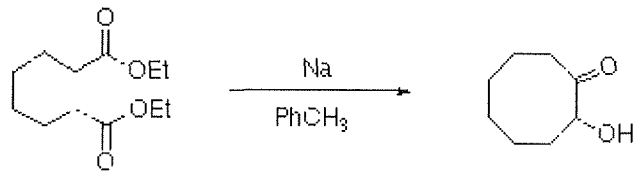
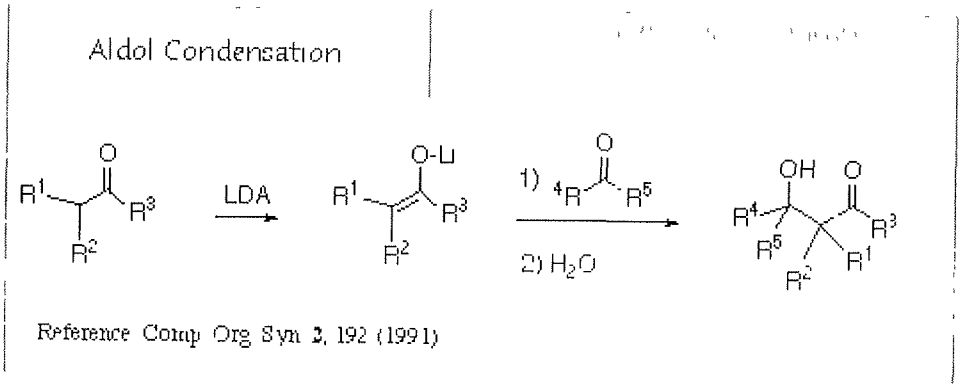
Acyloin Condensation
Aldol Condensation
Arbuzov Reaction
Arndt-Eistert Synthesis
Baeyer-Villiger Reaction
Bamford-Stephens Reaction
Barbier Reactions
Barbier-Wieland Degradation
Barton Reaction
Barton-McCombie Reaction
Barton Olefin Synthesis
Baudisch Reaction
Baylis-Hillman Reaction
Bechamp Reduction
Beckmann Rearrangement
Beckmann Fragmentation
Benzilic Acid Rearrangement
Benzoin Condensation
Bergman Reaction
Bernthsen Acridine Synthesis
Biginelli Reaction
Birch Reduction
Bishler-Mohlau Indole Synthesis
Bishler-Napieralski Reaction
Blaise Reaction
Blanc Reaction
Bodroux Reaction
Borsche-Drechsel Cyclization
Brackeen Imidazole Synthesis
Brook Rearrangement
Bucherer-Bergs Reaction
Cannizzaro Reaction
Carroll Rearrangement
Castro-Stephens Coupling
Chichibabin Reaction
Claisen Condensation
Claisen Rearrangement
Clemmensen Reduction
Combes Quinoline Synthesis
Conrad-Limpach Reaction
Cope Rearrangement
Cope Elimination Reaction
Cory-Kim Oxidation
Craig Method
Curtius Rearrangement
Dakin Reaction
Dakin West Reaction
Darzens Condensation
Dess-Martin Oxidation
Dieckmann Reaction
Diels-Alder Reaction
Doebner Reaction
Edman Degradation
Einhorn -Brunner Reaction
Emmert Reaction
Ene Reaction
Eschenmoser Fragmentation
Favorskii Rearrangement
Feist-Benary Synthesis
Finkelstein Reaction
Fischer Indole Synthesis
Fischer Oxazole Synthesis
Flood Reaction
Friedel-Crafts Acylation
Friedel-Crafts Alkylation
Friedlander Synthesis
Fries Rearrangement
Gabriel Synthesis
Gattermann-Koch Reaction
Goldberg Reaction
Grob Fragmentation
Hammick Reaction
Harries Ozonide Reaction
Heck Reaction
Hell-Volhard-Zelinsky Reaction
Henry Reaction
Hinsberg Thiophene Synthesis
Hofmann Reaction
Hofmann-Martius Rearrangement
Horner-Emmons
Hunsdiecker Reaction
Jacobsen Epoxidation
Jones Oxidation
Knoevenagel Condensation
Knorr Pyrrole Synthesis
Knorr Quinoline Synthesis
Kolbe-Schmitt Reaction
Krapcho Decarboalkoxylation
Krohnke-Pyridine Synthesis
Kucherov Reaction
Leuckart Reaction
Letts Nitrile Synthesis
Lieben Iodoform Reaction
Lossen Rearrangement
Madelung Synthesis
Mannich Reaction
Milas Hydroxylation Reaction
Mitsunobu Reaction
McMurry Reaction
Meerwein-Ponndorf-Verley Reduction
Peterson Reaction
Pinner Reaction
Pfitzner-Moffatt Oxidation
Pictet-Gams Isoquinoline Synthesis
Pictet-Spengler Isoquinoline Synthesis
Piloty-Robinson Synthesis
Pinacol Rearrangement
Pomeranz-Fritsch Reaction
Polonovski Reaction
Quelet Reaction
Reformatski Reaction
Reissert Reaction
Reissert Indole Synthesis
Riehm Quinoline Synthesis
Riley Oxidation
Ritter Reaction
Robinson Annulation
Rosenmund Reduction
Rowe Rearrangement
Rubottom Oxidation
Ruff-Fenton Degradation
Sandmeyer Reaction
Scholl Reaction
Schmidt Rearrangement
Schotten-Baumann Reaction
Sharpless Dihydroxylation
Sharpless Epoxidation
Simmons-Smith Reaction
Simonis Chromone Cyclization
Skraup Reaction
Sommelet-Hauser Rearrangement
Stephen Aldehyde Synthesis
Stevens Rearrangement
Swern Oxidation
Tiemann Rearrangement
Ullmann Reaction
Wacker Oxidation
Wharton Reaction
Whiting Reaction
Wichterle Reaction
Wolff Rearrangement
Wolff Kishner Reduction
Wittig Reaction
1,2-Wittig Rearrangement
2,3- Wittig Rearrangement

Acyloin Condensation



Reference Comp Org Syn , 3, 620 (1991)

Done


Aldol Condensation
LDA
1)
2) H_2O
Reference Comp Org Syn 2, 192 (1991)

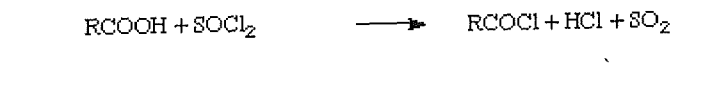
Done

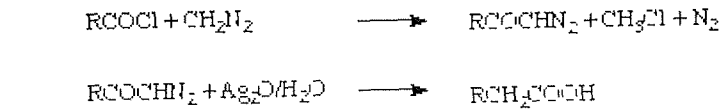
Arbuzov Reaction

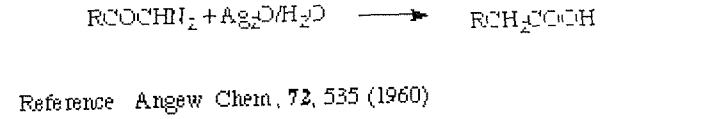
Reference Chem Rev, **81**, 415 (1981)

Done

Arndt-Eistert Synthesis



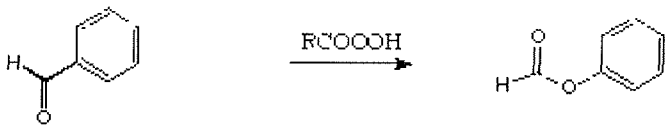




Reference Angew Chem , **72**, 535 (1960)

Done

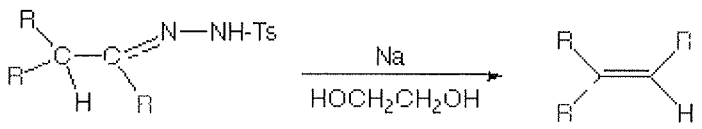
Baeyer-Villiger Oxidation



Reference Comp. Org. Syn., 7, 671-688 (1991)

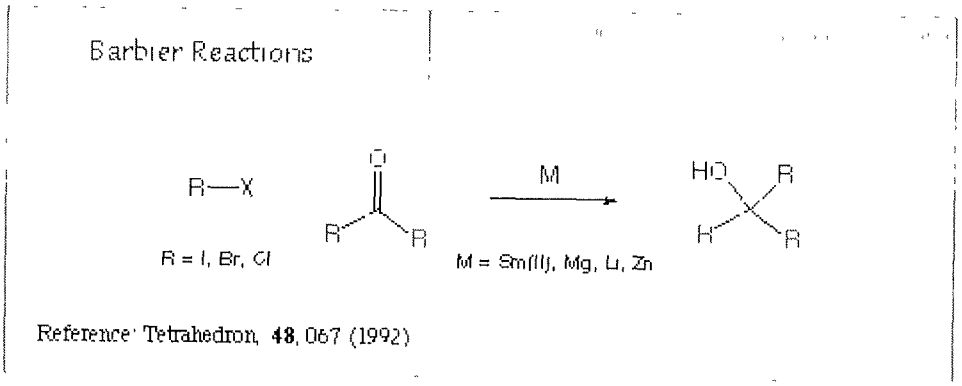
Done

Bamford-Stevens Reaction



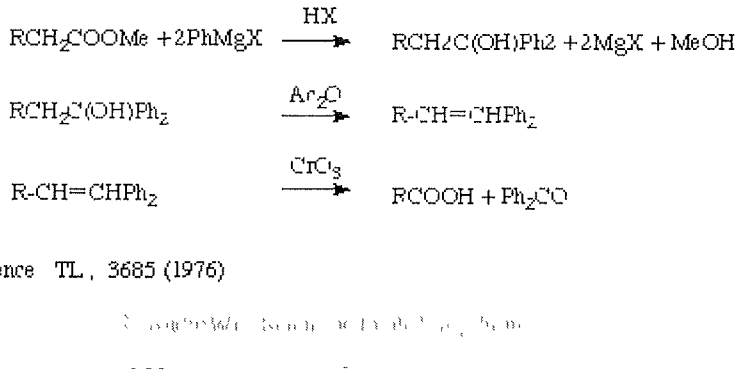
Reference Comp Org Syn, **6**, 776 (1991)

Done


Barbier Reactions
R—X
R = I, Br, Cl
O
R
R
M
M = Sm(II), Mg, Li, Zn
HO
R
H
R
Reference: Tetrahedron, 48, 067 (1992)

