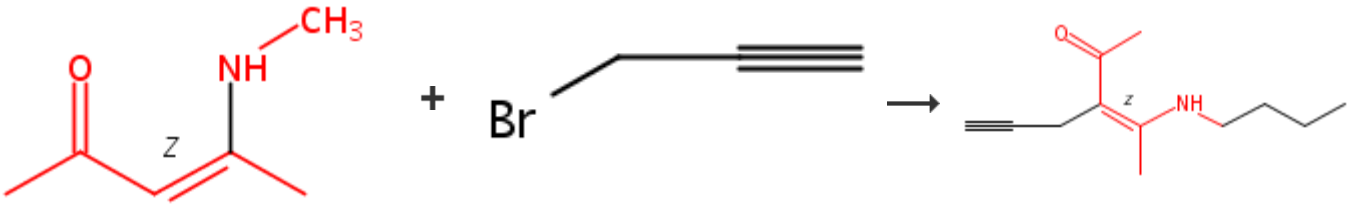
Procedure
1. Add hexyn-2-one reactant, NaH (102 mg, 2.12 mmol) to a stirred solution of (*Z*) -4- (methylamino) -3-penten-2-one (200 mg, 1.77 mmol) and propargyl bromide (0.24 ml, 0.26 g, 2.15 mmol) in anhyd THF (20 mL) at 0°C.
2. Allow the reaction mixture to warm to ambient temperature and stir overnight.

View more...

Available Experimental Data ^{1}H NMR, ^{13}C NMR, IR, R_f, State

View with MethodsNow

32. Single Step



65%

Reaction Protocol

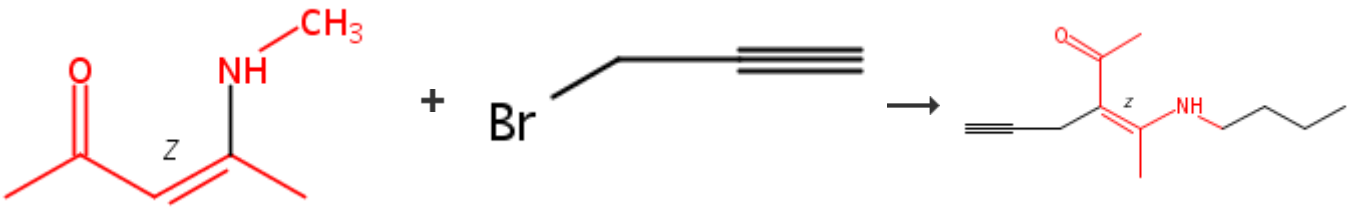
Procedure
1. Add hexyn-2-one reactant, *t*-BuLi (3.03 mL, 5.16 nmol, 1.7 M) to a stirred solution of (*Z*) -4- (methylamino) -3-penten-2-one (530 mg, 4.69 mmol) in anhyd THF (25 mL) at -78 °C and stir at that temperature for 30 min.
2. Add propargyl bromide (0.78 mL, 0.83 g, 7.03 mmol) thereafter and stir the mixture at -78 °C for a further 3 h, allow to warm to ambient temperature and stir overnight.

View more...

Available Experimental Data ^{1}H NMR, ^{13}C NMR, IR, R_f

View with MethodsNow

33. Single Step



58%

Reaction Protocol

Procedure

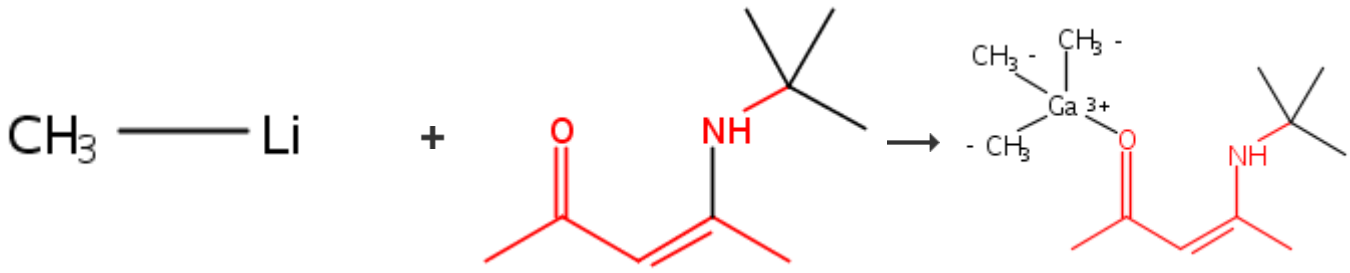
1. Add 5-hexyn-2-one reactant, *t*-BuLi (3.03 mL, 5.16 nmol, 1.7 M) to a stirred solution of (*Z*) -4- (methylamino) -3-penten-2-one (530 mg, 4.69 mmol) in anhyd THF (25 mL) at -78 °C and stir at that temperature for 30 min.
2. Add propargyl bromide (0.78 mL, 0.83 g, 7.03 mmol) thereafter and stir the mixture at -78 °C for a further 3 h, allow to warm to ambient temperature and stir overnight.

View more...

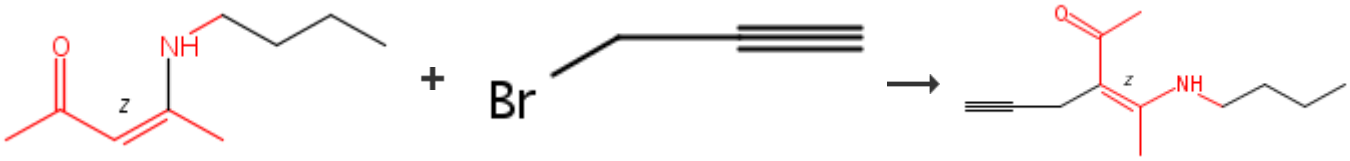
Available Experimental Data ^{1}H NMR, ^{13}C NMR, IR, R_f

