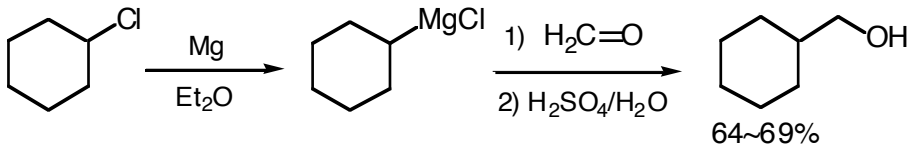
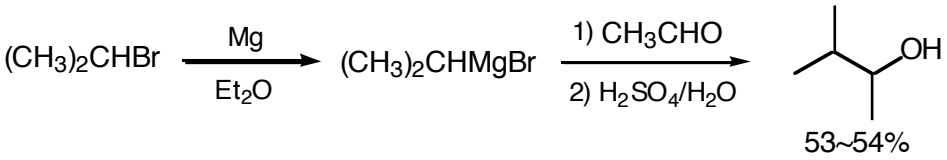
反応例　10.2　Grignard 反応と関連反応

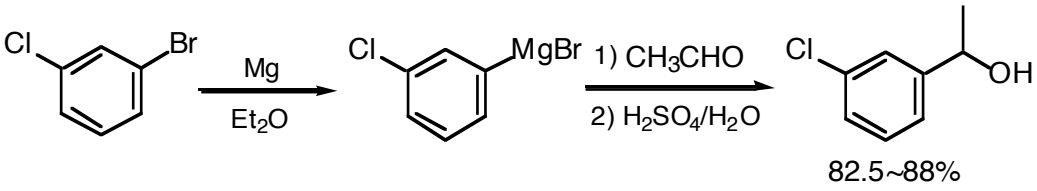
アルデヒド，ケトンとの反応



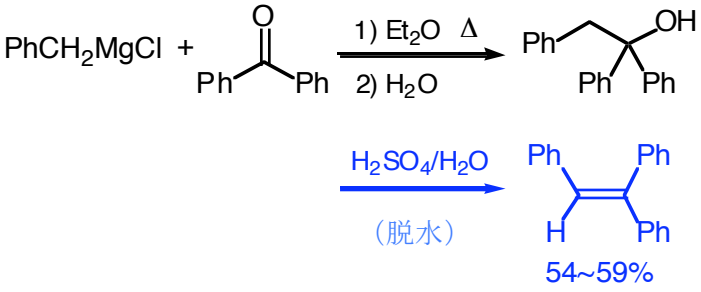
H. Gilman, W.E. Catlin, *Org. Synth.*, Coll. Vol. **1**, 188 (1941).



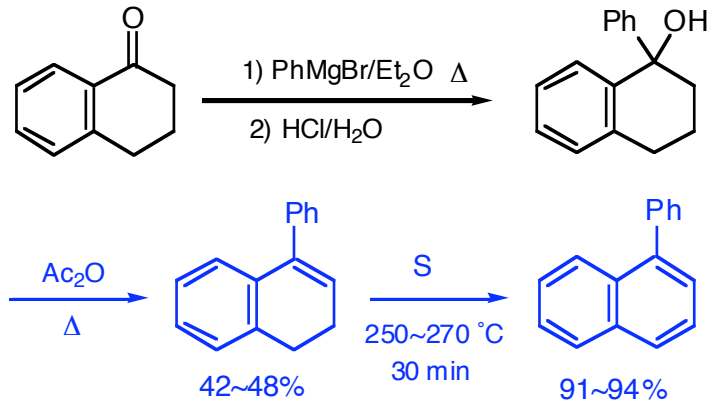
N.L. Drake, G.B. Cooke, *Org. Synth.*, Coll. Vol. **2**, 408 (1943).



C.G. Overberger, J.H. Saunders, R.E. Allen, R. Gander, *Org. Synth.*, Coll. Vol. **3**, 200 (1955).



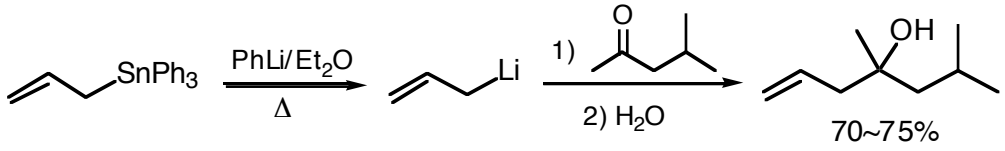
H. Adkins, W. Zartman,
Org. Synth., Coll. Vol. **2**, 606 (1943).