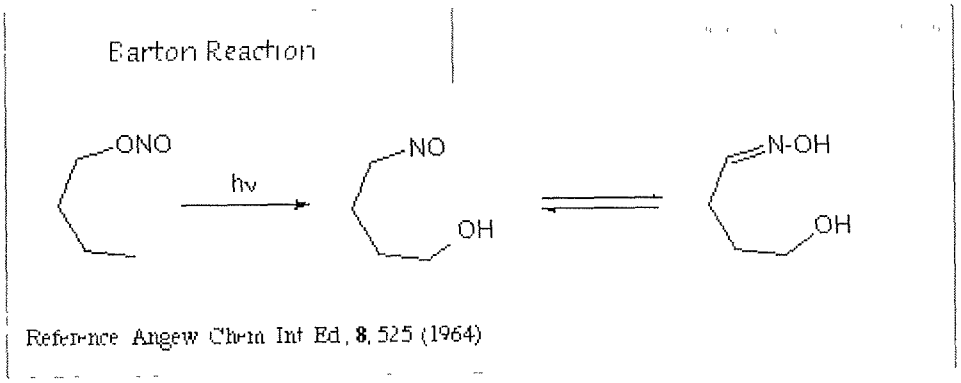
Done

Barbier-Wieland Degradation



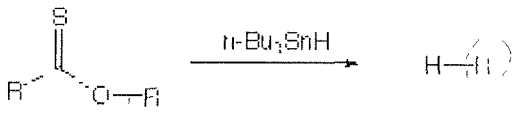
Reference TL , 3685 (1976)

Done


Barton Reaction
ONO
hv
NO
OH
N-OH
OH
Reference Angew Chem Int Ed, 8, 525 (1964)

Done

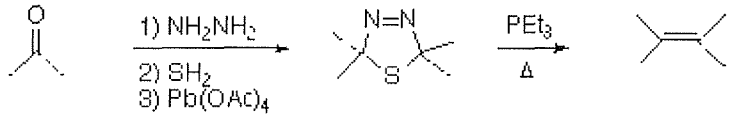
Barton-McCombie Reaction



Reference Res Chem Intermed, **19**, 755 (1993)

Done

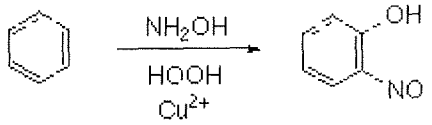
Barton Olefin Synthesis



Reference JACS, **106**, 5018 (1984)

Done

Baudisch Reaction



Reference TL, 5889 (1966)

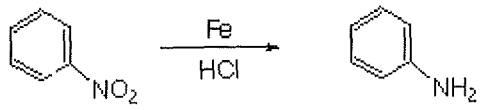
Done

Baylis-Hillman Reaction

Reference Tetrahedron, **44**, 4653 (1988)

Done

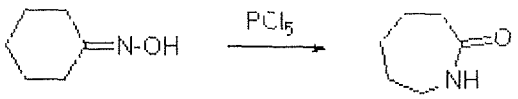
Bechamp Reduction



Reference Org React, 2, 428 (1944)

Done

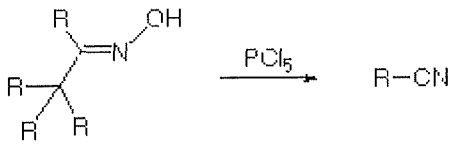
Beckmann Rearrangement



Reference Comp Org Syn, **1**, 98 (1991)

Done

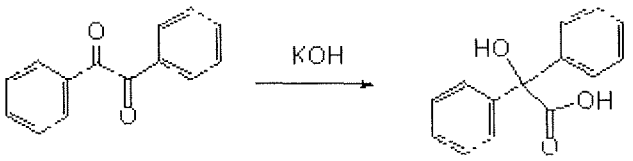
Beckmann Fragmentation



Reference Org React, **11**, 1 (1960)

Done

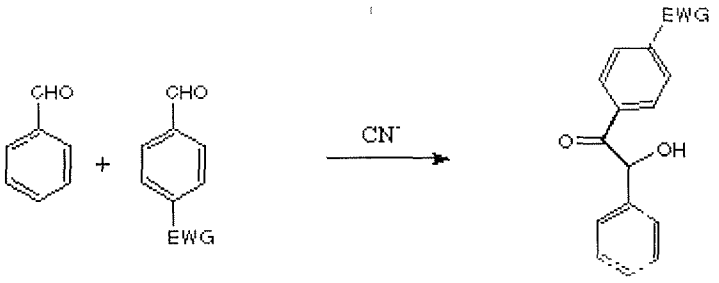
Benzilic Acid Rearrangement



Reference Comp Org Syn , 3, 821 (1991)

Done

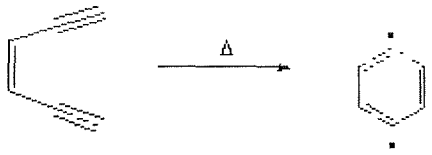
Benzoin Condensation



Reference Organic Reactions **IV**, 269 (1948)

Done

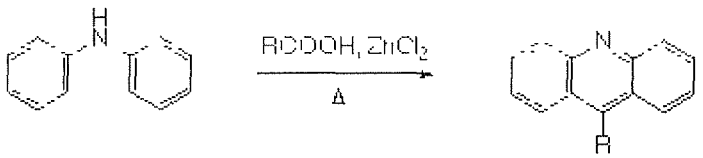
Bergman Reaction



Reference Proc Natl Acad Acd, 90, 5881 (1993)

Done

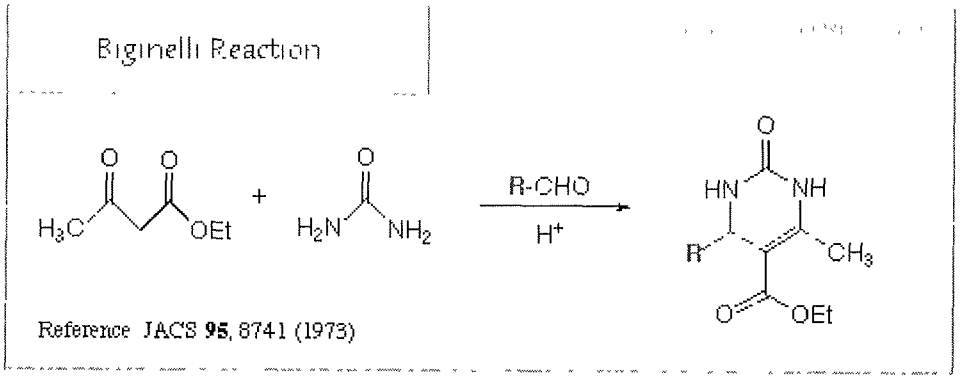
Bernthsen Acridine Synthesis



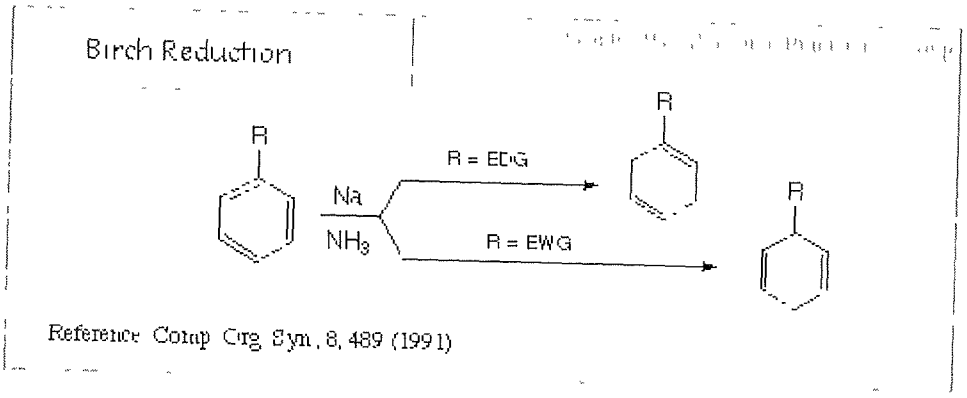
Reference JOC, **27**, 2658 (1962)

[redacted]

Done

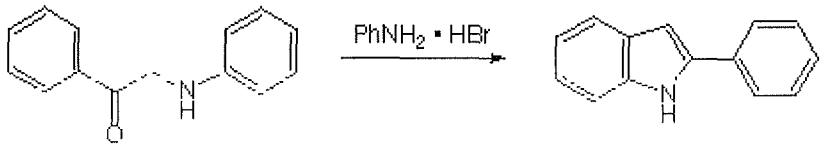

Biginelli Reaction
O
O
H3C
OEt
+
O
H2N
NH2
R-CHO
H+
O
HN
NH
R
CH3
O
OEt
Reference JACS 95, 8741 (1973)

Done


Birch Reduction
R
Na
NH3
R = EDG
R = EWG
R
R
Reference Comp Org Syn, 8, 489 (1991)

Done

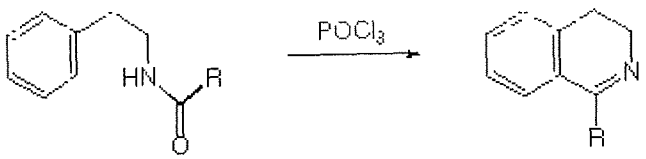
Bishler-Möhlau Indole Synthesis



Reference Heterocyclic Compounds 3, 22 (1952)

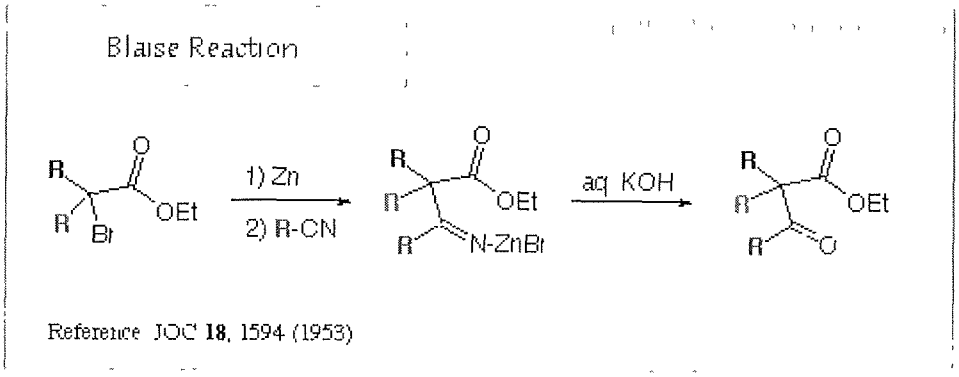
Done

Bishler-Napieralski Reaction



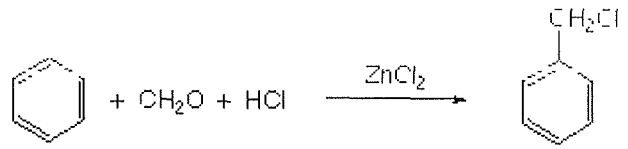
Reference Heterocycles, **15**, 165 (1981)

Done


Blaise Reaction
R
O
OEt
R
Br
1) Zn
2) R-CN
R
O
OEt
R
N-ZnBr
aq KOH
R
O
OEt
R
O
Reference JOC 18, 1594 (1953)

Done

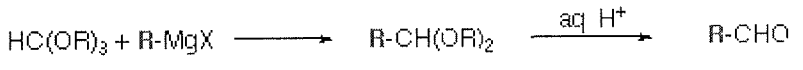
Blanc Reaction



Reference Org React, **1**, 63 (1942)

