

1. Single Step



90%

[Overview](#)

Steps/Stages

1.1 R:KI, S:H₂O, 7 h, 108°C; 108°C → 50°C

Notes

optimization study, optimized on temperature, phase transfer catalysis, quaternary ammonium salt-polymer catalyst used, Reactants: 1, Reagents: 1, Solvents: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

References

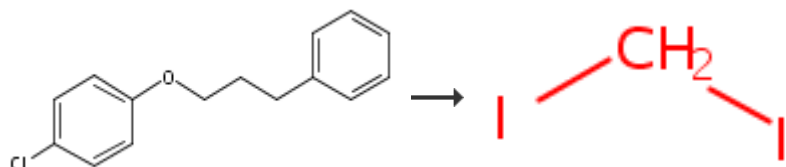
[Method for preparation of diiodomethane by using solid carrier-supported phase transfer catalyst](#)

By Wang, Wei et al

From Faming Zhuanli Shenqing, 102320916, 18 Jan 2012

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2. Single Step

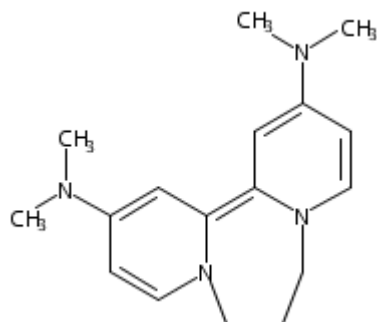


87%

[Overview](#)

Steps/Stages

1.1 R:



S:DMF, 72 h, rt

Notes

photochemical, Reactants: 1, Reagents: 1, Solvents: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

References

[Electron Transfer to Benzenes by Photoactivated Neutral Organic Electron Donor Molecules](#)

By Cahard, Elise et al

From Angewandte Chemie, International Edition, 51(15), 3673-3676, S3673/1-S3673/41; 2012

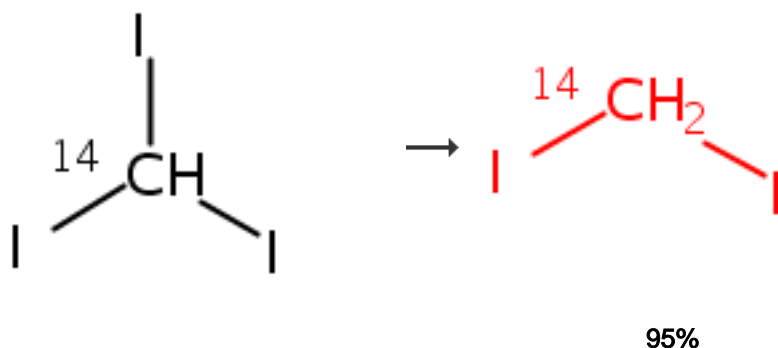
[Reaction Protocol](#)

Procedure

1. Add a solution of 1-chloro-4-(3-phenylpropoxy)benzene (256 mg, 0.9 mmol, 3.0 eq.) in N,N-dimethylformamide (5 ml) to 1-chloro-4-(3-phenylpropoxy)benzene (74 mg, 0.30 mmol, 1.0 eq.) and irradiate for 72 hours under inert atmosphere.
2. Add water (75 ml) to the reaction mixture.

[View more...](#)**Available
Experimental
Data**¹H NMR, ¹³C NMR, IR, Elemental Analysis, Mass Spec, State[View with
MethodsNow](#)

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3. Single Step[Overview](#)**Steps/Stages**

1.1 R:NaOH, R:As

Notes

H 60.deg., Reactants: 1, Reagents: 2, Steps: 1, Stages: 1, Most stages in any one step: 1

References

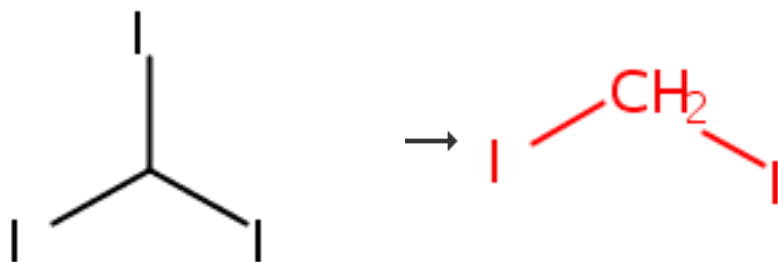
[Synthesis of carbon 14 labeled Eschenmoser's salt: dimethyl\(\[14C\]methylene\)ammonium iodide](#)

By Kupczyk-Subotkowska, Lidia and Shine, Henry J.