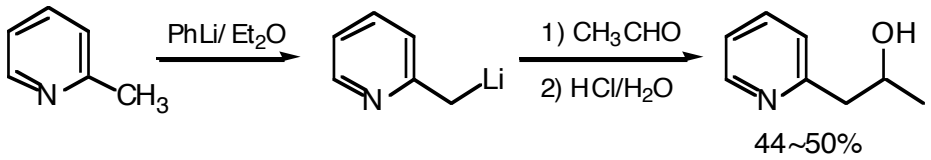
R. Weiss
Org. Synth., Coll. Vol. **3**, 729 (1955).

（脱水素）

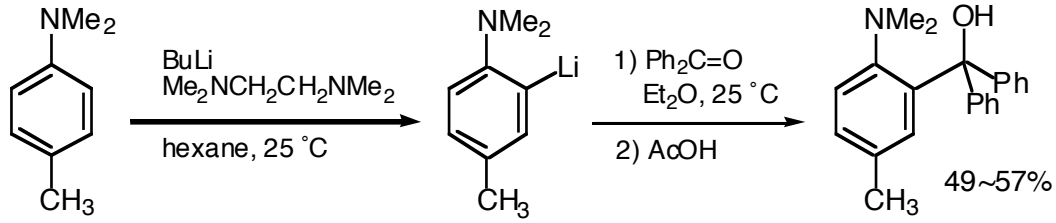
有機リチウム化合物



D. Seyferth, M.A. Weiner, *Org. Synth.*, Coll. Vol. **5**, 452 (1973).

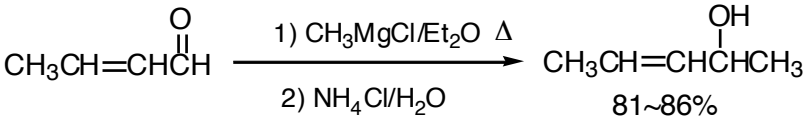


L.A. Walter, *Org. Synth.*, Coll. Vol. **5**, 452 (1973).

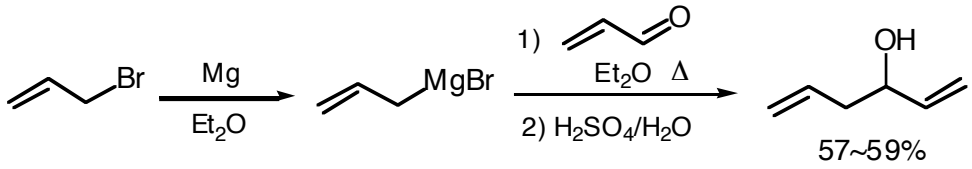


J.V. Hay, T.M. Harris, *Org. Synth.*, Coll. Vol. **6**, 478 (1988).

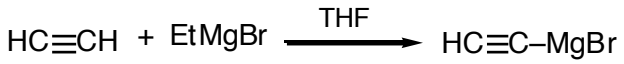
α，β-不飽和カルボニル化合物への 1，2-付加

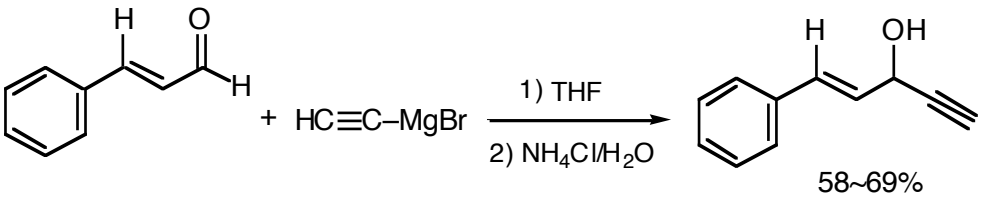


E.R. Coburn, *Org. Synth.*, Coll. Vol. **3**, 696 (1955).



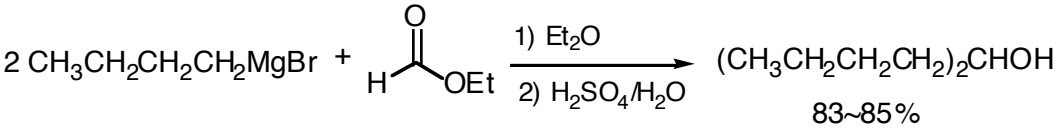
J.C.H. Hwa, H. Sims, *Org. Synth.*, Coll. Vol. **5**, 608(1973).