Done

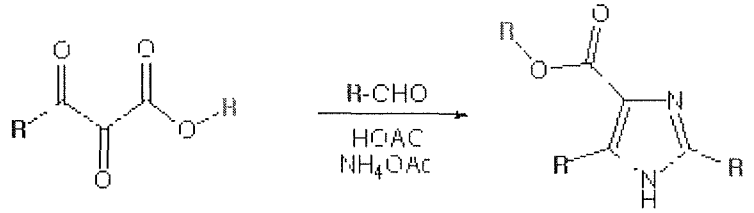
Bodroux-Chichibabin Aldehyde Synthesis



Reference JOC 6, 489 (1941)

Done

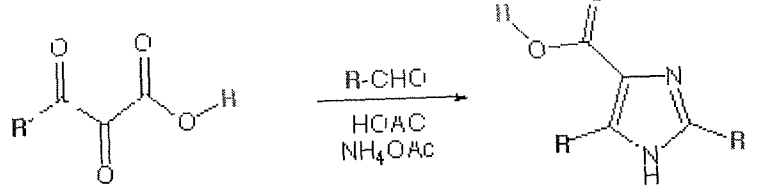
Brackeen Imidazole Synthesis



Reference TL, **35**, 1635 (1994)

Done

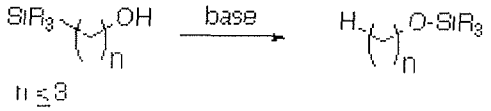
Brackeen Imidazole Synthesis



Reference TL, **35**, 1635 (1994)

Done

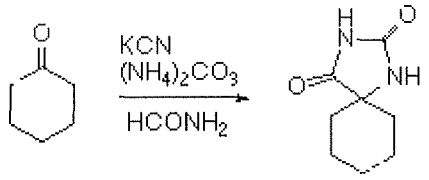
Brook Rearrangement



Reference JACS **112**, 5609 (1990)

Done

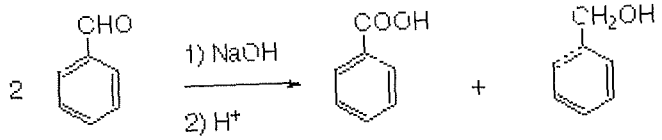
Bucherer-Bergs Reaction



Reference J Med Chem , **23**, 754 (1980)

Done

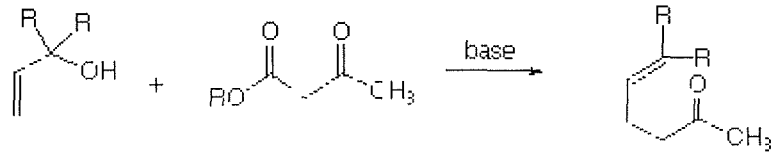
Cannizzaro Reaction



Reference JACS **101**, 3576 (1979)

Done

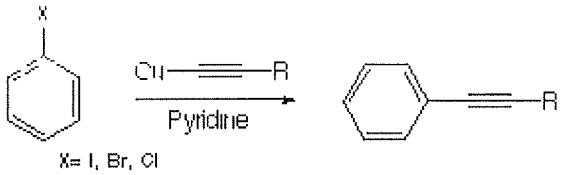
Carroll Rearrangement



Reference Org Syn, **68**, 210 (1990)

Done

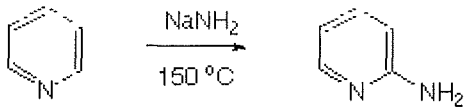
Castro-Stephens Coupling



Reference Org React, **22**, 253 (1975)

Done

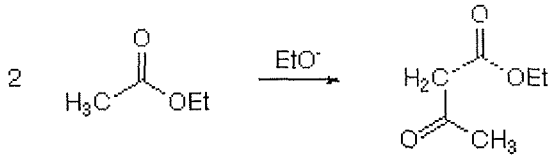
Chichibabin Reaction



Reference JOC **46**, 2134 (1981)

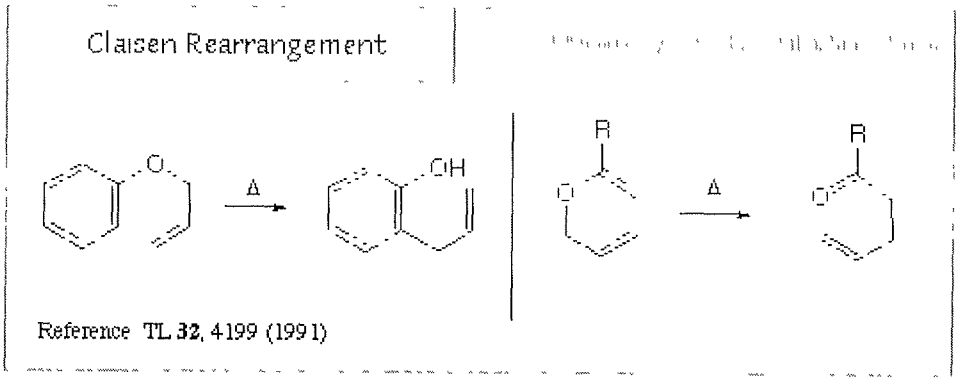
Done

Claisen Condensation



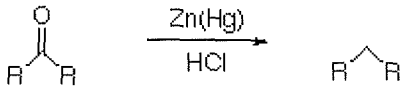
Reference Comp Org Syn , **2**, 795 (1991)

Done



Done

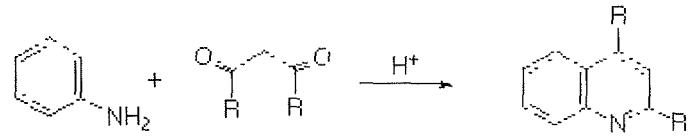
Clemmensen Reduction



Reference Comp Org Syn, **8**, 309 (1991)

Done

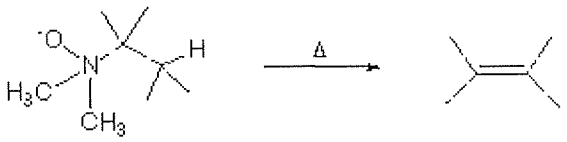
Combes Quinoline Synthesis



Reference JOC 37, 3952 (1972)

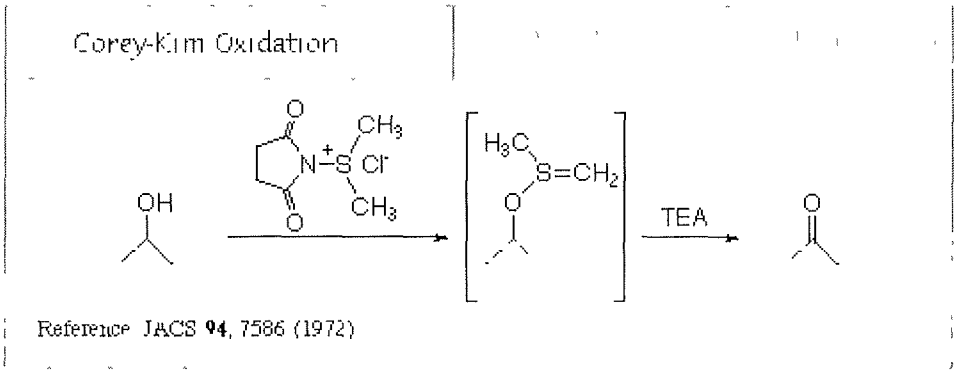
Done

Cope Elimination



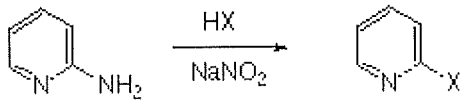
Reference Org React, **11**, 317 (1960)

Done


Corey-Kim Oxidation
OH
CH3
N
S
Cl
CH3
O
O
H3C
S=CH2
O
TEA
O
Reference JACS 94, 7586 (1972)

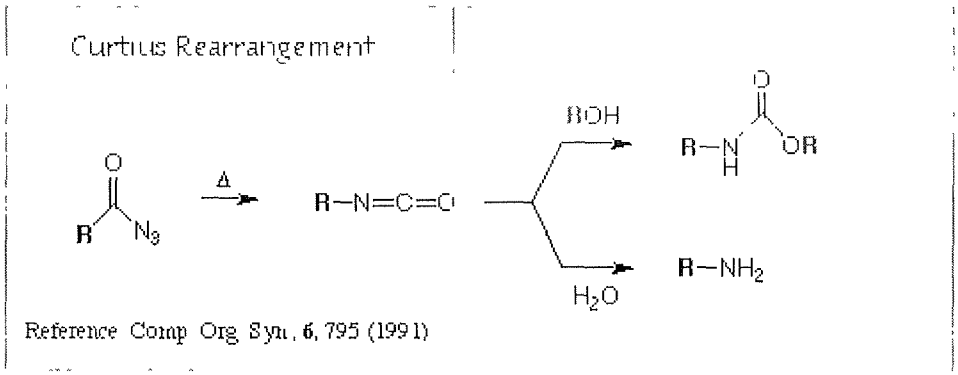
Done

Craig Method



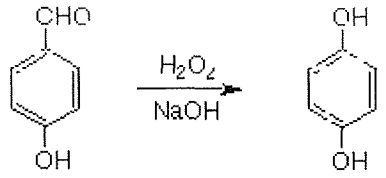
Reference Heterocyclic Compounds **I**, 555 (1950)

Done


Curtius Rearrangement
O
R
N3
Δ
R–N=C=O
ROH
R–N
H
O
OR
R–NH2
H2O
Reference Comp Org Syn , 6, 795 (1991)

Done

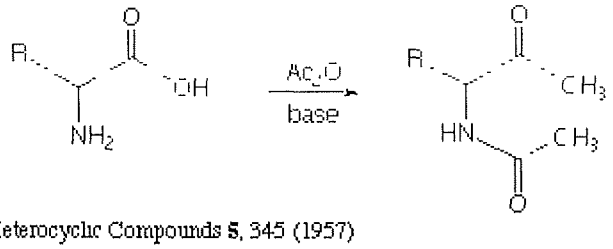
Dakin Reaction



Reference Can J Chem , **55**, 102 (1977)

Done

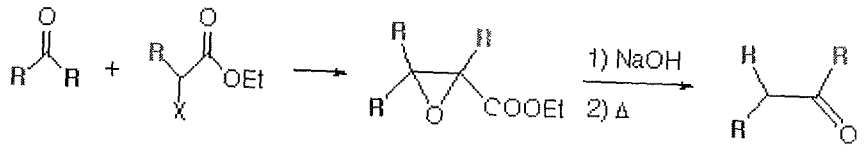
Dakin-West Reaction



Reference Heterocyclic Compounds **5**, 345 (1957)