From Journal of Labelled Compounds and Radiopharmaceuticals, 33(4), 301-4; 1993

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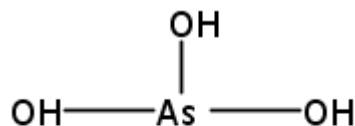
4. Single Step



97%

[Overview](#)**Steps/Stages**

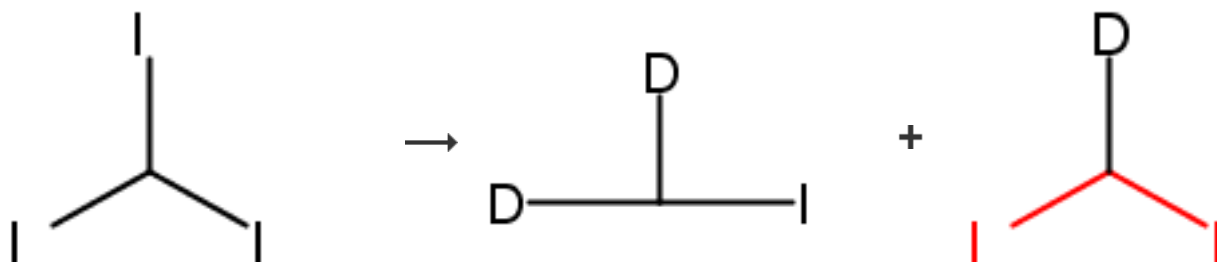
1.1 R:



• 3 Na

R:NaOH, S:H₂O

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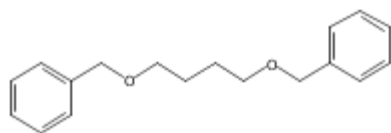
5. Single Step

85% (18:81)

85% (18:81)

[Overview](#)**Steps/Stages**

1.1 R:

R:Et₂Zn, S:ClCH₂CH₂Cl, S:CH₂Cl₂1.2 R:D₂SO₄, S:D₂O**Notes**

Aq. Na₃AsO₃/NaOH, 60-65 C, Deiodination, Reduction, Reactants: 1, Reagents: 2, Solvents: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

References

[Methylene iodide](#)

By Adams, Roger and Marvel, C. S.

From Organic Syntheses, I, 57-9; 1921

Notes

Reactants: 1, Reagents: 3, Solvents: 3, Steps: 1, Stages: 2, Most stages in any one step: 2

References

[First Evidence for the Formation of a Geminal Dizinc Carbenoid: A Highly Stereoselective Synthesis of 1,2,3-Substituted Cyclopropanes](#)

By Charette, Andre B. et al

From Journal of the American Chemical Society, 124(3), 386-387; 2002

Experimental Procedure

Dideuteroiodomethane. To a solution of 1,4-dibenzyloxy-butane (50.0 mg, 0.185 mmol, 1 eq.) in dry 1,2-dichloroethane (0.5 mL) at 0 °C was first added Et₂Zn (38 µL, 0.370 mmol, 2 eq.) then a solution of CHI₃ (146 mg, 0.370 mmol, 2 eq.) in a minimum of 1,2-dichloroethane CH₂Cl₂ (3 mL) by cannula. The ice bath was removed and the reaction mixture was stirred for 5 min before being quenched with D₂O and D₂SO₄. nheptane (25 µL, 0.171 mmol, 0.92 eq.) was then added as an internal standard. A sample of the organic phase was filtered on a small silica pad and injected in a GC-MS (for isotopic detection) and GC (for quantitative results). Results revealed the consumption of iodoform along with the formation of dideutero-iodomethane and deutero-diiodomethane.