View with MethodsNow

34. Single Step

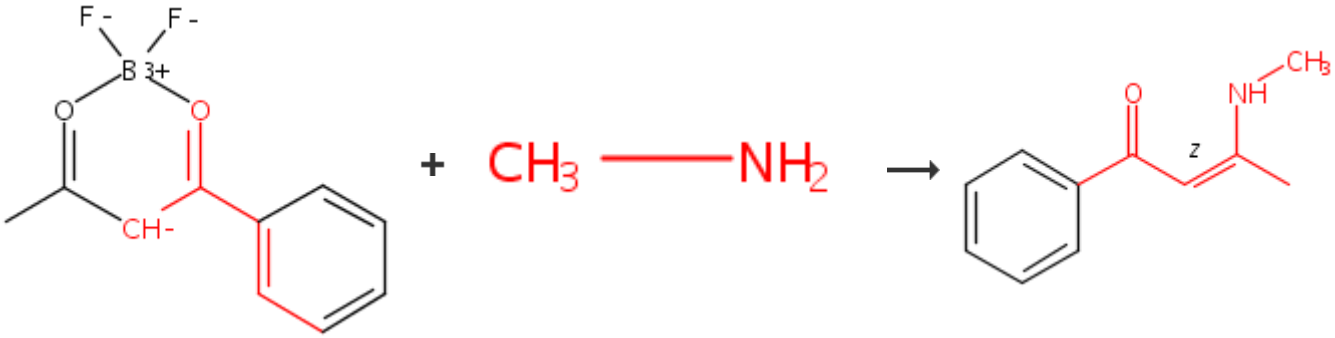


35. Single Step



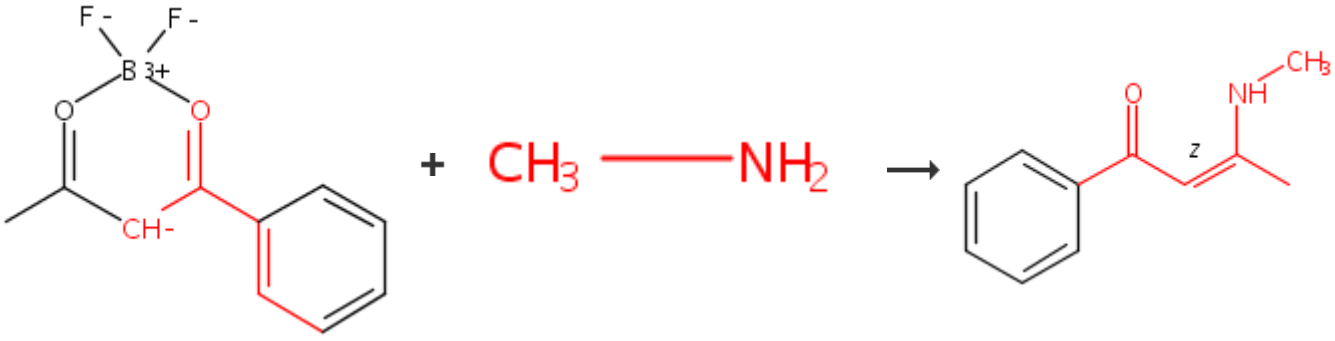
51%

36. Single Step



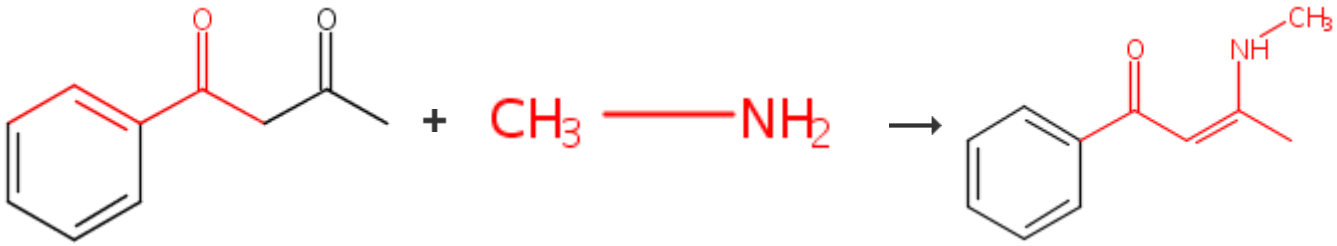
99%

37. Single Step



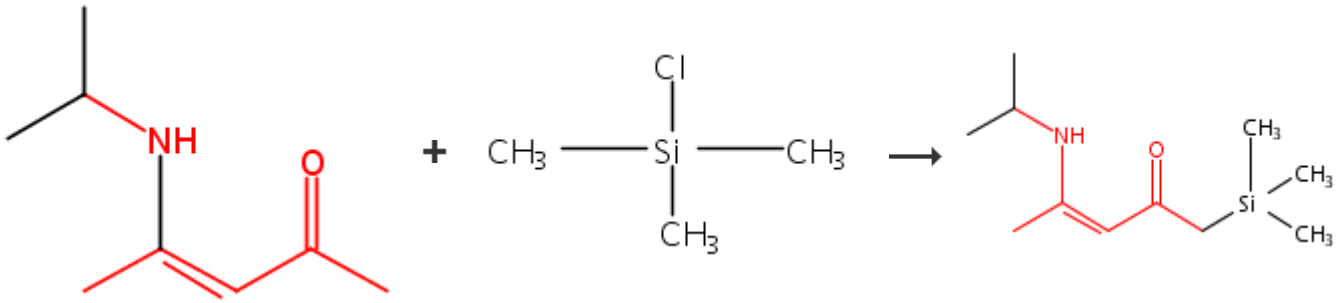
99%

38. Single Step



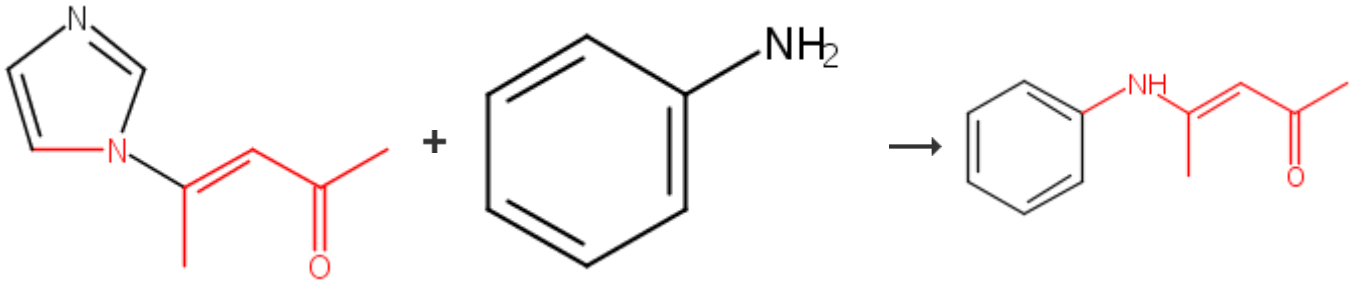
87%

39. Single Step



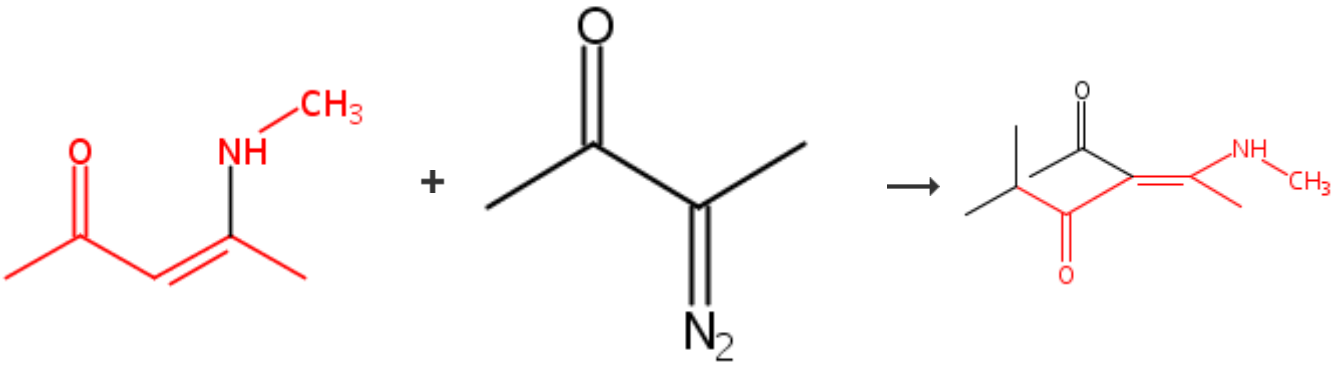
78%

40. Single Step



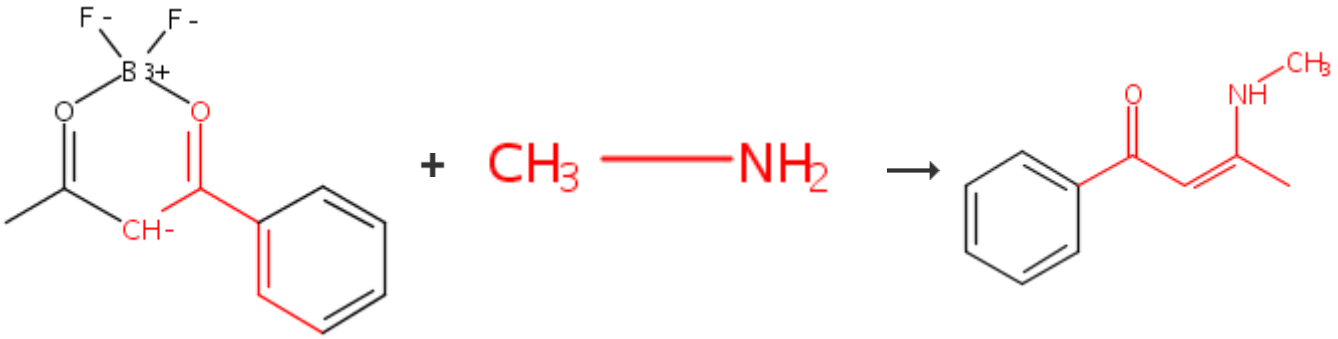
75%

41. Single Step



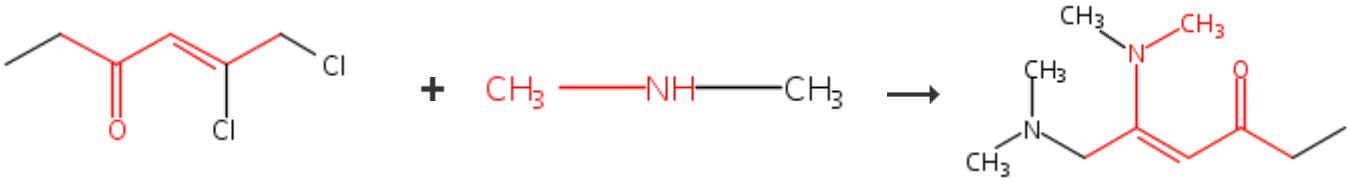
61%

42. Single Step

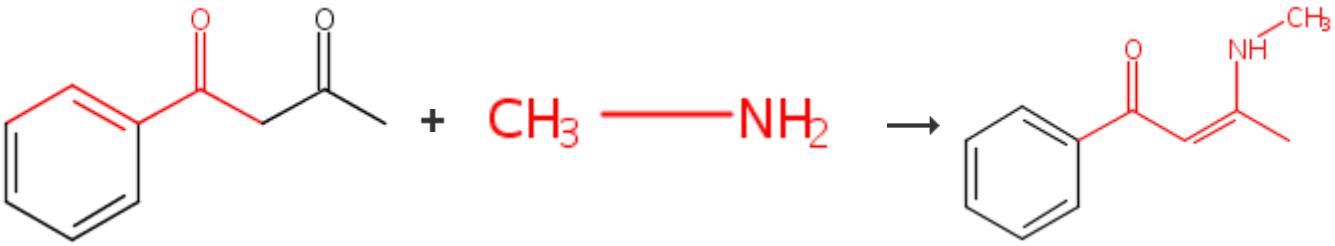


50%

43. Single Step

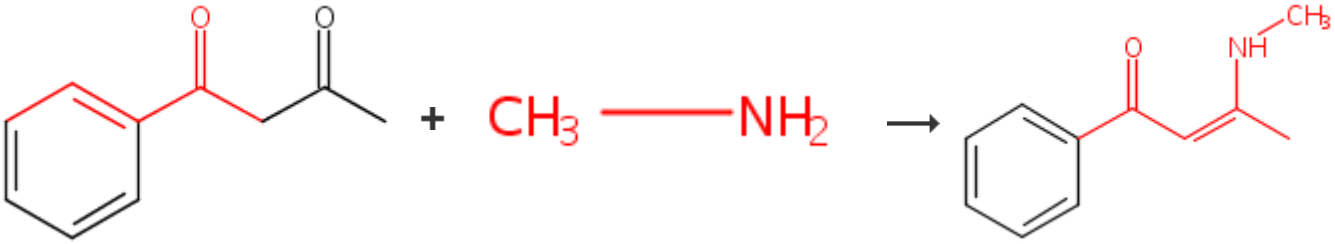


44. Single Step

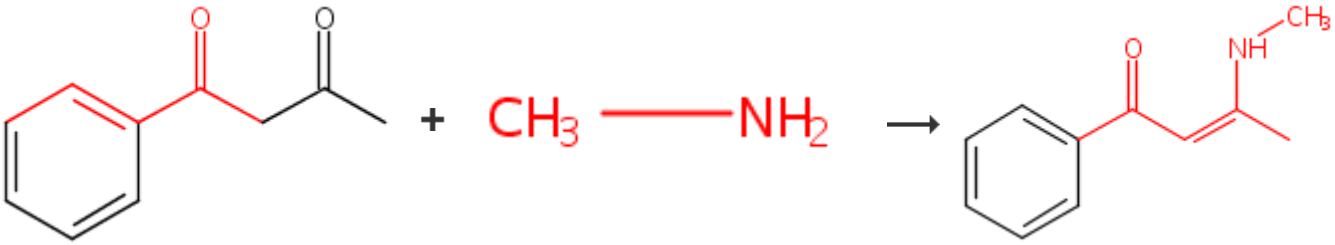


76%

45. Single Step



46. Single Step



Reaction Protocol

Procedure

1. Charge a 250-ml flask with benzoylacetone (62 mmol) and 33% ethanolic solution of methylamine (120 ml).
2. Reflux the mixture for 4 hours.

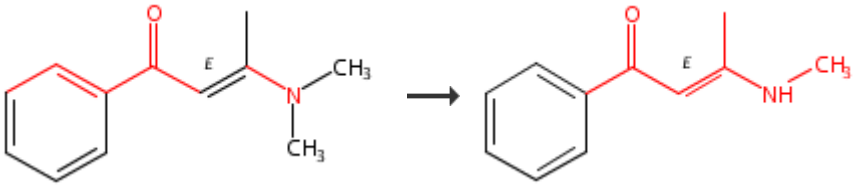
View more...

Available Experimental Data

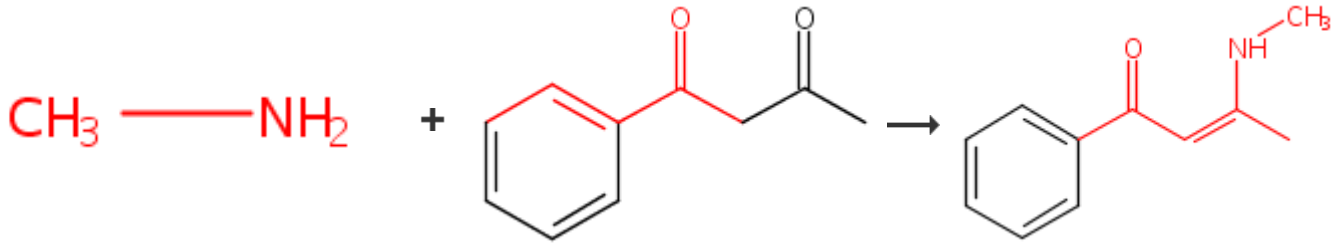
^{1}H NMR, ^{13}C NMR, MP

View with MethodsNow

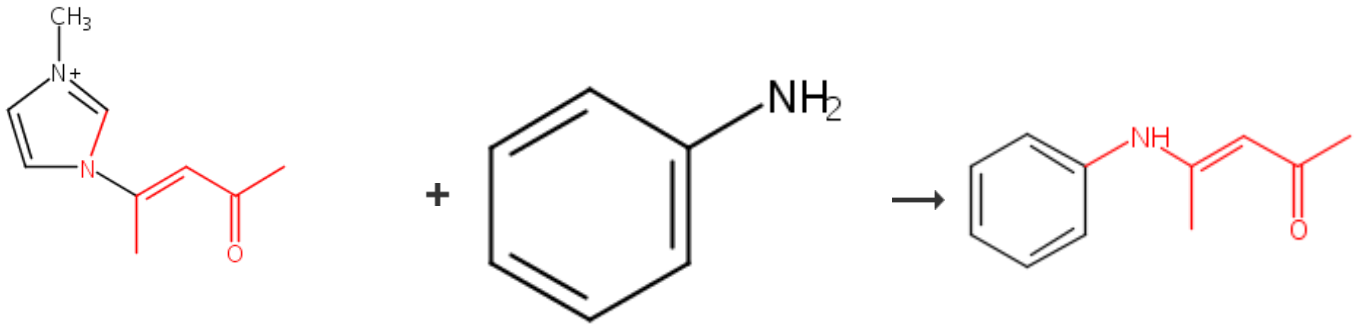
47. Single Step



48. Single Step



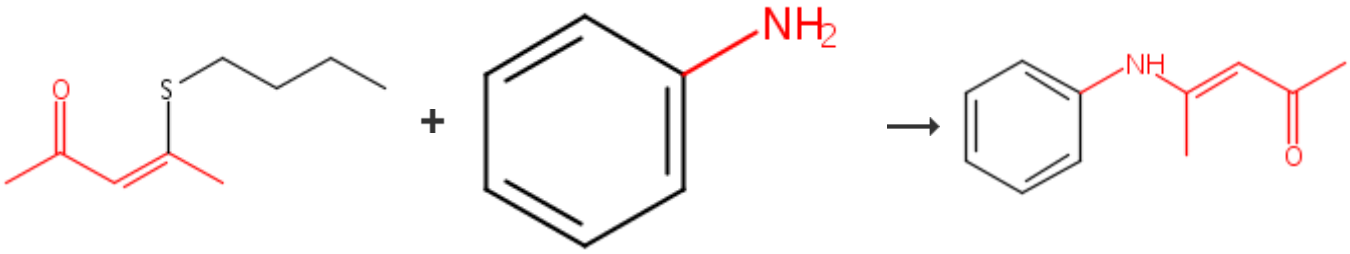
49. Single Step



- | -

22%

50. Single Step



25%

Reaction Protocol

Procedure

1. Stir a solution of the ketone (1 mmol) and the amine (1.2 mmol) in benzene (30 ml) for 10 h at room temperature or at reflux temperature or heat at 100 °C in a sealed tube.
2. Pour the reaction mixture into dilute hydrochloric acid (30 ml) .