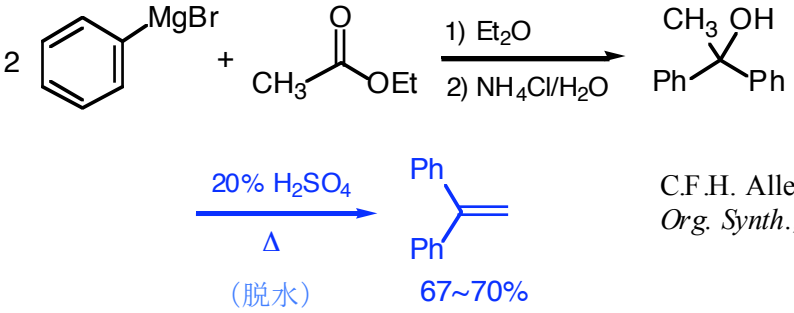


L. Skattebøl, E.R.H. Jones, M.C. Whiting, *Org. Synth.*, Coll. Vol. **4**, 792(1963).

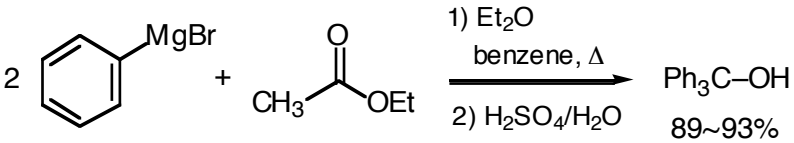
エステルとの反応



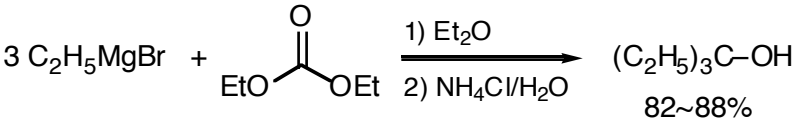
G.H.Coleman, D. Craig, *Org. Synth.*, Coll. Vol. **2**, 179 (1943).



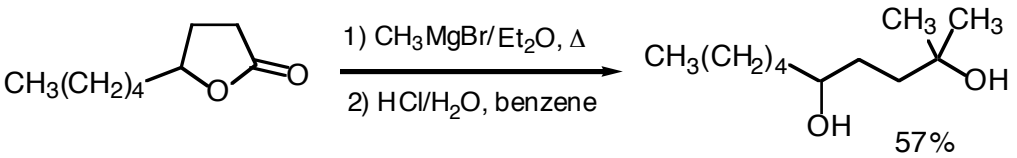
C.F.H. Allen, S. Converse,
Org. Synth., Coll. Vol. **1**, 226 (1941).



W.E. Bachmann, H.P. Hetzner, *Org. Synth.*, Coll. Vol. **3**, 869 (1955).

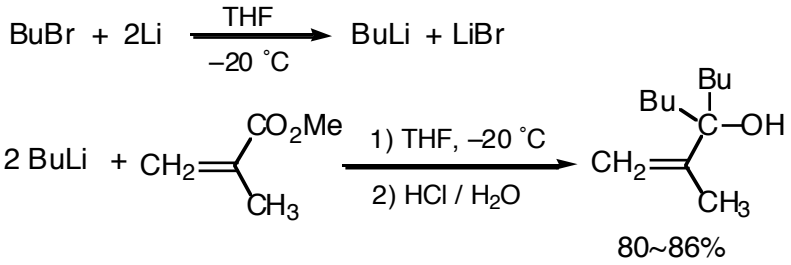


W.W. Moyer, C.S. Marvel, *Org. Synth.*, Coll. Vol. **2**, 602 (1943).