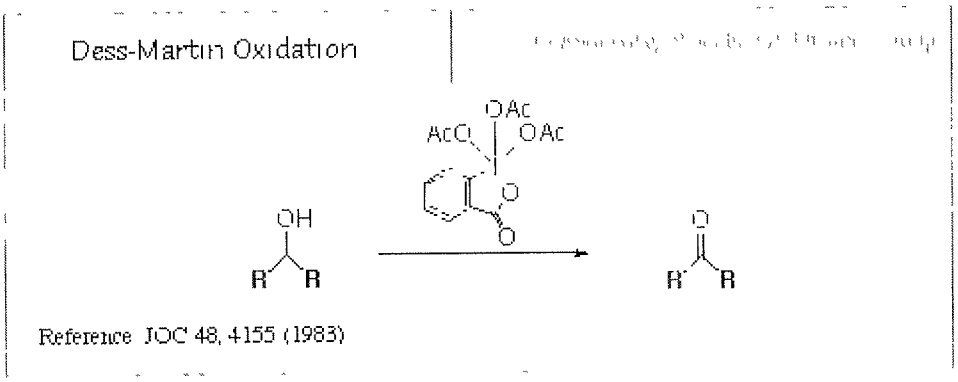
Done

Darzens Condensation

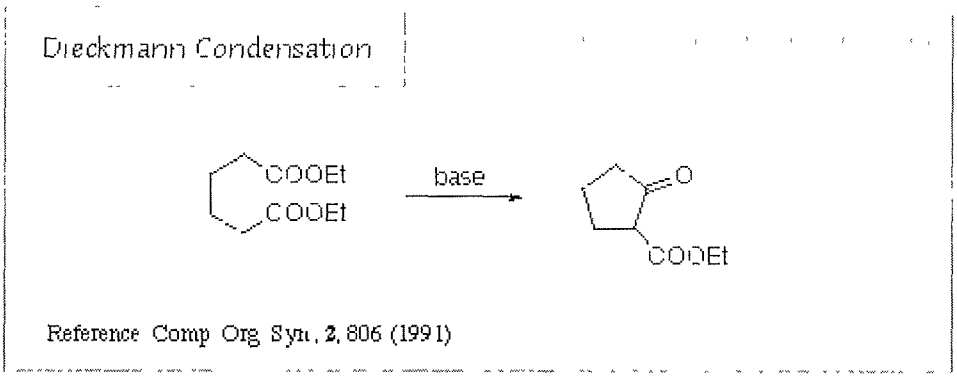


Reference Comp Org Syn, **2**, 409 (1991)

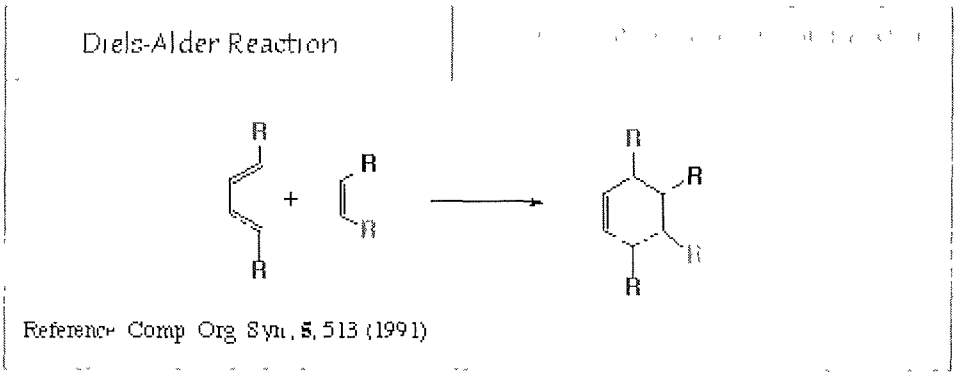
Done


Dess-Martin Oxidation
OAc
AcO
OAc
O
O
OH
R
R
O
R
R
Reference JOC 48, 4155 (1983)

Done

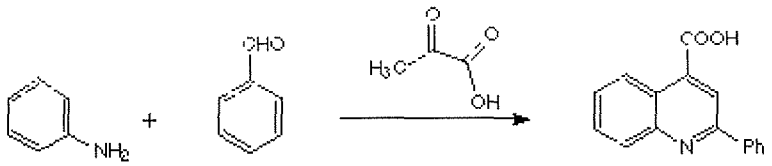

Dieckmann Condensation
COOEt
COOEt
base
O
COOEt
Reference Comp Org Syn, 2, 806 (1991)

Done


Diels-Alder Reaction
R
R
R
+
R
R
R
R
Reference Comp Org Syn, 5, 513 (1991)

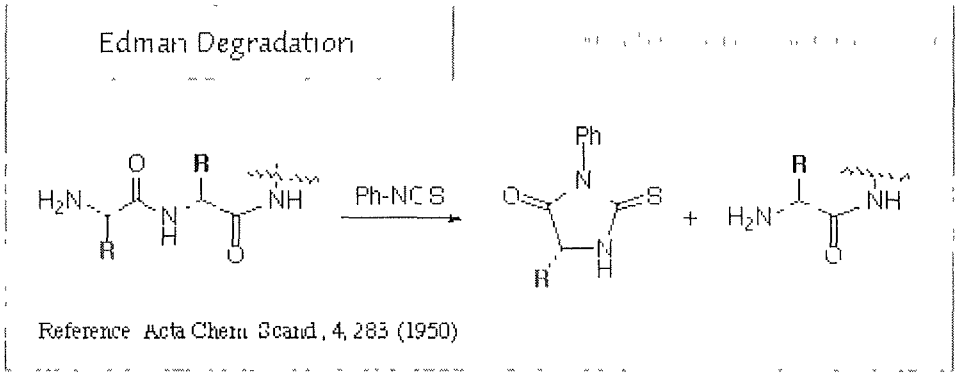
Done

Doebner Reaction



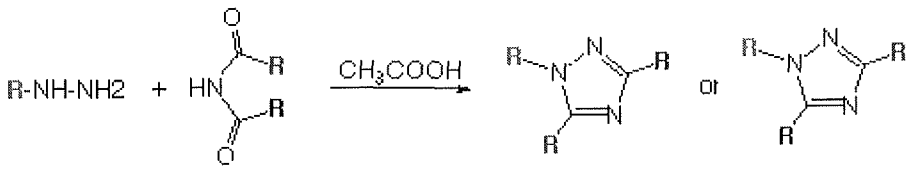
Reference Aust J Chem , **31**, 863 (1978)

Done


Edman Degradation
Ph-NCS
Reference Acta Chem Scand , 4, 283 (1950)

Done

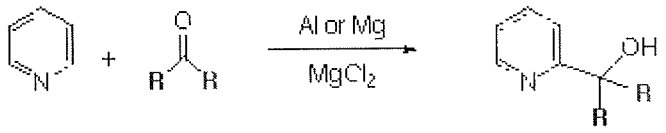
Einhorn-Brunner Reaction



Reference Synthetic Methods 9, No 449 (1955)

Done

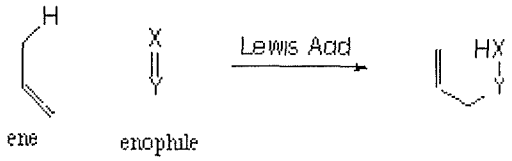
Emmert Reaction



Reference JCS [C], 2 104 (1969)

Done

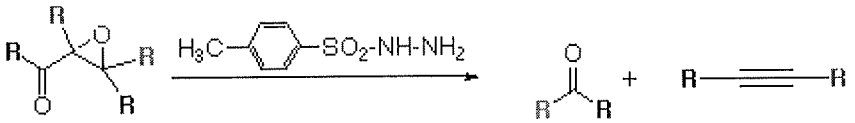
Ene Reaction



Reference Comp Org Syn , **5**, 1 (1991)

Done

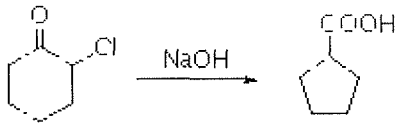
Eschenmoser Fragmentation



Reference JOC **58**, 1900 (1993)

Done

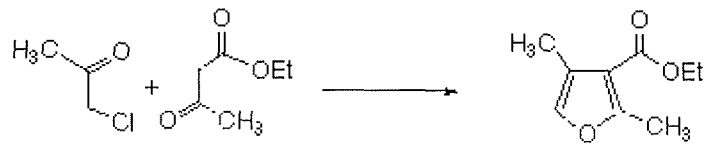
Favorskii Rearrangement



Reference Org React, **11**, 261 (1960)

Done

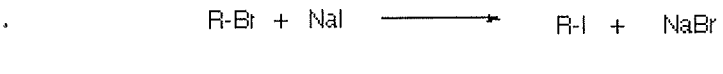
Feist-Benary Synthesis



Reference JOC **45**, 1524 (1980)

Done

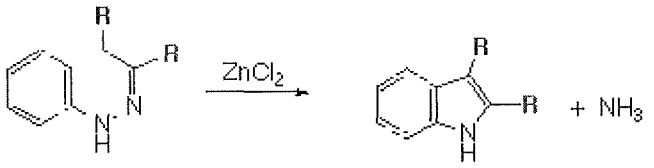
Finkelstein Reaction



Reference TL **22**, 2055 (1981)

Done

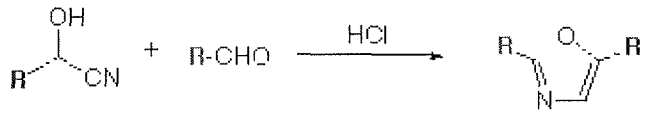
Fischer Indole Synthesis



Reference Accts. Chem Res , **14**, 275 (1981)

Done

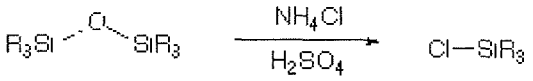
Fischer Oxazole Synthesis



Reference TL 4391 (1971)

Done

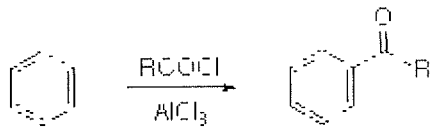
Flood Reaction



Reference Top Curr Chem., **88**, 33 (1980)