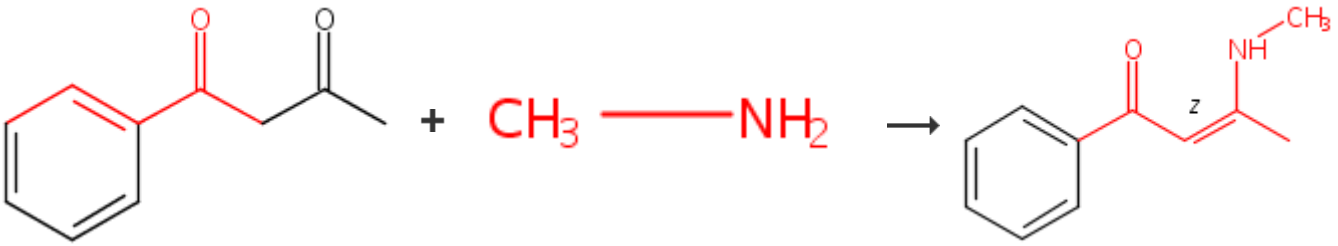
View more...

Available Experimental Data

^{1}H NMR, IR, MP

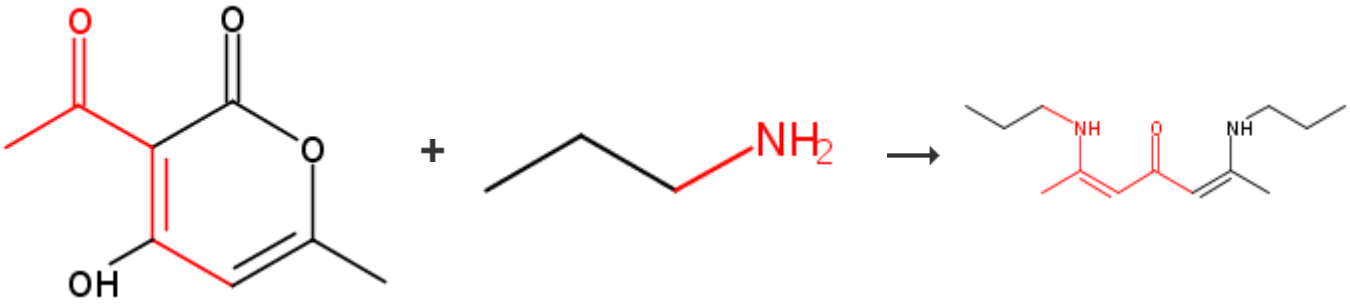
View with MethodsNow

51. 2 Steps



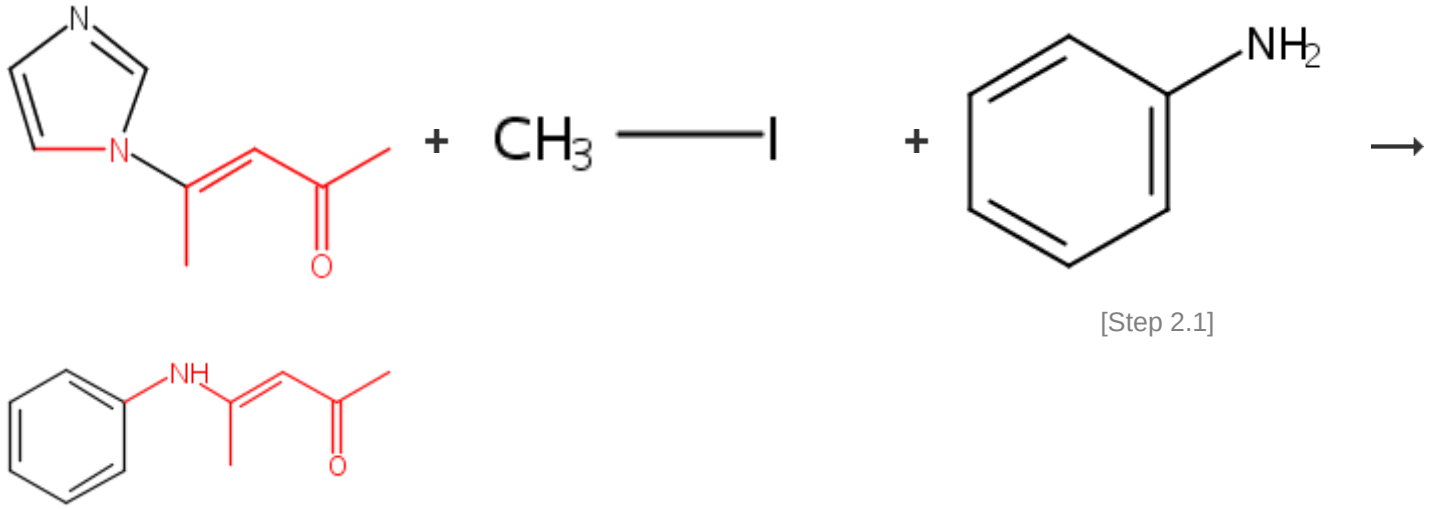
[Step 2.1]

52. Single Step



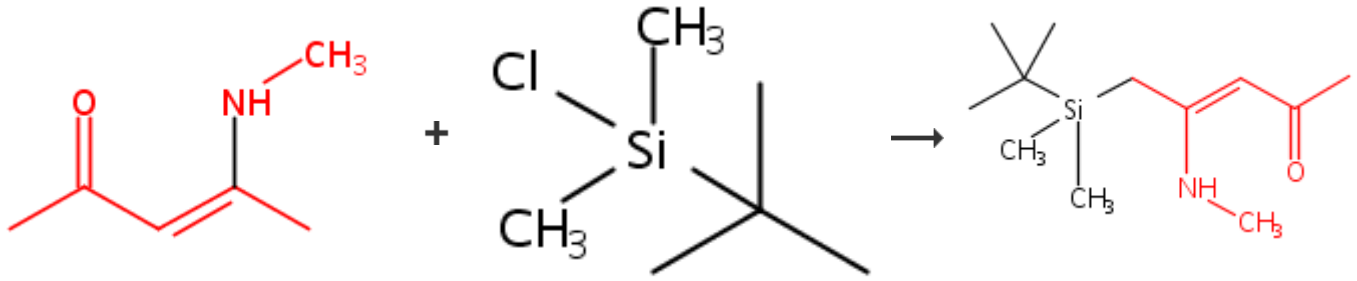
29%

53. 2 Steps



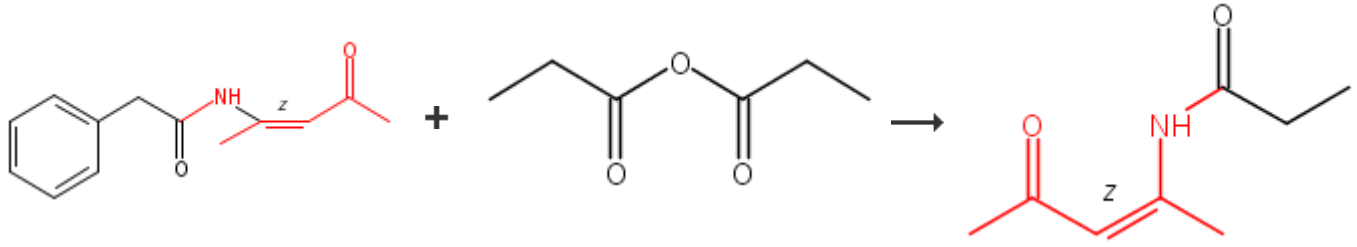
[Step 2.1]

54. Single Step



77%

55. 2 Steps



[Step 2.1]

Reaction Protocol

Procedure

1. Add KO*t*-Bu (70 mg, 0.62 mmol) to a stirred solution of the (Z)-N-(3-oxo-1,3-diphenylprop-1-enyl)propionamide (143 mg) in THF (5 mL) at 0 °C.
2. Stir the mixture overnight while being allowed to warm up to room temperature.

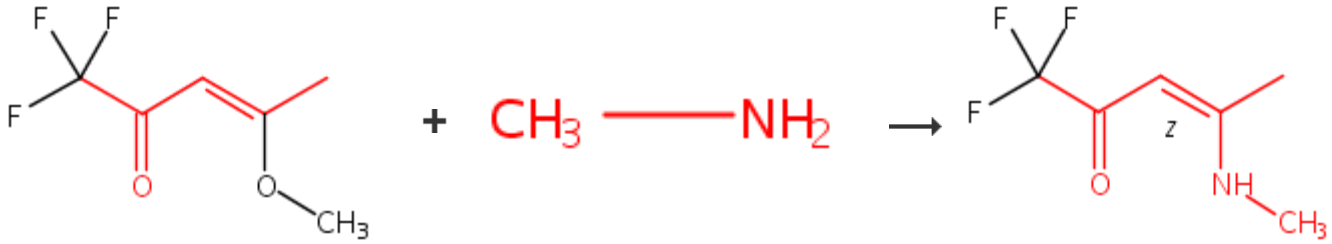
View more...