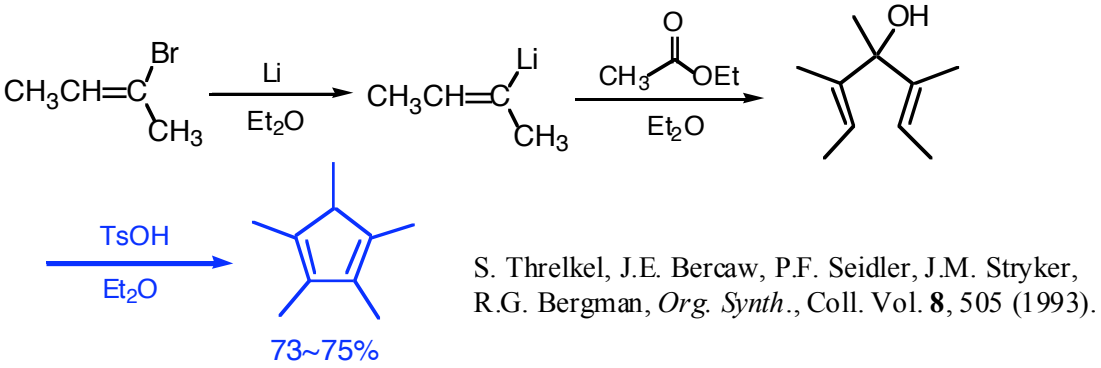


J. Colonge, R. Marey, *Org. Synth.,* Coll. Vol. **4**, 601 (1963).

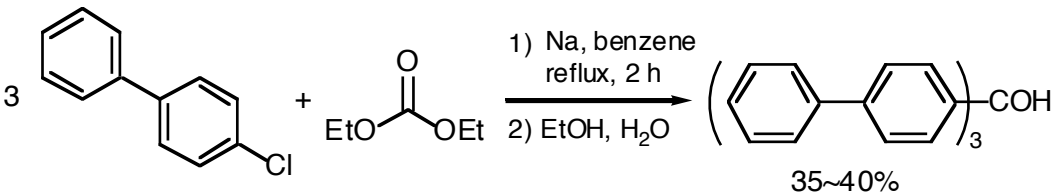
有機アルカリ金属化合物



P.J. Pearce, D.H. Richards, N.F. Scilly, *Org. Synth.*, Coll. Vol. **6**, 478 (1988).

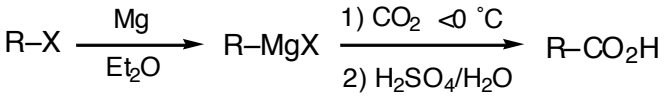


S. Threlkel, J.E. Bercaw, P.F. Seidler, J.M. Stryker, R.G. Bergman, *Org. Synth.*, Coll. Vol. **8**, 505 (1993).

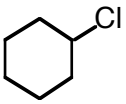


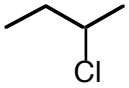
A.A. Morton, J.R. Myles, W.S. Emerson, *Org. Synth.*, Coll. Vol. **3**, 831 (1955).

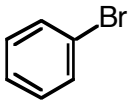
二酸化炭素との反応



R–X =  収率：72~73%

 収率：85%

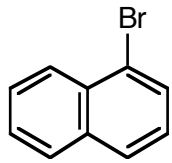
 収率：76~78%

 収率：80~85%

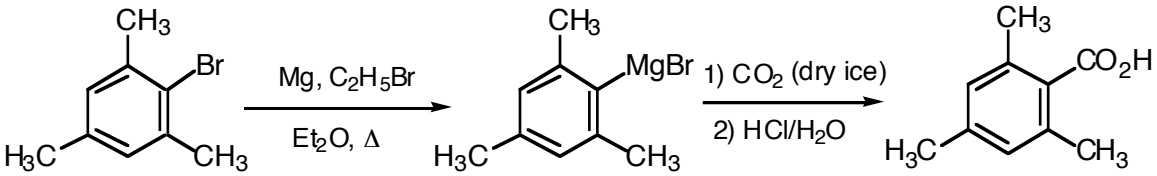
H. Gilman, R.H. Kirby, *Org. Synth.*, Coll. Vol. **1**, 361 (1941).

R–X = $(CH_3)_3C–Cl$ 収率：69~70%

S.V. Puntambeker, E.A. Zoellner, *Org. Synth.*, Coll. Vol. **1**, 524 (1941).