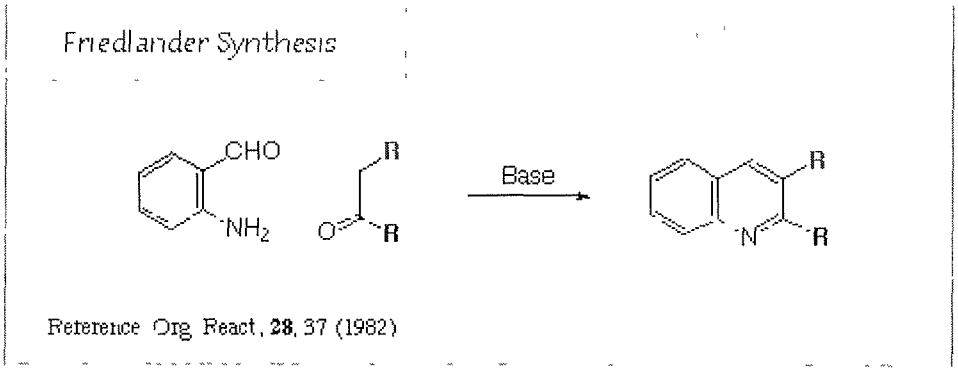
Done

Friedel-Crafts Acylation Reaction



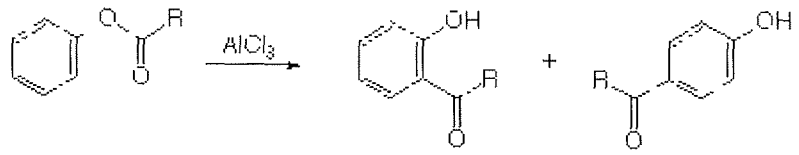
Reference. Comp Org. Syn., 2, 753 (1991)

Done


Friedlander Synthesis
CHO
NH2
R
O
R
Base
R
N
R
Reference Org React, 28, 37 (1982)

Done

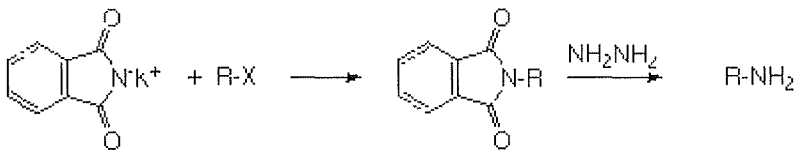
Fries Rearrangement



Reference Org React, **1**, 342 (1942)

Done

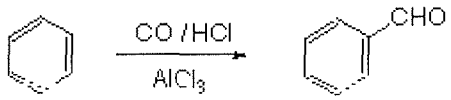
Gabriel Synthesis



Reference Comp Org Syn ,**6**, 79 (1991)

Done

Gattermann-Koch Reaction

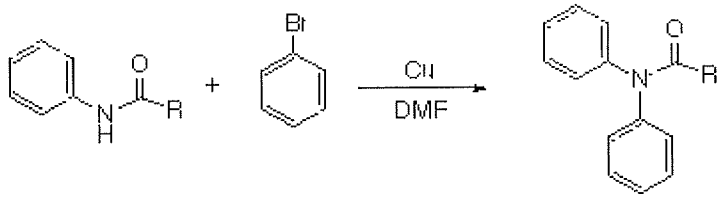


Addition of Cu_2Cl_2 allows reaction to proceed at 1 ATM

Reference J Organometal Chem , **194**, 221 (1980)

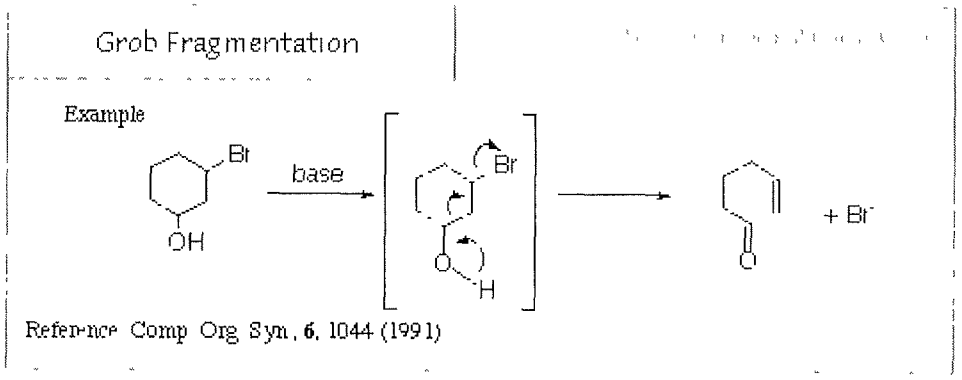
Done

Goldberg Reaction



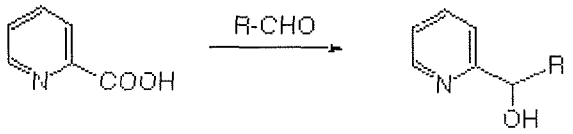
Reference Org React, **14**, 19 (1965)

Done


Grob Fragmentation
Example
Br
OH
base
Br
O
H
O
+ Br⁻
Reference Comp Org Syn, 6, 1044 (1991)

Done

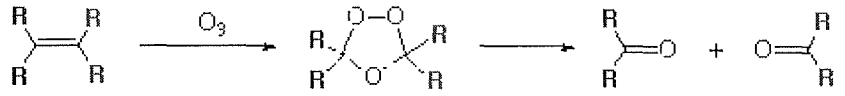
Hammick Reaction



Reference JOC **36**, 2002 (1971)

Done

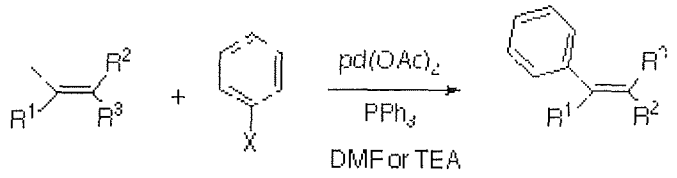
Harries Ozonide Reaction



Reference Accts Chem Res , **1**, 313 (1968)

Done

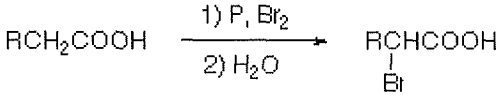
Heck Reaction



Reference Org React **27**, 345 (1982)

Done

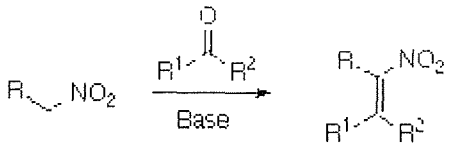
Hell-Volhard-Zelinsky Reaction



Reference JACS **91**, 7098 (1969)

Done

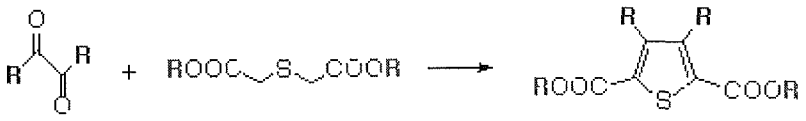
Henry Reaction



Reference Comp Org Syn 2, 321 (1991)

Done

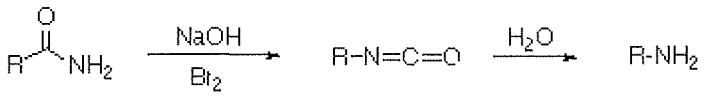
Hinsberg Thiophene Synthesis



Reference JACS **87**, 1739 (1965)

Done

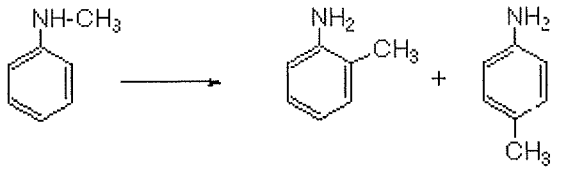
Hofmann Reaction



Reference Comp Org Syn, **6**, 800 (1991)

Done

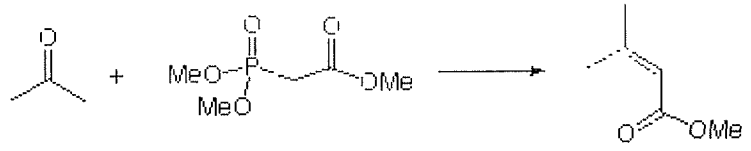
Hofmann-Martius Rearrangement



Reference JOC **35**, 1642 (1970)

Done

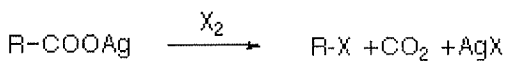
Horner-Emmons-Wadsworth Reaction



Reference Comp Org Syn, **1**, 755 (1991)

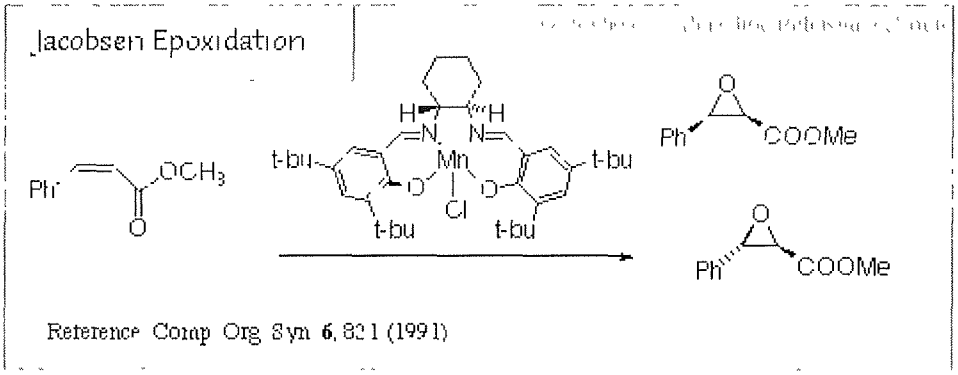
Done

Hunsdiecker Reaction

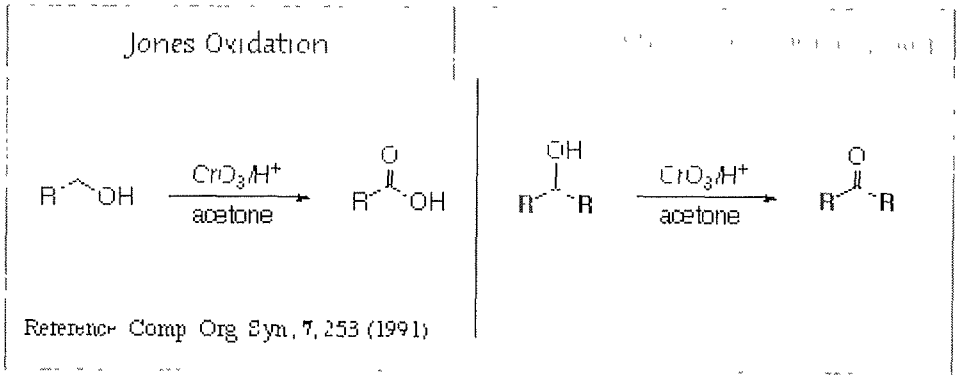


Reference JOC **44**, 3405 (1979)

Done

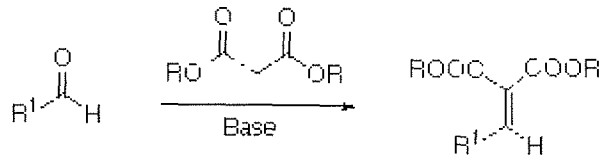

Jacobsen Epoxidation
Ph
OCH3
O
H
H
N
N
t-bu
t-bu
Mn
Cl
O
O
t-bu
t-bu
Ph
COOMe
Ph
COOMe
Reference Comp Org Syn 6, 821 (1991)