Available Experimental Data

^{1}H NMR, ^{13}C NMR, IR, Elemental Analysis, HRMS, Mass Spec, MP, State

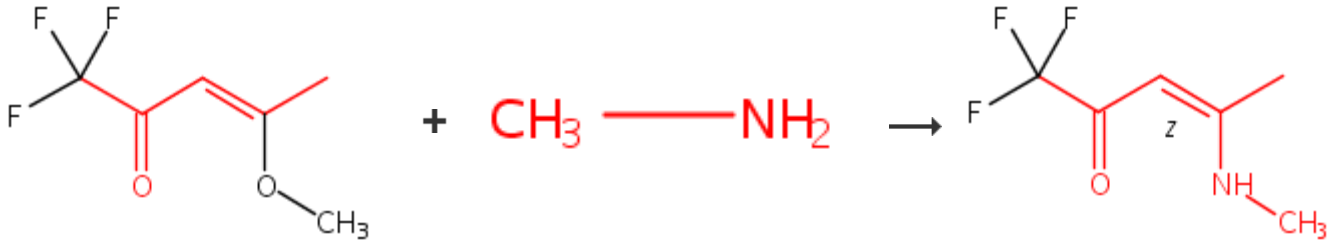
View with MethodsNow

56. Single Step



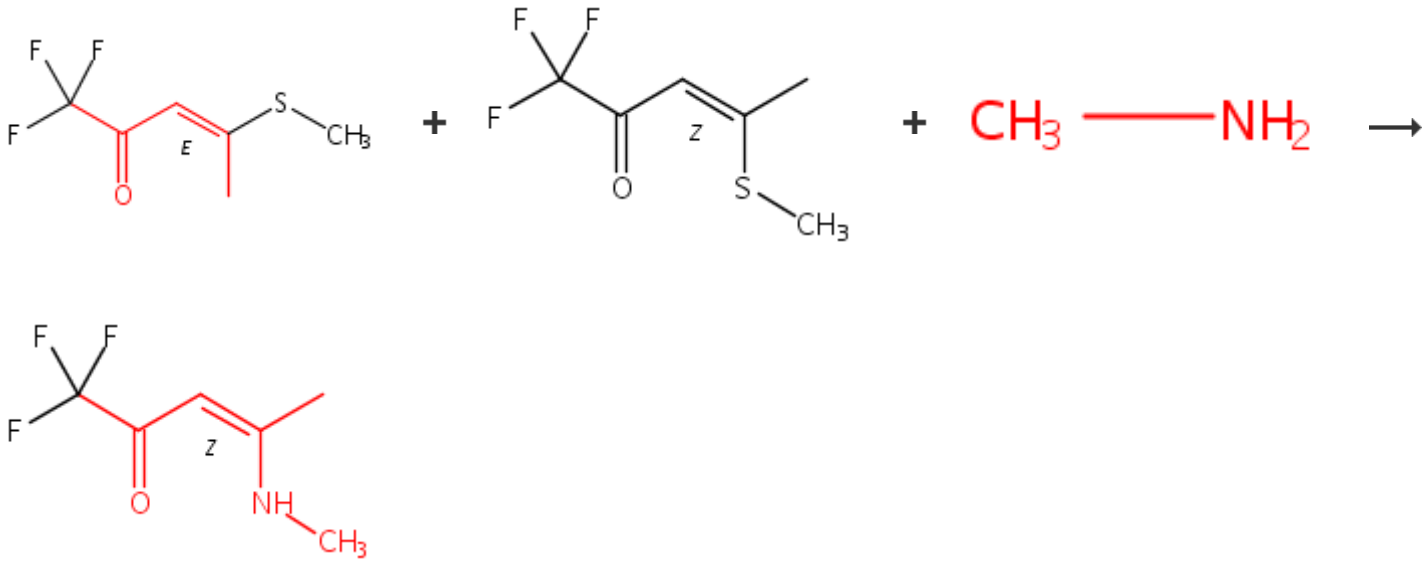
92%

57. Single Step



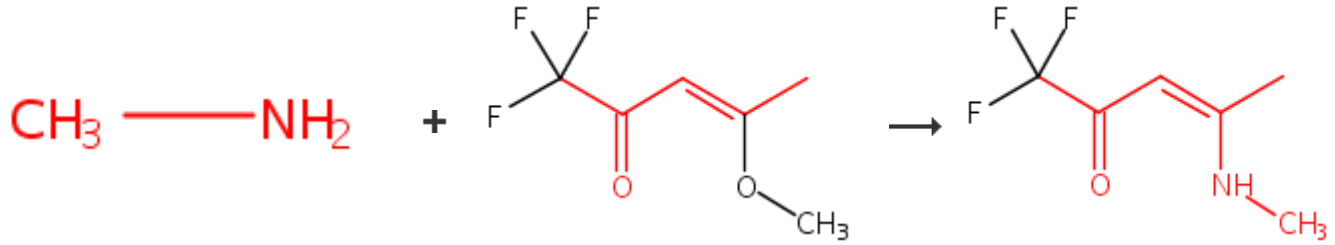
70%

58. Single Step

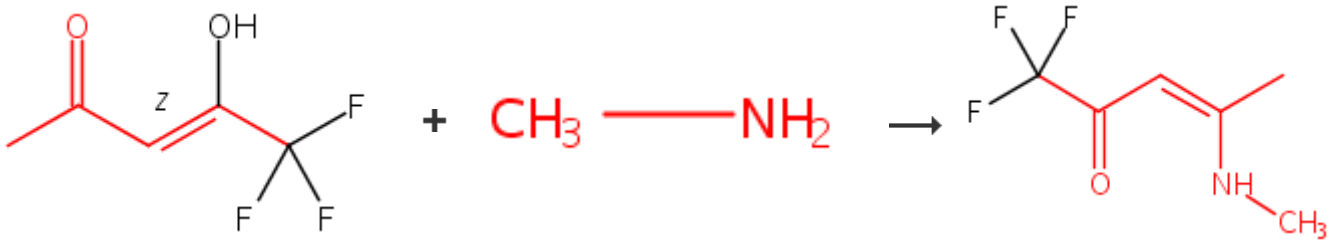


76%

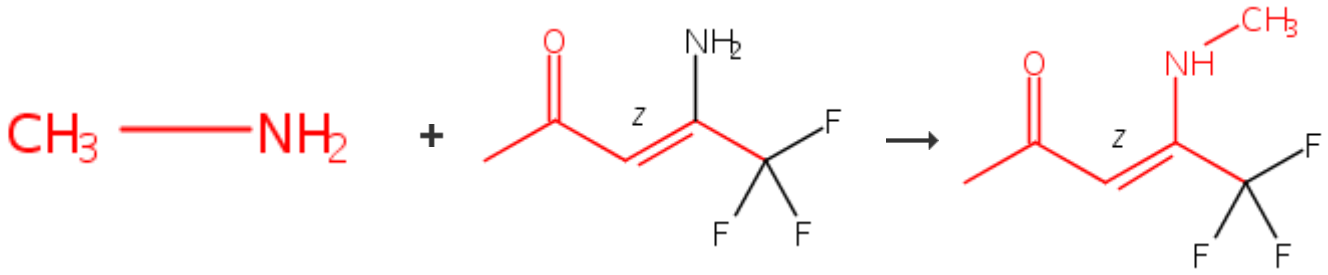
59. Single Step



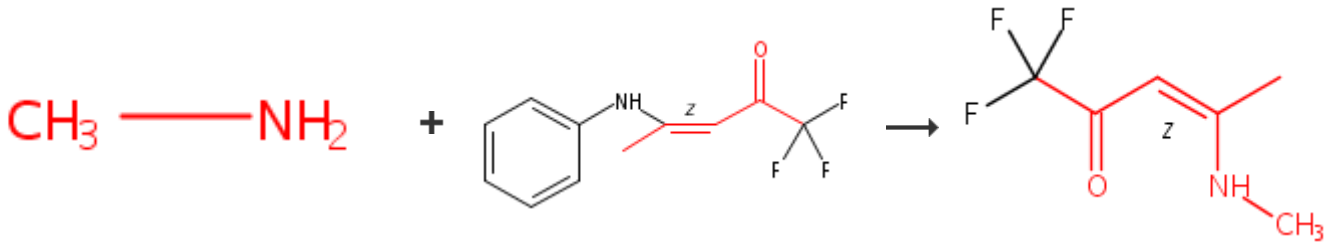
60. Single Step



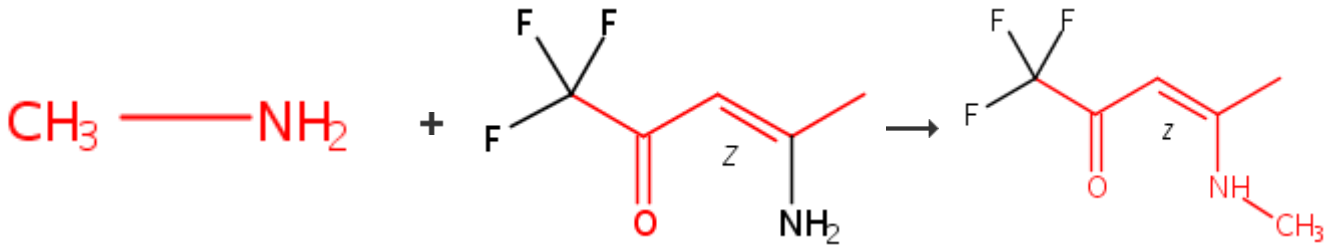
61. Single Step



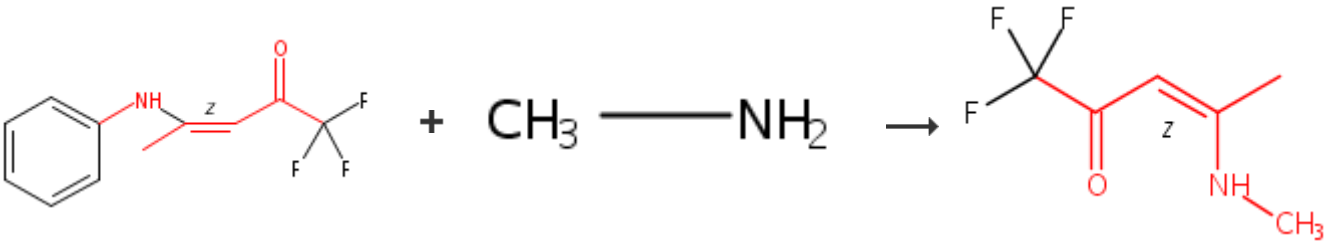
62. Single Step



63. Single Step

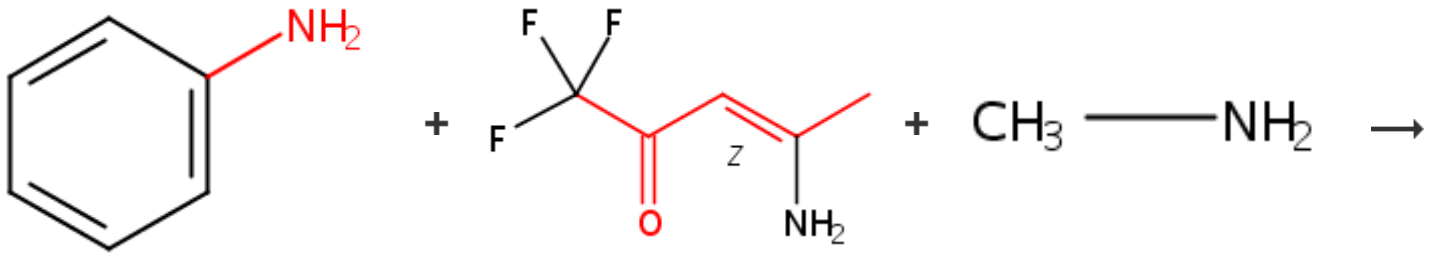


64. 2 Steps

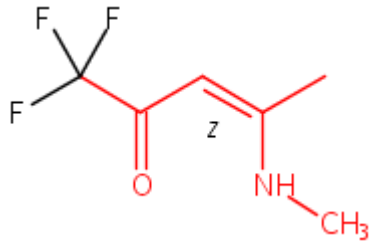


[Step 2.1]

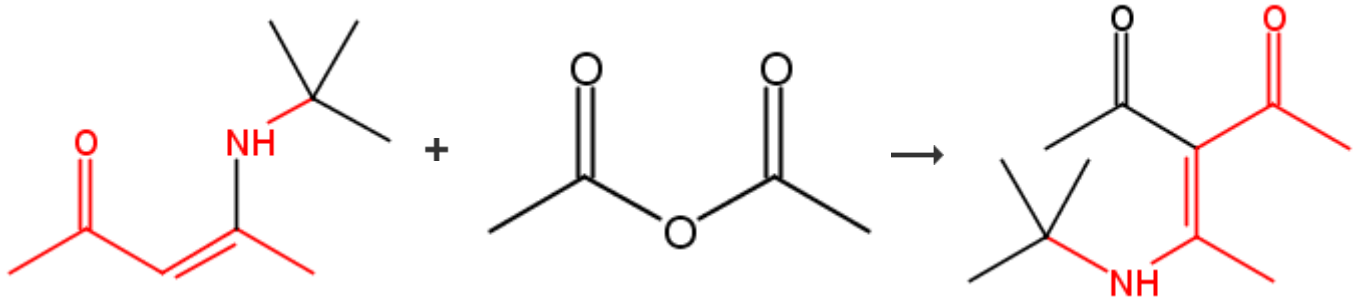
65. 2 Steps



[Step 2.1]