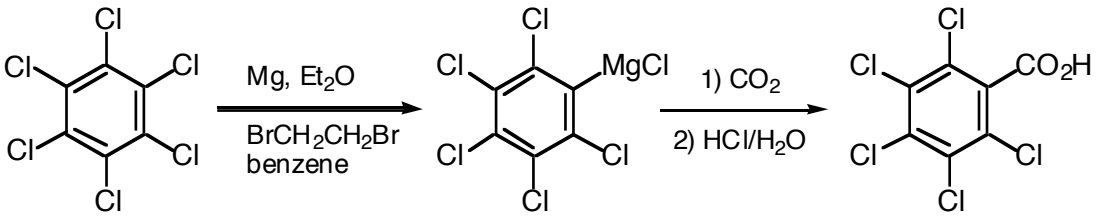
R–X =  収率：68~70%

H. Gilman, N.B.St. John, F. Schlze, *Org. Synth.*, Coll. Vol. **2**, 425 (1943).



（臭化エチルを用いないと収率は61ー66%になる．）

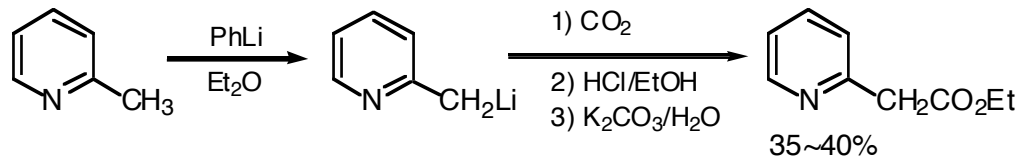
D.M. Bowen, *Org. Synth.*, Coll. Vol. **3**, 553 (1955).



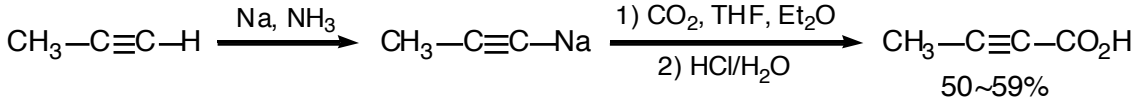
（1, 2-ジブロモエタンで反応を促進している．）

D.E. pearson, D. Cowan, *Org. Synth.*, Coll. Vol. **5**, 890 (1973).

有機アルカリ金属化合物

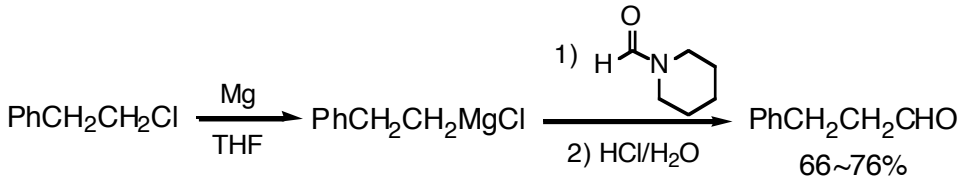


R.B. Woodward, E.C. Komfeld, *Org. Synth.*, Coll. Vol. **3**, 413 (1955).



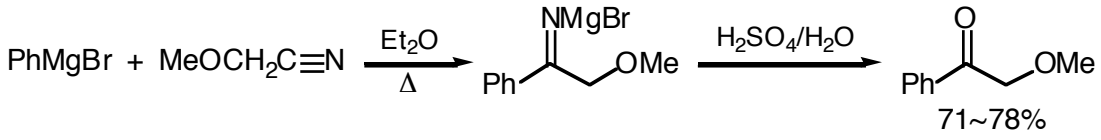
J.C. Kauer, M. Brown, *Org. Synth.*, Coll. Vol. **5**, 1043 (1973).

アミドとの反応

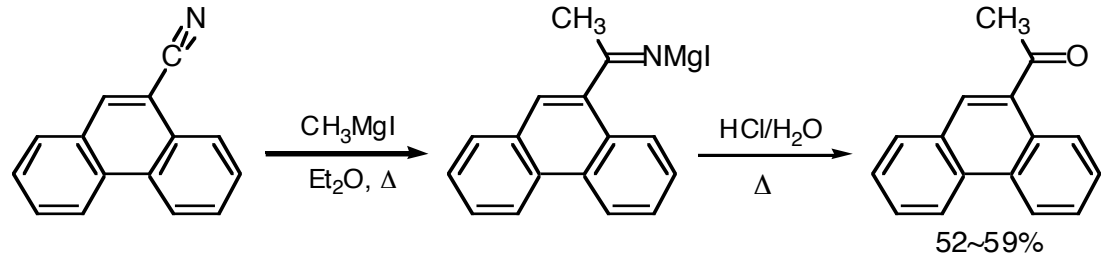


G.A. Olah, M. Arvanaghi, *Org. Synth.*, Coll. Vol. **7**, 451 (1990).