Done


Jones Oxidation
R OH
CrO3/H+
acetone
R OH
O
OH
R R
CrO3/H+
acetone
R R
O
Reference Comp Org Syn, 7, 253 (1991)

Done

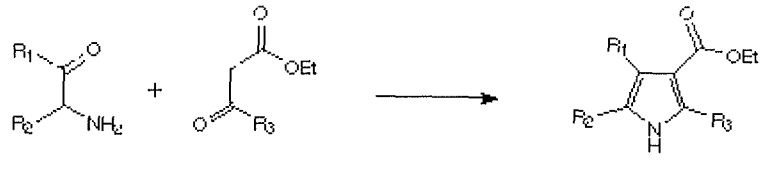
Knoevenagel Condensation



Reference Comp. Org Syn. **2**, 341 (1991)

Done

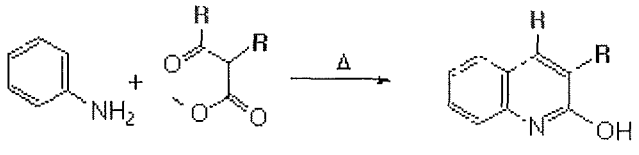
Knorr Pyrrole Synthesis



Reference JOC **36**, 853 (1971)

Done

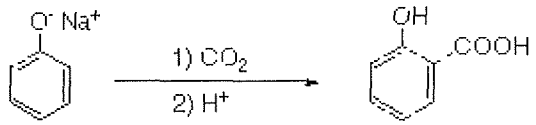
Knorr Quinoline Synthesis



Reference JOC 34, 1709 (1969)

Done

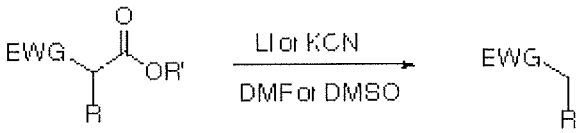
Kolbe-Schmitt Reaction



Reference JCS 3145 (1954)

Done

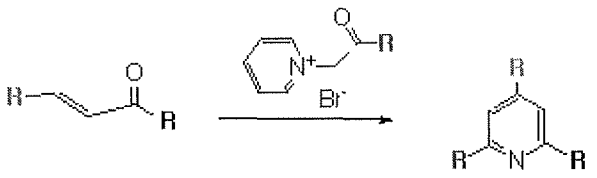
Krapcho Decarboalkoxylation



Reference Synthesis 805, (1982)

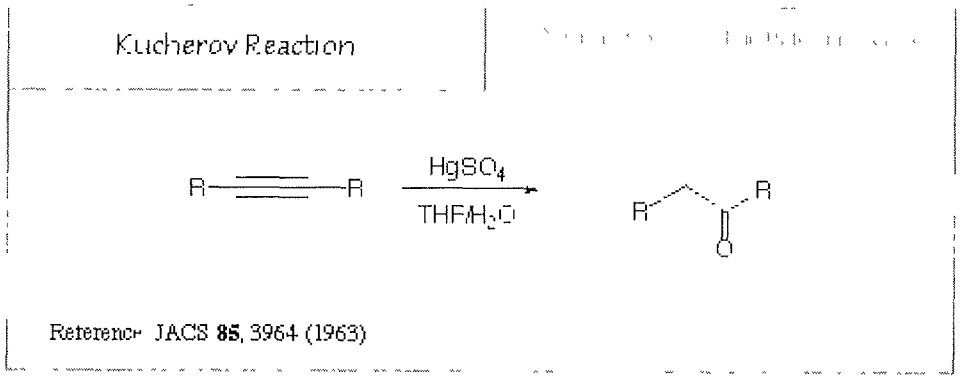
Done

Kröhnke Pyridine Synthesis



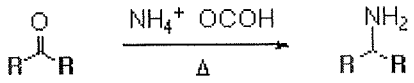
Reference JOC, **51**, 850 (1986)

Done


Kucherov Reaction
R
R
HgSO4
THF/H2O
R
R
O
Reference JACS 85, 3964 (1963)

Done

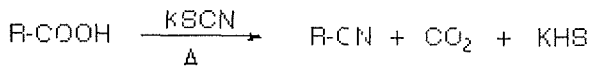
Leuckart Reaction



Reference JOC **33**, 1647 (1968)

Done

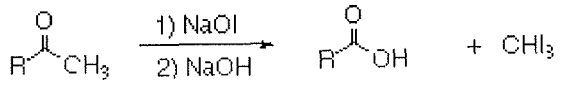
Letts Nitrile Synthesis



Reference Chem Rev, **42**, 264 (1948)

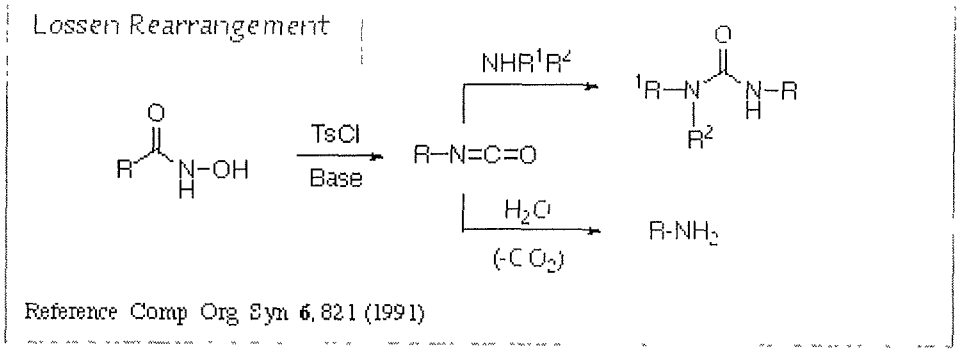
Done

Lieben Iodoform Reaction



Reference J Chem Ed, **36**, 572 (1959)

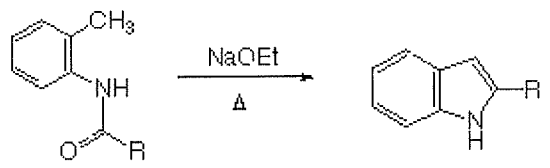
Done



Reference Comp Org Syn **6**, 821 (1991)

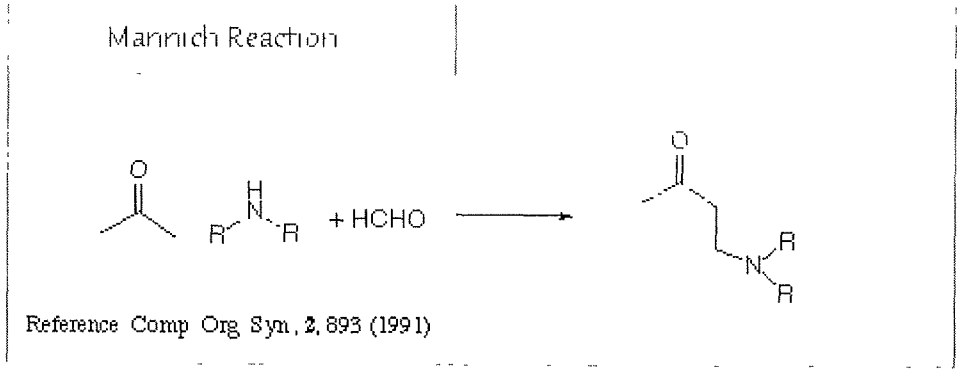
Done

Madelung Synthesis



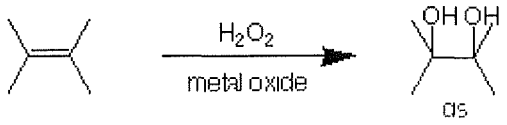
Reference JOC 46, 4515 (1981)

Done


Mannich Reaction
O
H
N
R
R
+ HCHO
O
R
N
R
Reference Comp Org Syn, 2, 893 (1991)

Done

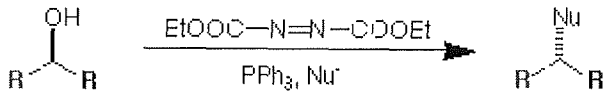
Milas Hydroxylation



Reference JACS **62**, 1841 (1940)

Done

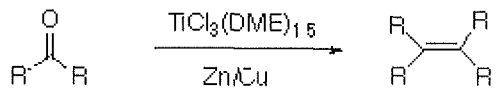
Mitsunobu Reaction



Reference Org React, 42, 335 (1992)

Done

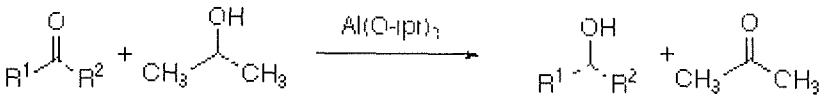
McMurry Reaction



Reference Comp Org Syn **3**, 583 (1991)

Done

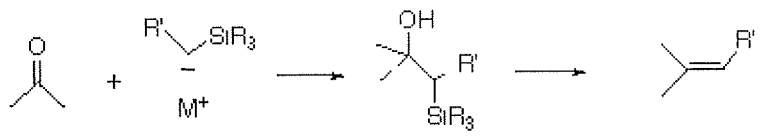
Meerwein-Ponndorf-Verley Reduction



Reference Comp Org Syn **8**, 88 (1991)

Done

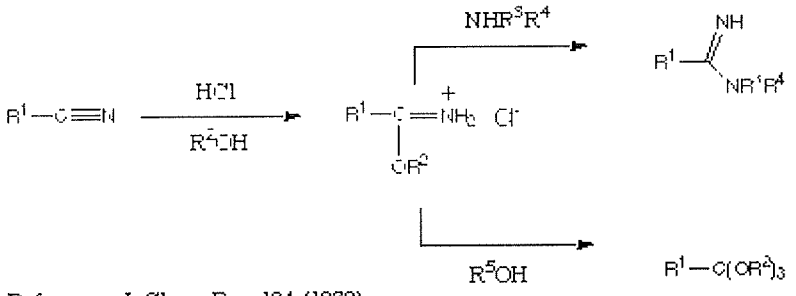
Peterson Reaction



Reference Comp Org Syn **1**, 782 (1991)

Done

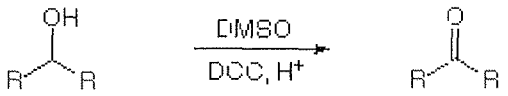
Pinner Reaction



Reference J Chem Res 134 (1978)

Done

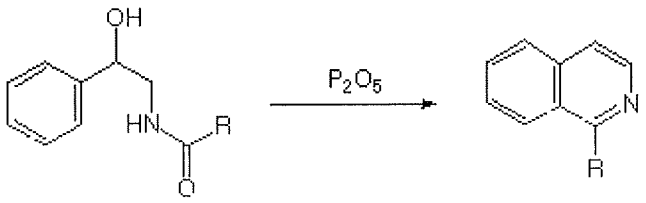
Pfitzner-Moffatt Oxidation



Reference Comp Org Syn, 7, 291 (1991)