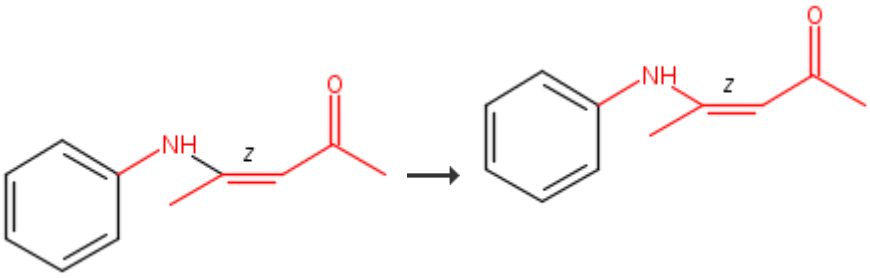


66. Single Step



63%

67. Single Step



- Li

Reaction Protocol

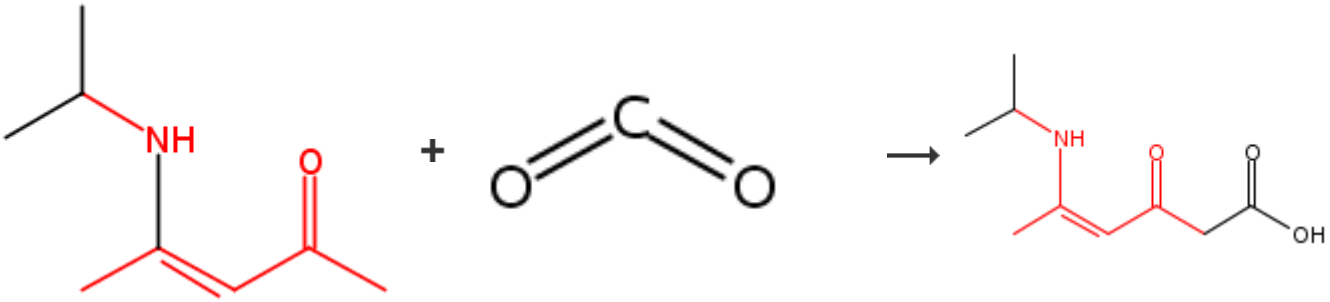
Procedure

1. Add 1.6 M n-butyllithium hexane solution (6.25 mL, 10.0 mmol) dropwise to a dried toluene solution (50 mL) of (Z)-4-(phenylamino)pent-3-en-2-one (1.75 g, 10.0 mmol) at -78 °C.
2. Stir the reaction mixture.

View more...

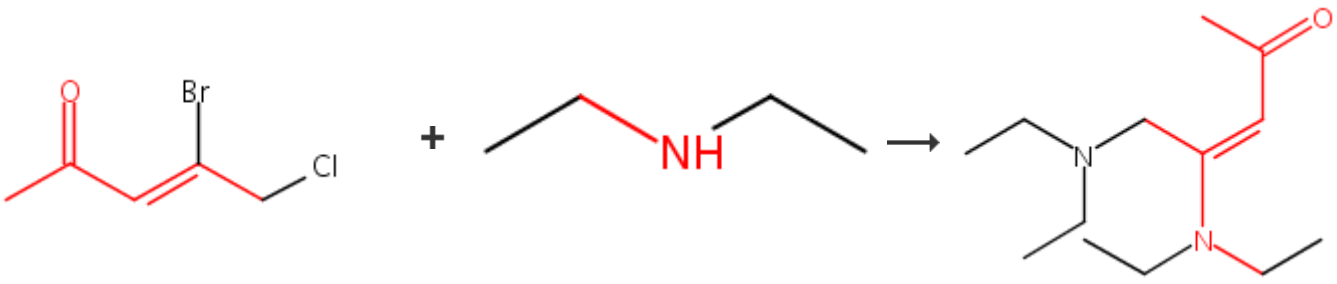
View with MethodsNow

68. Single Step



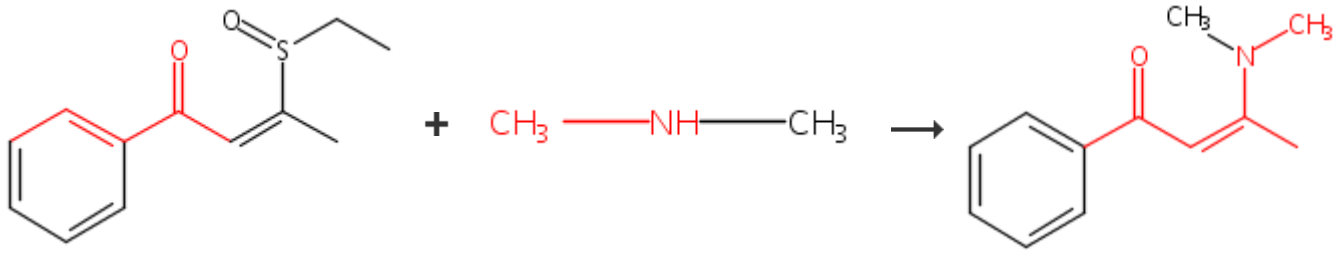
90%

69. Single Step



86%

70. Single Step



95%

Reaction Protocol

Procedure

1. Stir a solution of the ketone (1 mmol) and the amine (1.2 mmol) in benzene (30 ml) for 1 h at room temperature.
2. Pour into dilute hydrochloric acid (30 ml) .

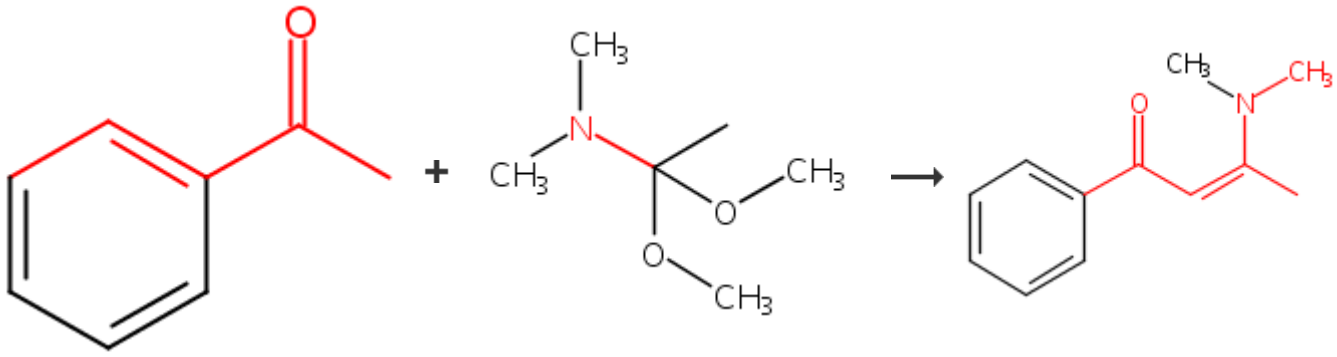
View more...