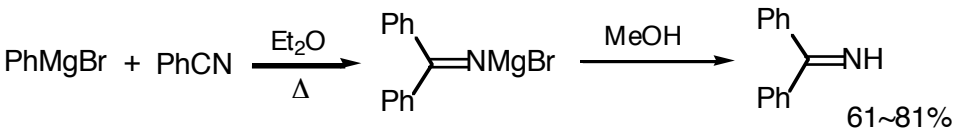
ニトリルとの反応



R.B. Moffett, R.L. Shriner, *Org. Synth.*, Coll. Vol. **3**, 567 (1955).

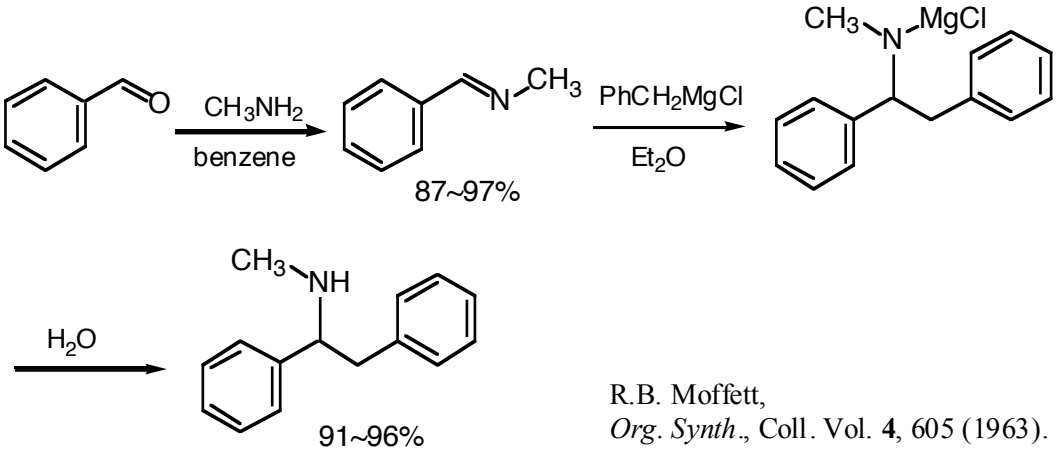


J.E. Callen, C.A. Donfeld, G.H. Coleman, *Org. Synth.*, Coll. Vol. **3**, 26 (1955).



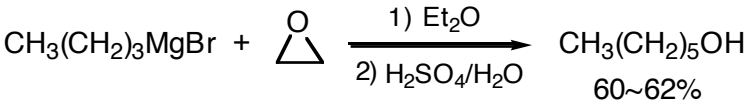
P.L. Pickard, T.L. Tolbert, *Org. Synth*., Coll. Vol. **5**, 520 (1973).

イミンとの反応

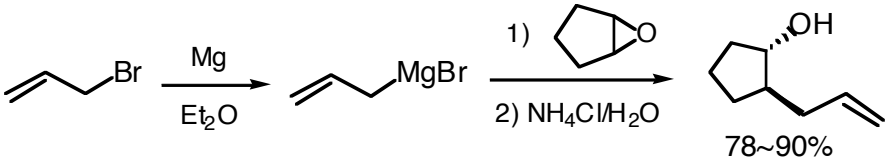


R.B. Moffett,
Org. Synth., Coll. Vol. **4**, 605 (1963).

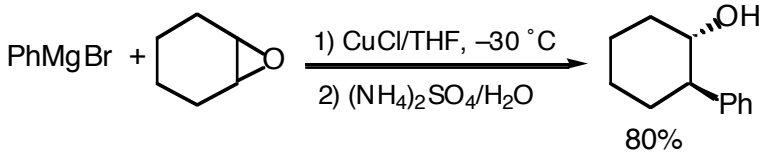
エポキシドとの反応



E.E. Dreger, *Org. Synth*., Coll. Vol. **1**, 306 (1941).

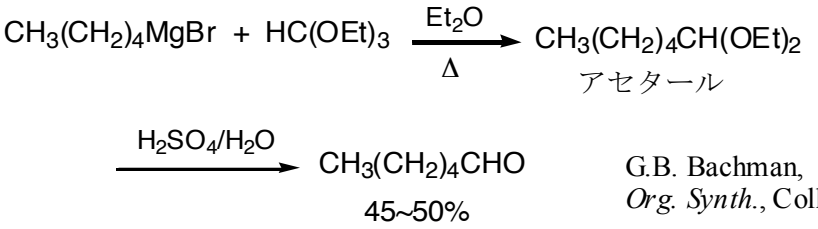


L.S. Hegedus, M.S. Holden, J.M. McKearin, *Org. Synth*., Coll. Vol. **7**, 501 (1990).