Done

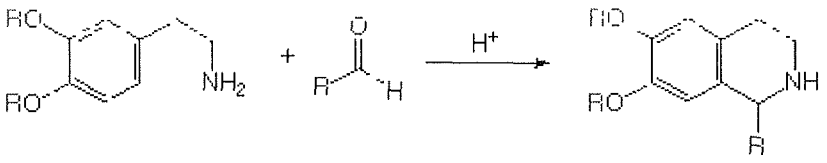
Pictet-Gams Isoquinoline Synthesis



Reference Perkin Trans I, 539 (1979)

Done

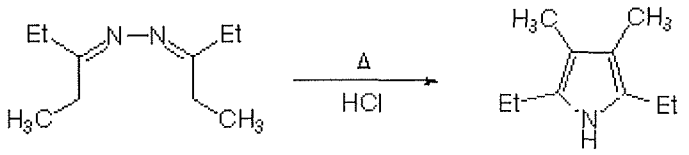
Pictet-Spengler Isoquinoline Synthesis



Reference Heterocycles **39**, 903 (1994)

Done

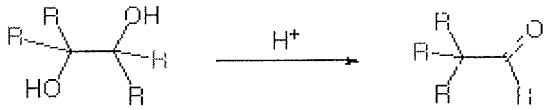
Piloty-Robinson Synthesis



Reference JOC 39, 2575 (1974)

Done

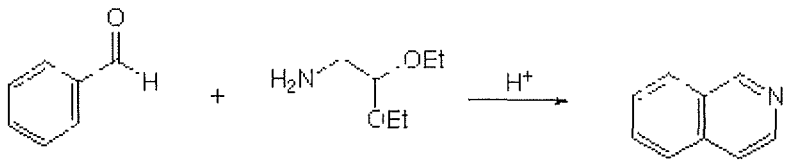
Pinacol Rearrangement



Reference Comp Org Syn, 3, 721 (1991)

Done

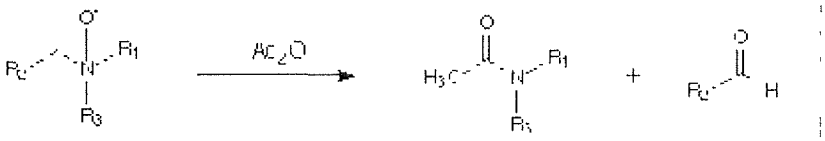
Pomeranz-Fritsch Reaction



Reference Heterocycles **28**, 601 (1987)

Done

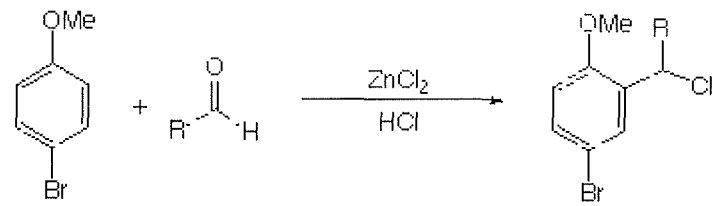
Polonovski Reaction



Reference Comp Org Syn **6**, 909 (1991)

Done

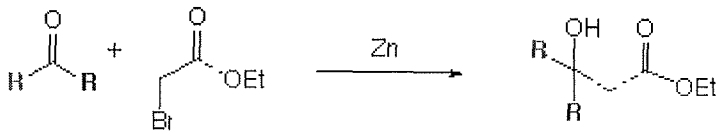
Quelet Reaction



Reference Compt Rend, **202**, 956 (1936)

Done

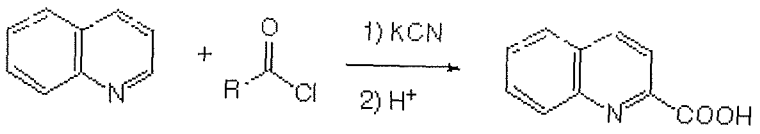
Reformatsky Reaction



Reference Comp Org, Syn, 2, 377 (1991)

Done

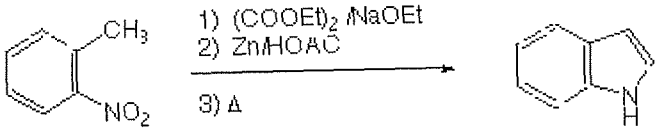
Rissert Reaction



Reference Advan Heterocyc Chem., **24**, 187 (1979)

Done

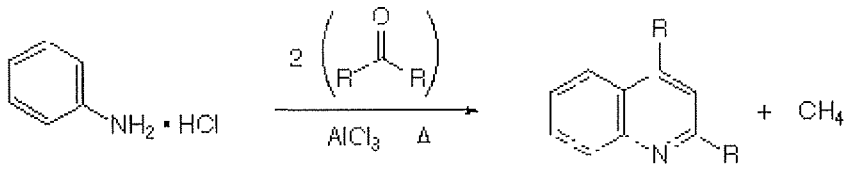
Reissert Indole Synthesis



Reference Heterocyclic Compounds 3, 18 (1962)

Done

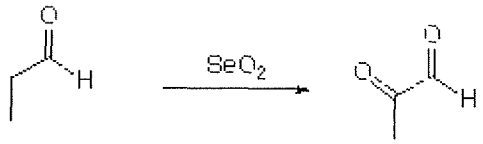
Riehm Quinoline Synthesis



Reference Heterocyclic Compounds **4**, 16 (1952)

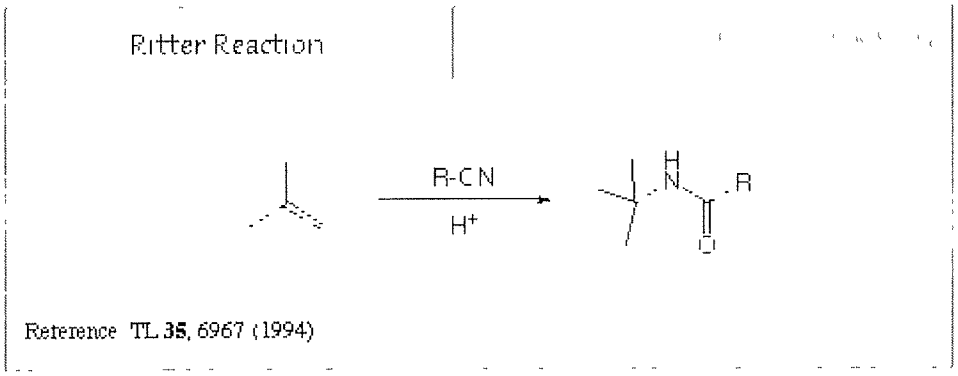
Done

Riley Oxidation

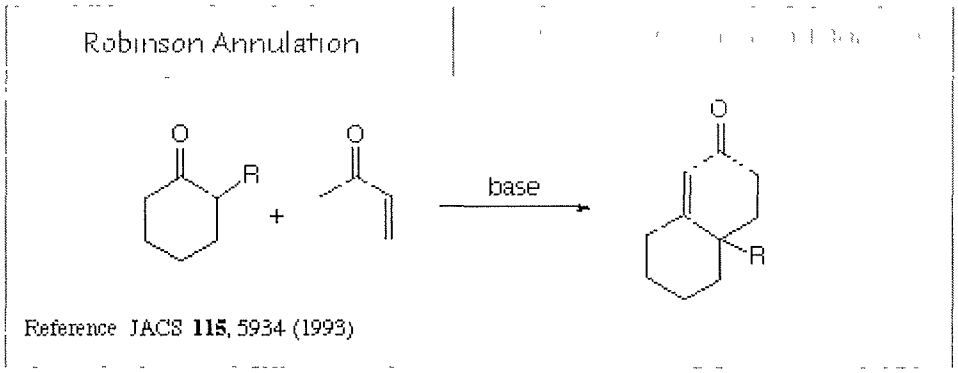


Reference Org React, **5**, 331 (1949)

Done

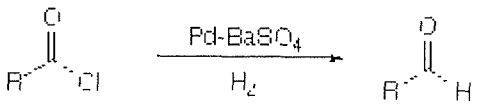


Done


Robinson Annulation
O
R
+
O
base
O
R
Reference JACS 115, 5934 (1993)

Done

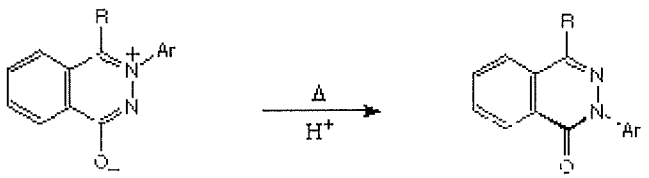
Rosenmund Reduction



Reference JOC **56**, 5159 (1991)

Done

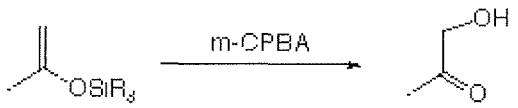
Rowe Rearrangement



Reference JACS 73, 2298 (1951)

Done

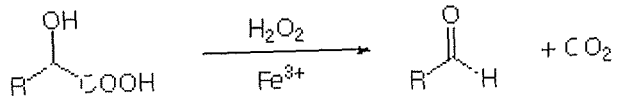
Rubottom Oxidation



Reference JACS **115**, 3146 (1993)

Done

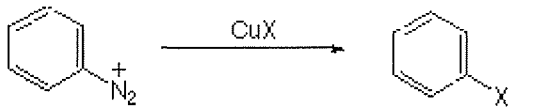
Ruff-Fenton Degradation



Reference Carbohyd Res , **90**, 123 (1981)

Done

Sandmeyer Reaction

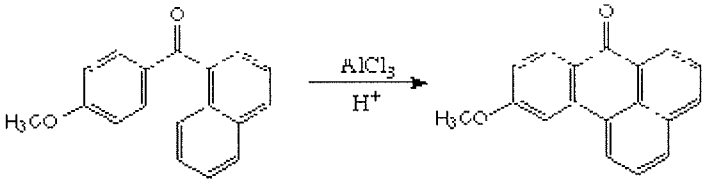


X= Cl, Br, CN

Reference Perkin Trans , I, 645 (1987)