Available Experimental Data

^{1}H NMR, IR, Elemental Analysis, MP

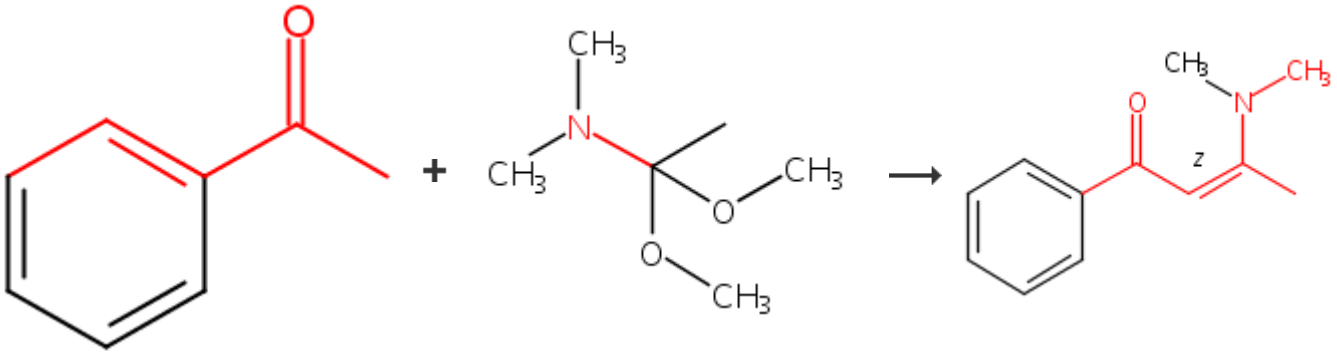
View with MethodsNow

71. Single Step

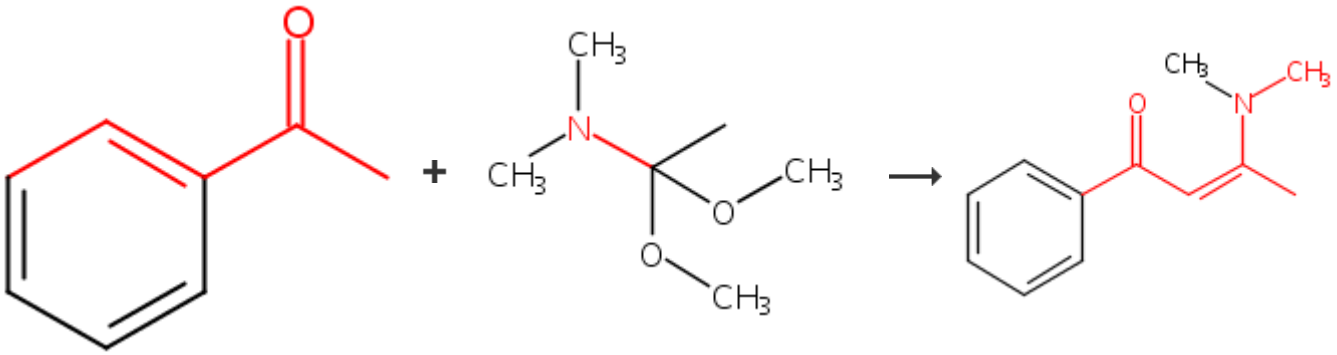


87%

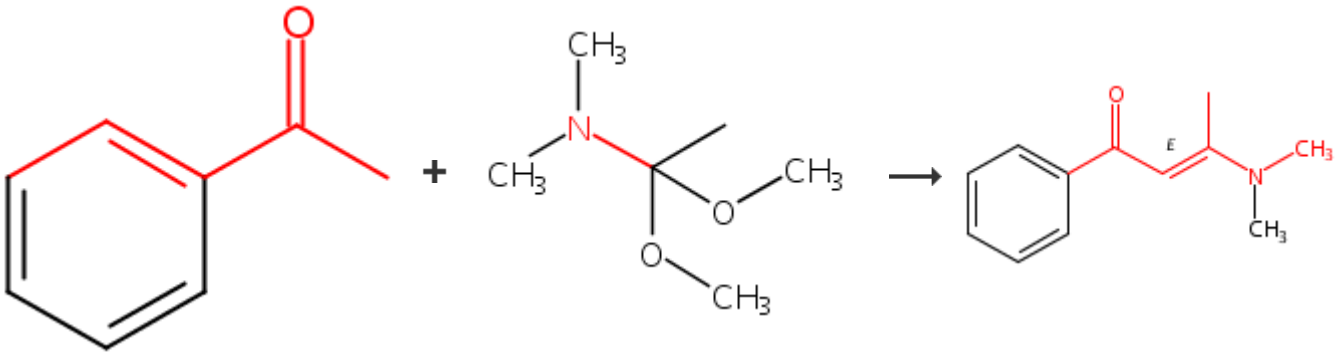
72. Single Step



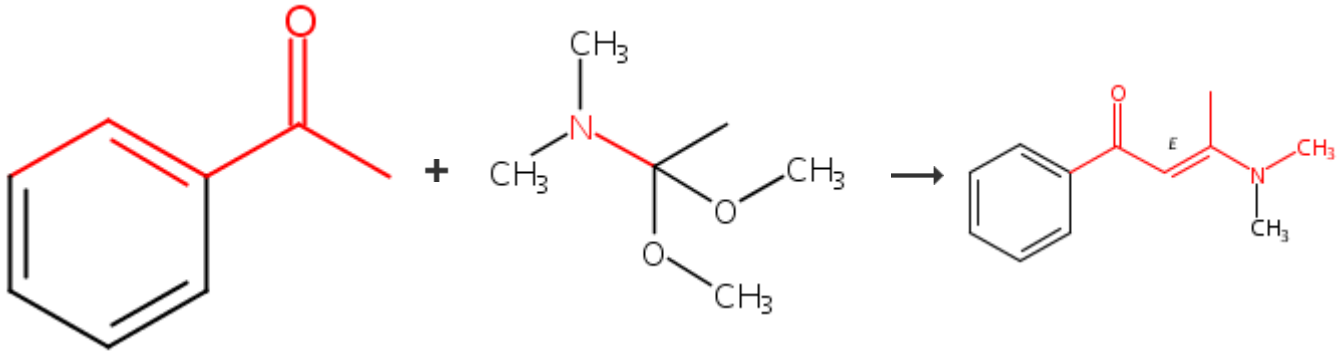
73. Single Step



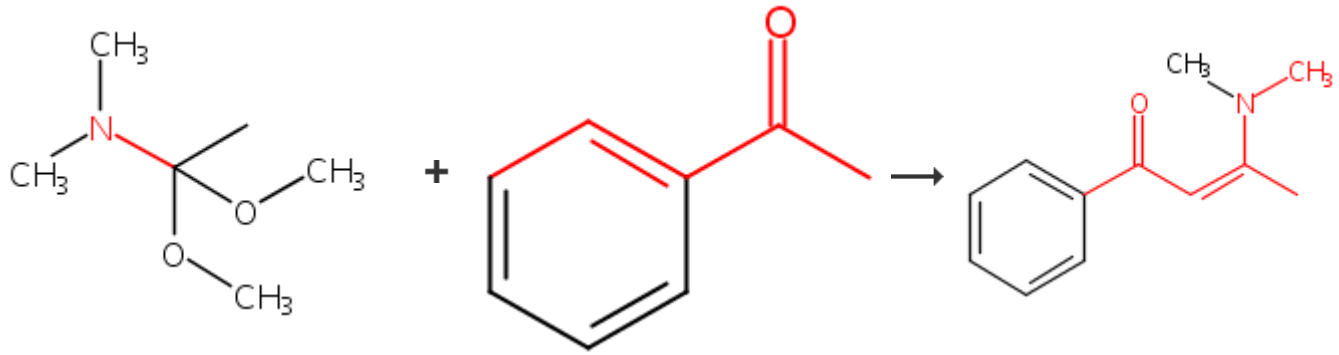
74. Single Step



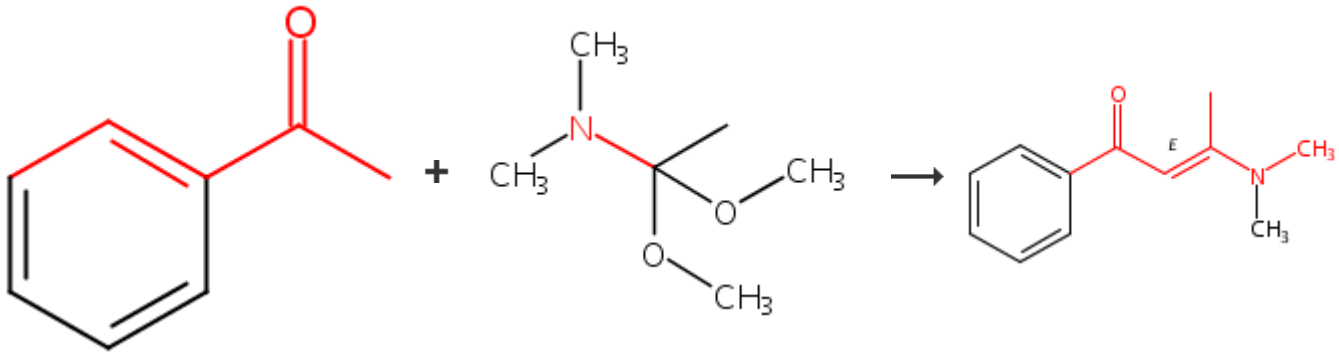
75. Single Step



76. Single Step

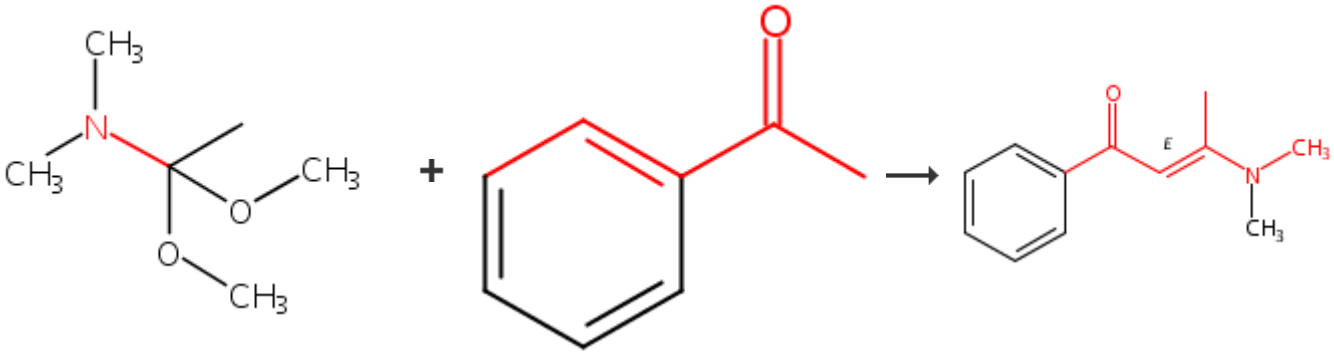


77. Single Step

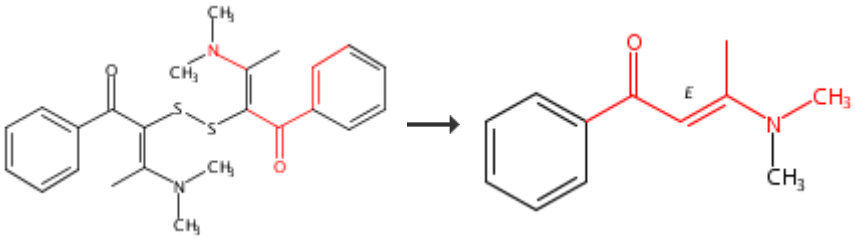


47%

78. Single Step

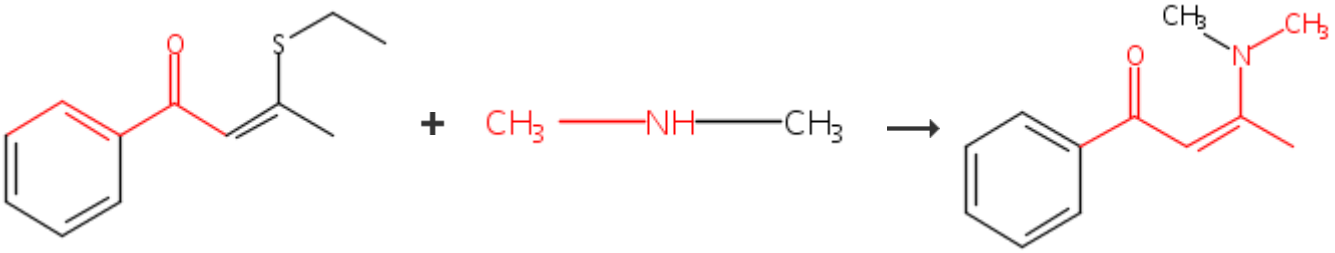


79. Single Step



60%

80. Single Step



65%

Reaction Protocol

Procedure

1. Stir a solution of the ketone (1 mmol) and the amine (1.2 mmol) in benzene (30 ml) for 15 h at room temperature or at reflux temperature or heat at 100 °C in a sealed tube.
2. Pour the reaction mixture into dilute hydrochloric acid (30 ml) .

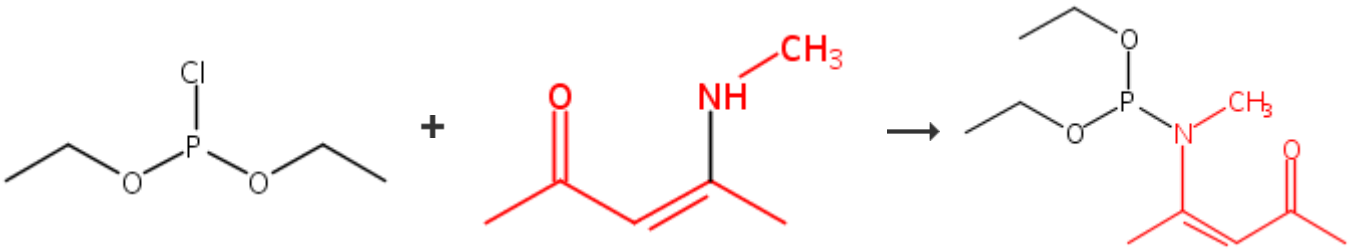
View more...