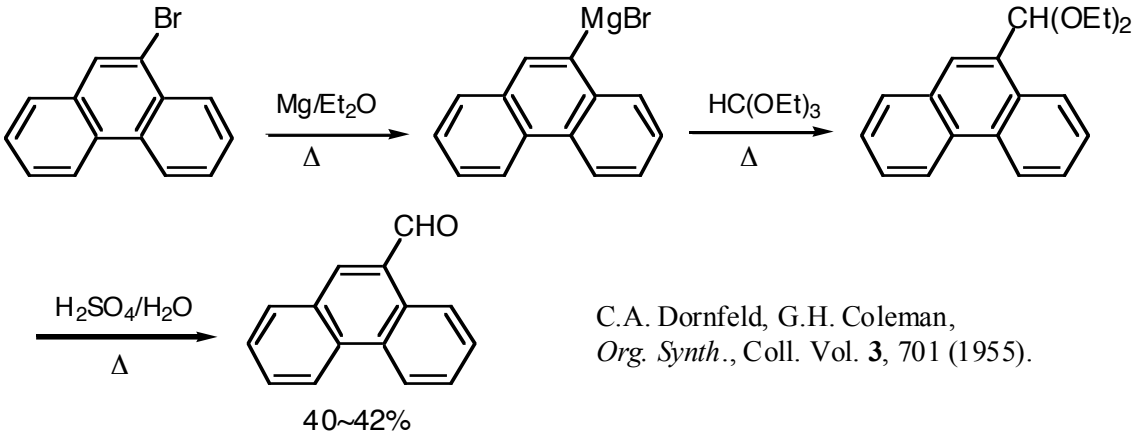


A. Schwartz, P. Madan, J.K. Whitesell, R.M. Lawrence, *Org. Synth*., Coll. Vol. **8**, 516 (1993).

オルトエステルとの反応：アセタールとアルデヒドの合成

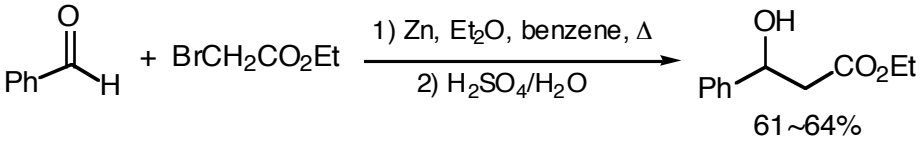


G.B. Bachman,
Org. Synth., Coll. Vol. **2**, 323 (1943).

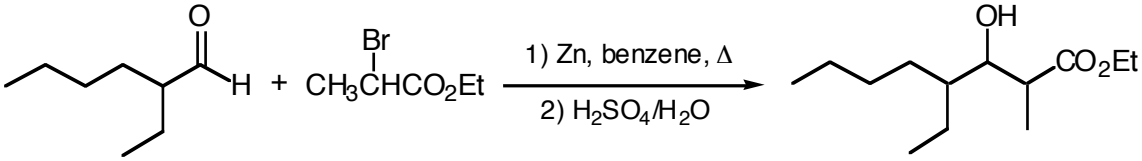


C.A. Dornfeld, G.H. Coleman,
Org. Synth., Coll. Vol. **3**, 701 (1955).

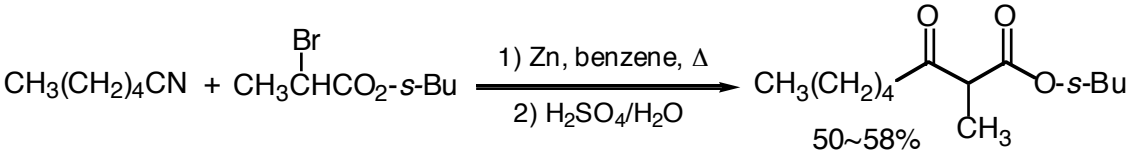
Reformatsky 反応



C.R. Hauser, D.S. Breslow, *Org. Synth.*, Coll. Vol. **3**, 408 (1955).



K.L. Rinehart, E.G. Perkins, *Org. Synth.*, Coll. Vol. **4**, 444 (1963).



K.L. Rinehart, *Org. Synth.*, Coll. Vol. **4**, 120 (1963).