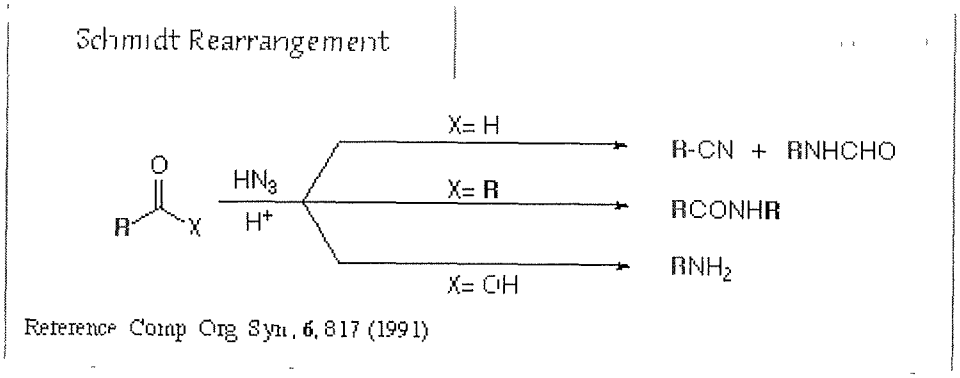
Done

Scholl Reaction



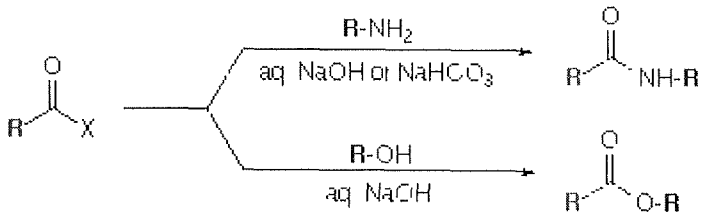
Reference JACS **102**, 5262 (1980)

Done


Schmidt Rearrangement
O
R
X
HN3
H+
X= H
X= R
X= OH
R-CN + RNHCHO
RCONHR
RNH2
Reference Comp Org Syn, 6, 817 (1991)

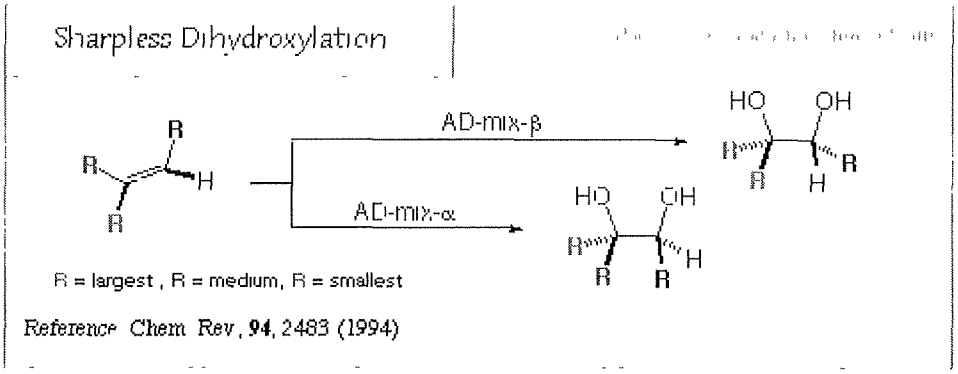
Done

Schotten-Baumann

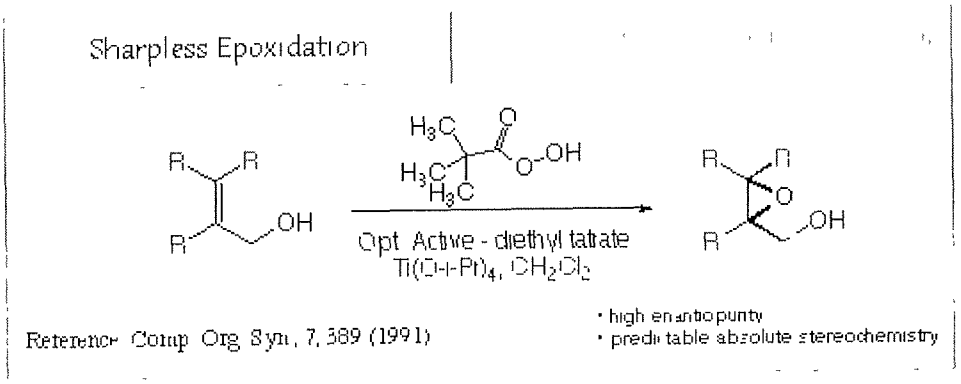


Reference Bull Chem Soc Japan, 42, 1756 (1969)

Done

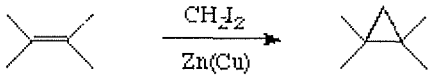

Sharpless Dihydroxylation
AD-mix-β
AD-mix-α
HO
OH
R
H
R = largest , R = medium, R = smallest
Reference Chem Rev, 94, 2483 (1994)

Done


Sharpless Epoxidation
R
R
OH
R
H3C
O
O
OH
H3C
H3C
Opt Active - diethyl tatrate
Ti(O-i-Pr)4, CH2Cl2
R
O
OH
R
Reference Comp Org Syn, 7, 389 (1991)
• high enantiopurity
• predictable absolute stereochemistry

Done

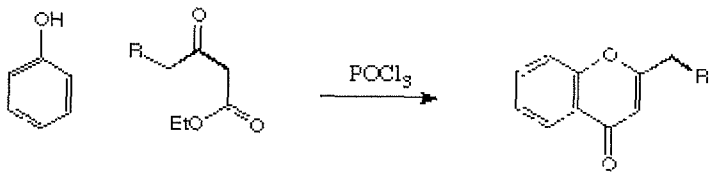
Simmons-Smith Reaction



Reference Coll Czech Chem Commun **46**, 2751 (1981)

Done

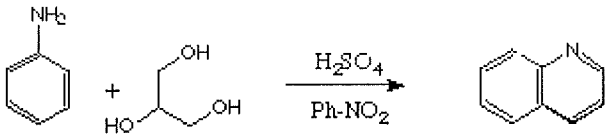
Simonis Chromone Syn



Reference Aust J Chem **25**, 1367 (1972)

Done

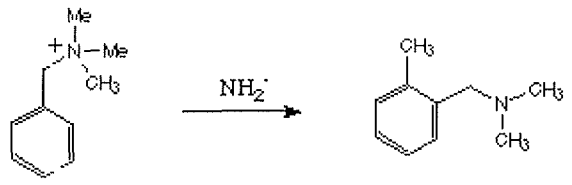
Skraup Reaction



Reference JCS , Perkin Trans I, **260**, 263 (1972)

Done

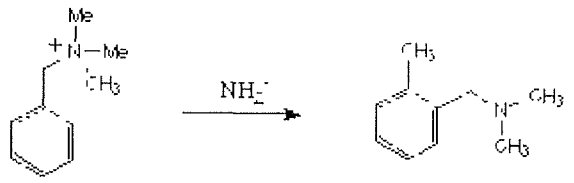
Sommelet-Hauser Rearrangement



Reference JCC, **57**, 5034 (1992)

Done

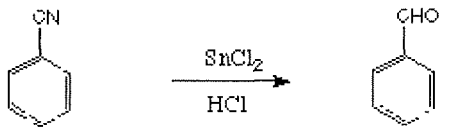
Sommelet-Hauser Rearrangement



Reference JCC, **57**, 5034 (1992)

Done

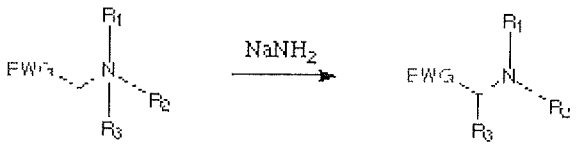
Stephen Aldehyde Syhthesis



Reference JOC, 37, 318 (1972)

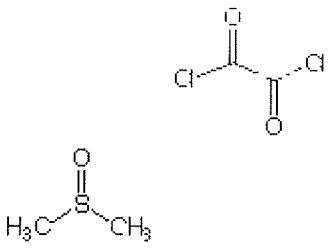
Done

Stevens Rearrangement



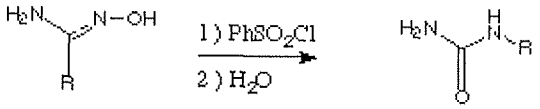
Reference JACS, **96**, 1547 (1974)

Done



Done

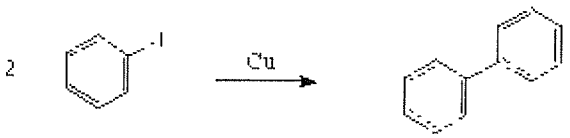
Tiemann Rearrangement



Reference JOC, **21**, 1186 (1956)

Done

Ullmann Reaction

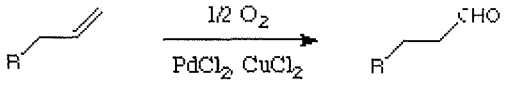


Reference JACS, **103**, 6460 (1981)

[redacted]

Done

Wacker Reaction



Reference JACS, **100**, 3407 (1978)

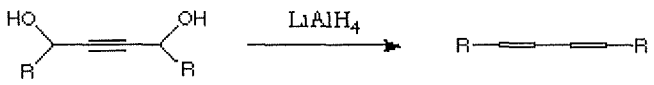
Done

Wharton Reaction

Reference JOC, **26,** 3615 (1961)

Done

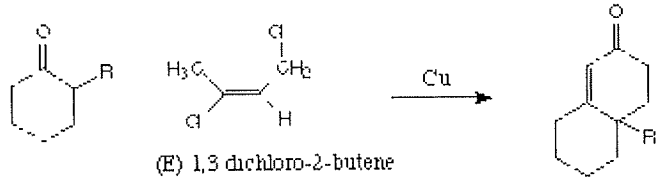
Whiting Reaction



Reference Helv Chim Acta , **39**, 454 (1956)

Done

Wichterle Reaction

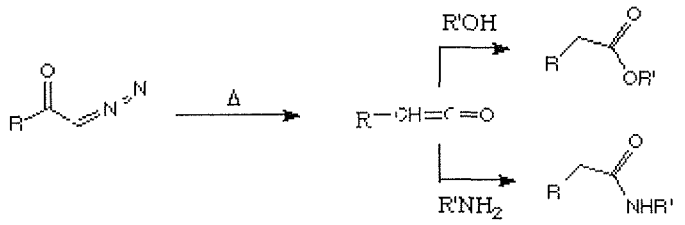


(E) 1,3 dichloro-2-butene

Reference TL, 3489 (1979)

Done

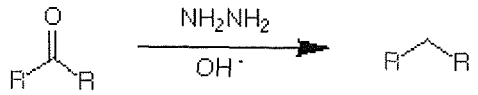
Wolff Rearrangement



Reference Comp Org Syn, 3, 887 (1991)

Done

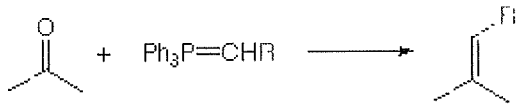
Wolff-Kishner Reduction



Reference Comp Org Syn, **8**, 327 (1991)

Done

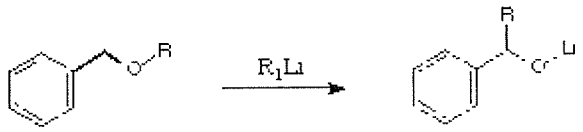
Wittig Reaction



Reference Comp Org Syn, **1**, 755 (1991)

Done

Wittig Rearrangement



Reference Angew Chem **91**, 625 (1979)

Done

2,3 - Wittig Rearrangement

Reference Comp Org Syn, 3, 975 (1991)

Done