Available Experimental Data

^{1}H NMR, IR, Elemental Analysis, MP

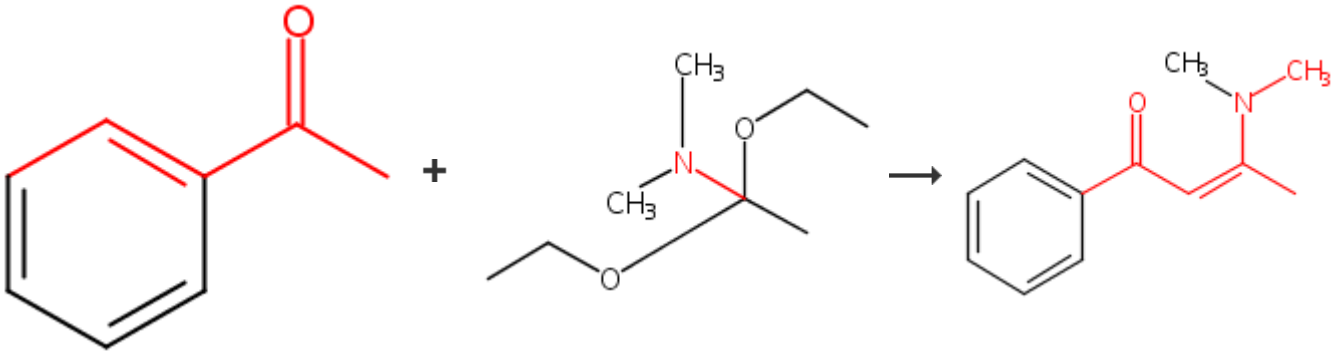
View with MethodsNow

81. Single Step



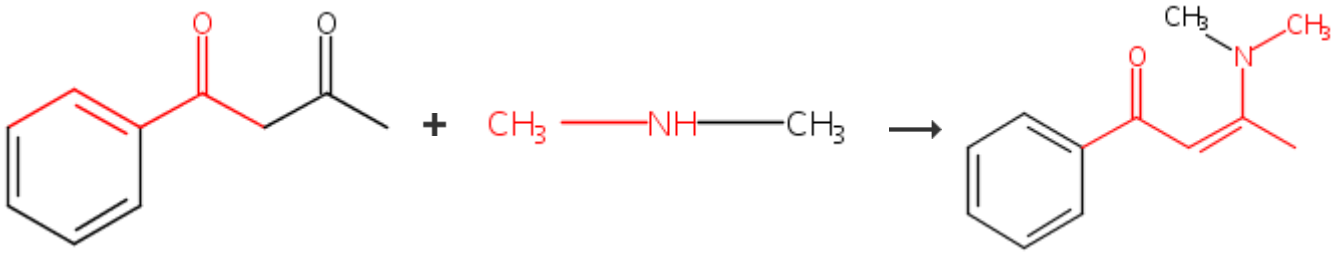
59%

82. Single Step

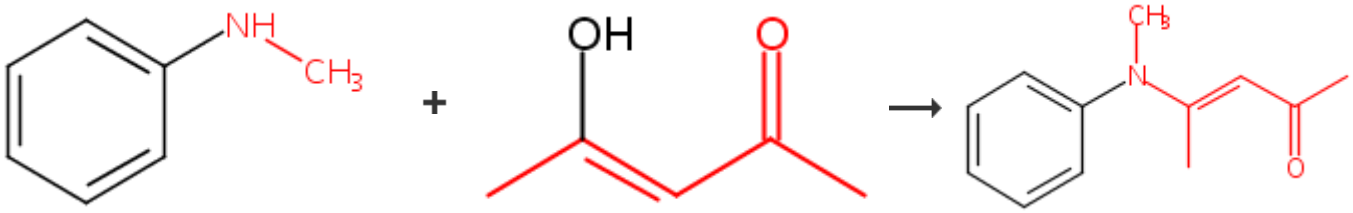


55%

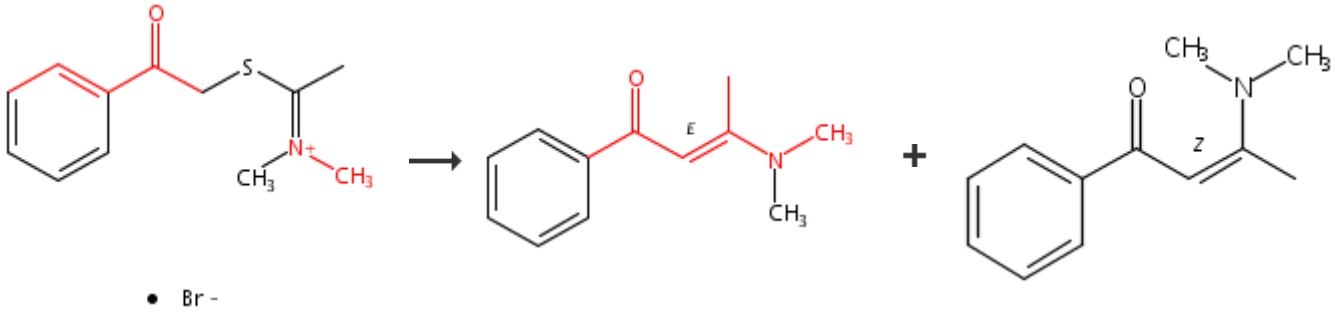
83. Single Step



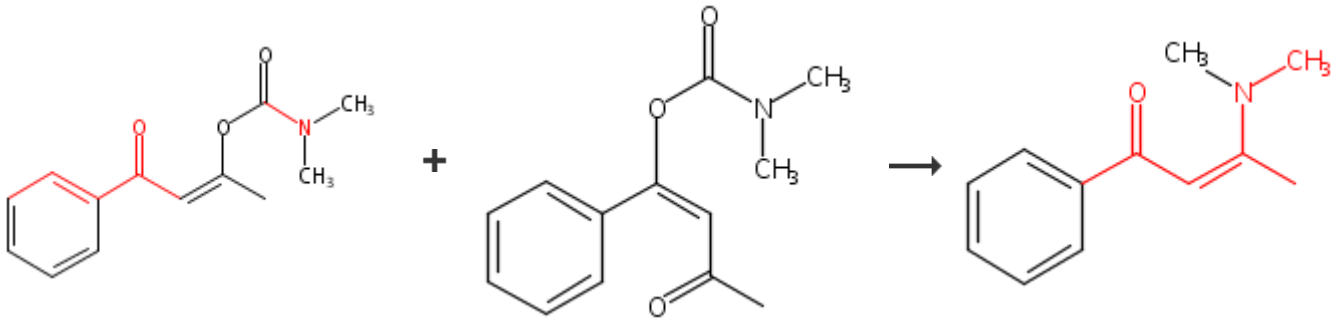
84. Single Step



85. Single Step

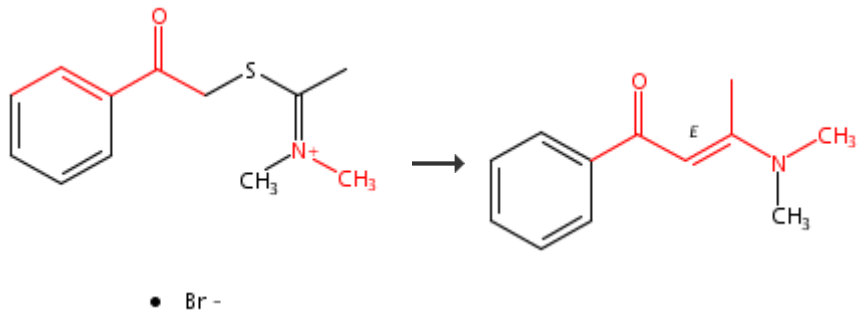


86. Single Step

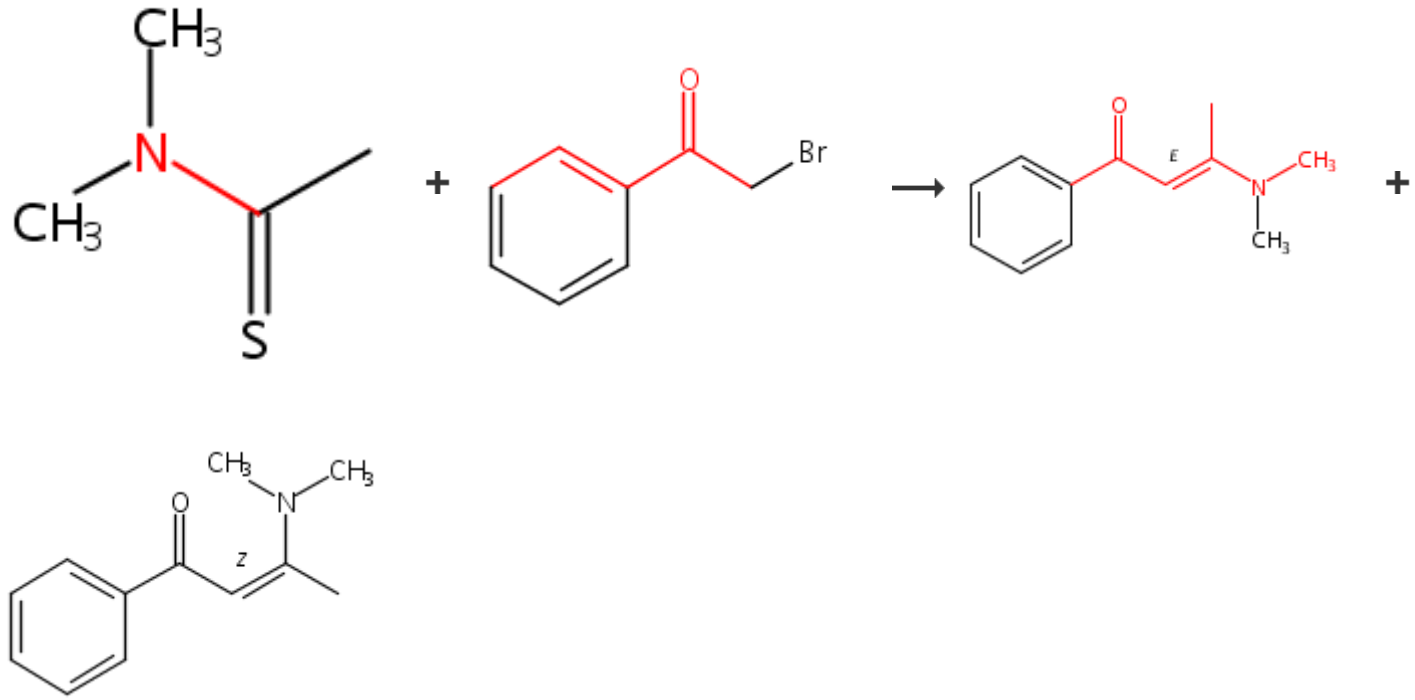


15%

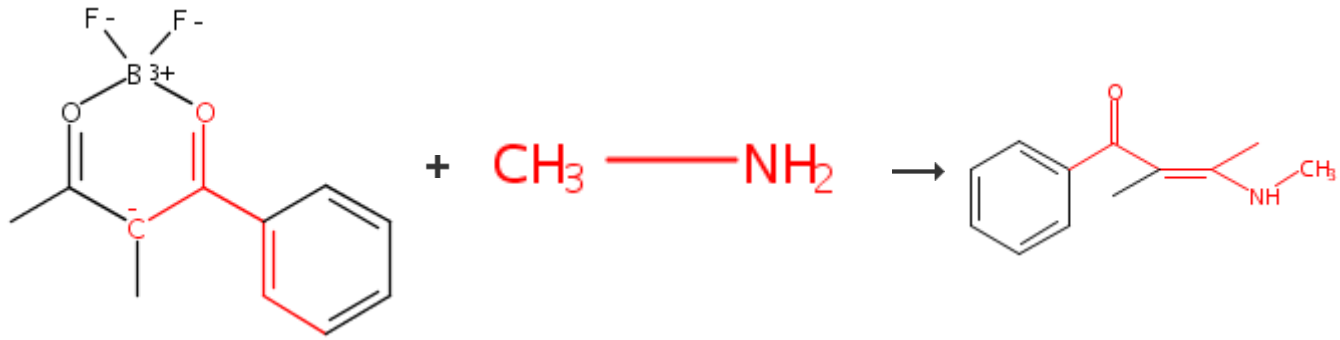
87. 2 Steps



88. 2 Steps

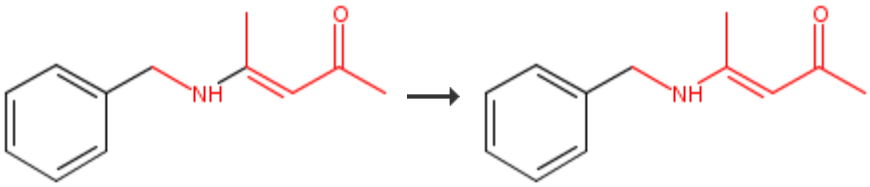


89. Single Step



98%

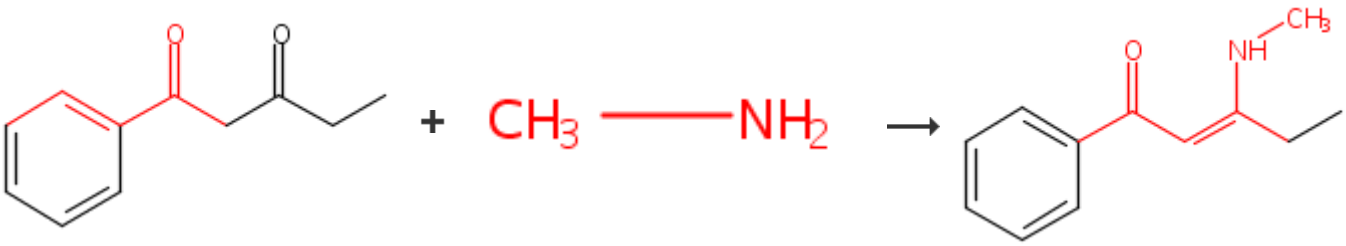
90. Single Step



sodium complex

65%

91. Single Step



62%

Reaction Protocol

Procedure

1. Reflux a mixture of the β -diketone (0.025 mol) and a soln of $MeNH_2$ (3.10 g, 0.1 mol) in EtOH (12.5 mL) for 5 h or stir at 25 °C for 2 h.
2. Evaporate the volatile components in vacuo.

View more...

Available Experimental Data

^{1}H NMR, MP

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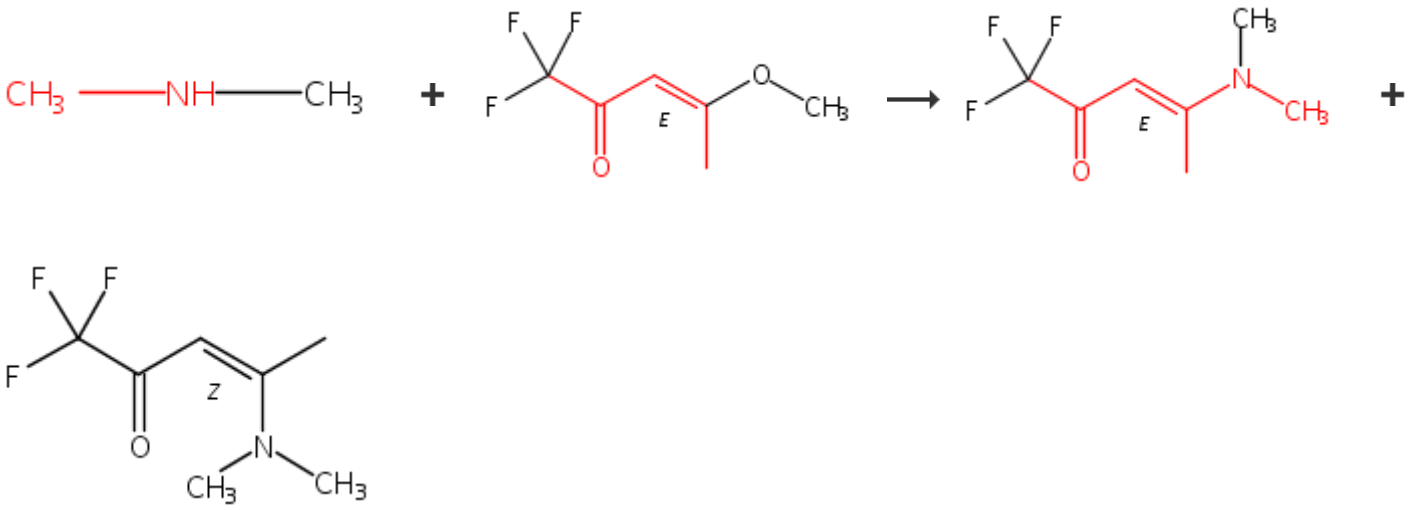
92. Single Step



Reaction Protocol

Procedure

1. Prepare a solution (3.8 mL) of 40% Me_2NH in water (30 mM) and add to a solution of 20 mM of alkoxyenone in 20 ml of acetonitrile with stirring at 0 °C.
2. Stir the mixture for 5 h at 20 °C.

View more...

Available Experimental Data

^{1}H NMR, ^{13}C NMR, ^{19}F NMR, Elemental Analysis, MP, State

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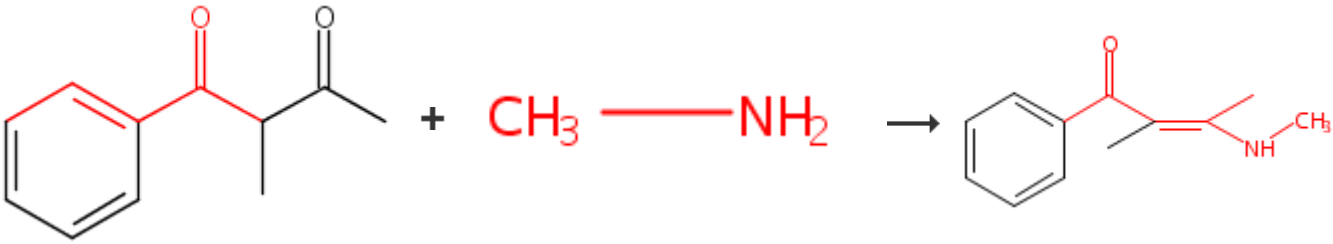
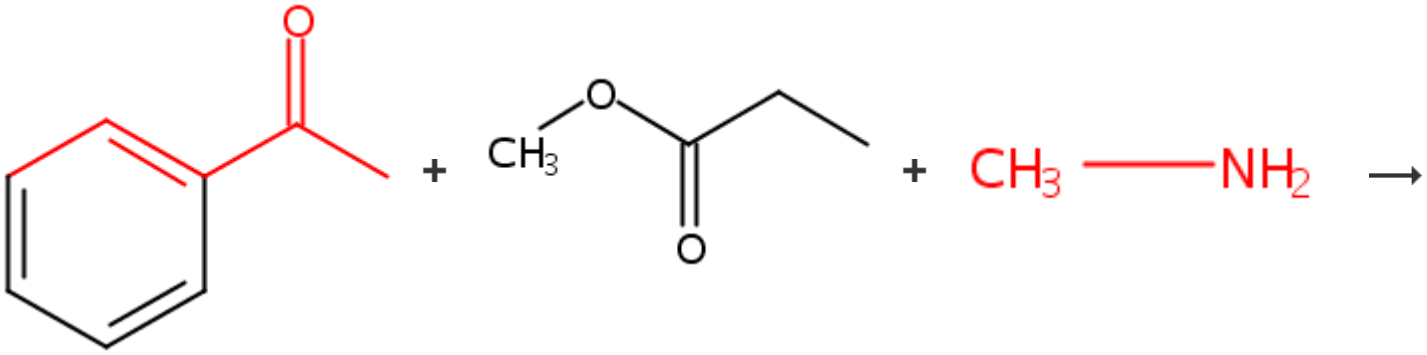
93. 2 Steps

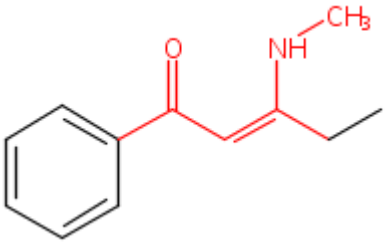


[Step 2.1]

94. 2 Steps



[Step 2.1]



Reaction Protocol

Procedure

1. Carry out the reaction under an inert atmosphere.
2. Charge a 500-mL four-necked round-bottomed flask with *t*-PentOK (26.51 g, 0.21 mol) and freshly distilled THF (150 mL) .

View more...

Available Experimental Data

^{1}H NMR, ^{13}C NMR, BP, MP

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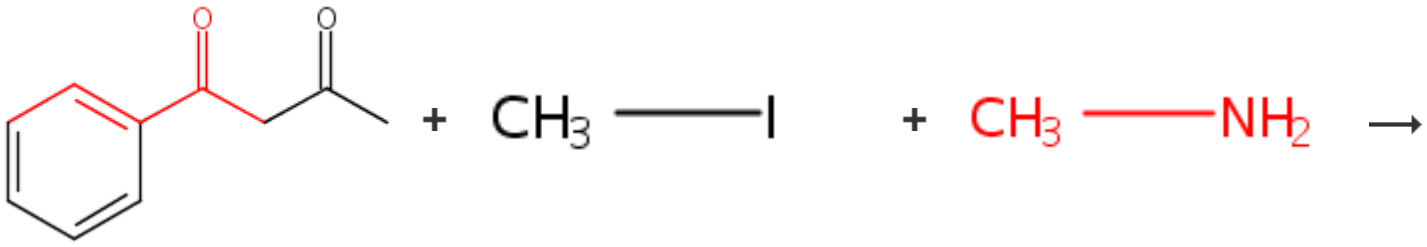
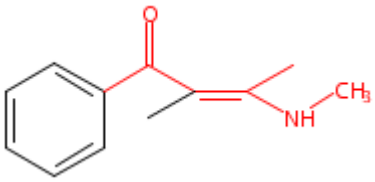
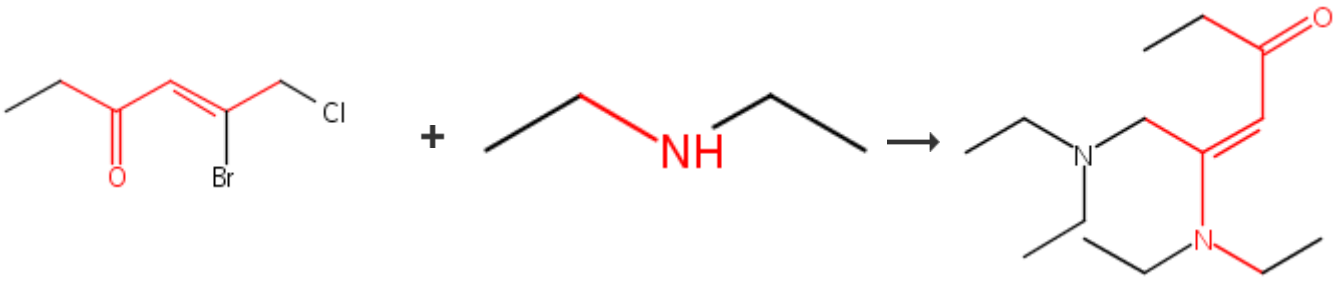
95. 3 Steps



[Step 3.1]

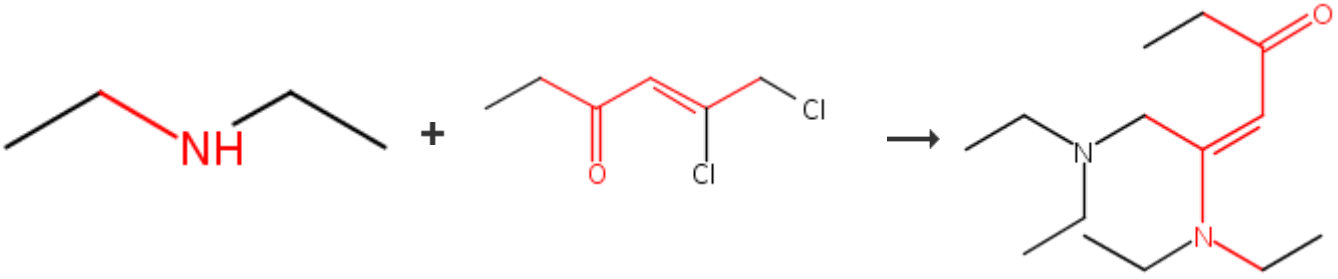


96. Single Step



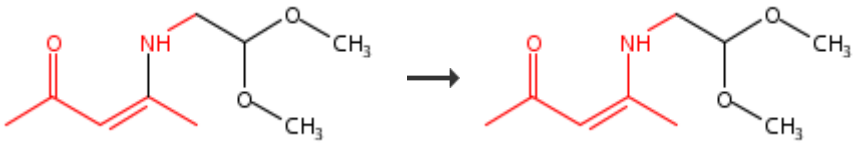
82%

97. Single Step



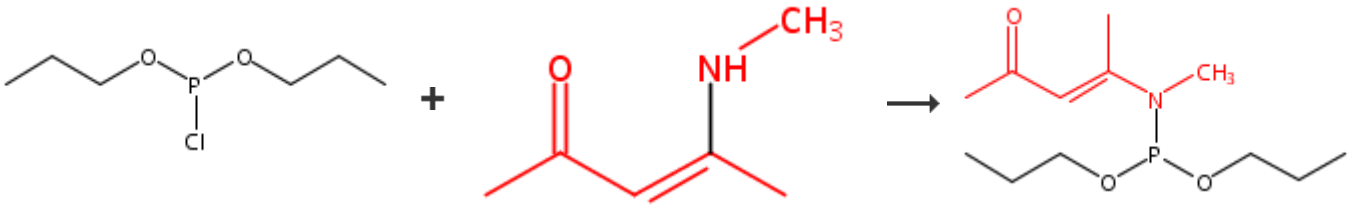
87%

98. Single Step



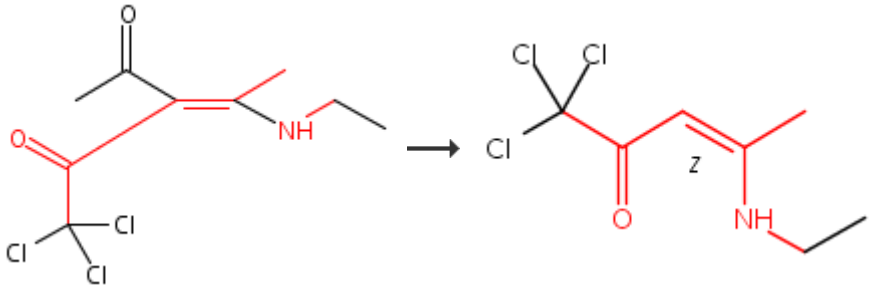
alk. earth complex

99. Single Step



55%

100. Single Step



95%

Reaction Protocol

Procedure

1. Add TFA (3 mL) to the reactant (3 mmol) and stir the mixture vigorously under room temperature for 1 h.
2. Add water (200 mL) and extract the mixture with CH_2Cl_2 (3 × 20 mL) .

View more...

Available Experimental Data

^{1}H NMR, MP

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