Reaction Protocol

Procedure

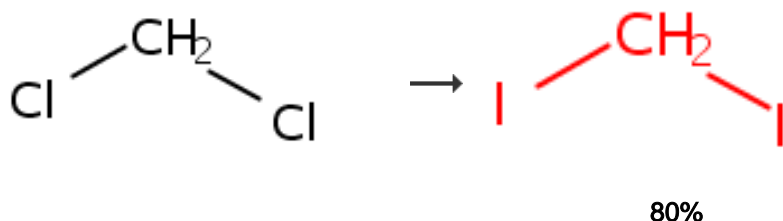
1. Add Et₂Zn (38 µL, 0.370 mmol, 2 equivalents), a solution of CHI₃ (146 mg, 0.370 mmol, 2 equivalents) in a minimum of 1,2-dichloroethane CH₂Cl₂ (3 mL) to a solution of 1,4-dibenzyloxy-butane (0.185 mmol, 1 equivalent) in dry 1,2-dichloroethane (0.5 mL) at 0 °C by cannula.
2. Remove the ice bath.

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6. Single Step



Overview

Steps/Stages

1.1

Notes

Classification: Transhalogenation; Iodination;
Phase transfer catalyst; # Conditions: n-Bu₃PC16H₃₃+Br-; 100-110 deg /4-5atm; 18-20h, Reactants: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

References

[Improved synthesis of diiodomethane and chloriodomethane in the presence of phase-transfer catalysts](#)

By Landini, Dario and Rolla, Franco

From Chemistry & Industry (London, United Kingdom), (13), 533-4; 1974

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7. Single Step



Overview

Steps/Stages

1.1 R:NaI, C:Bu₄N⁺•I⁻, S:DMF, rt → 140°C; 2 h, 135-145°C

Notes

product yield and reaction time depends on presence of catalyst, product was distilled in the presence of copper wire (without copper wire product purity will decrease), Reactants: 1, Reagents: 1, Catalysts: 1, Solvents: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

References

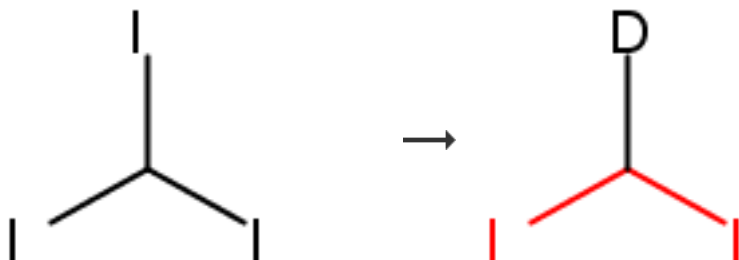
[Process for terminal dihaloalkane](#)

By Herlekar, Omkar Pravin et al

From Indian Pat. Appl., 2012MU01684, 03 Aug 2012

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8. Single Step



Overview

Steps/Stages

1.1 R:Et₂Zn, S:CH₂Cl₂, 0.08-24 h, rt

1.2 R:D₂O, rt

Notes

iodoform:CHDI₂ ratio depends on reaction time, Reactants: 1, Reagents: 2, Solvents: 1, Steps: 1, Stages: 2, Most stages in any one step: 2

References

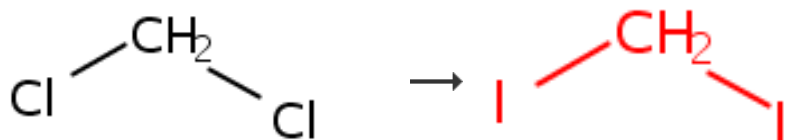
[Highly Enantioselective Synthesis of 1,2,3-Substituted Cyclopropanes by Using α-Iodo- and α-Chloromethylzinc Carbenoids](#)

By Beaulieu, Louis-Philippe B. et al

From Chemistry - A European Journal, 18(46), 14784-14791, S14784/1-S14784/201; 2012

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9. Single Step



Overview

Steps/Stages

1.1 R:Nal, S:DMF, rt → 100°C; 6-8 h, 100°C

Notes

Reactants: 1, Reagents: 1, Solvents: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

References

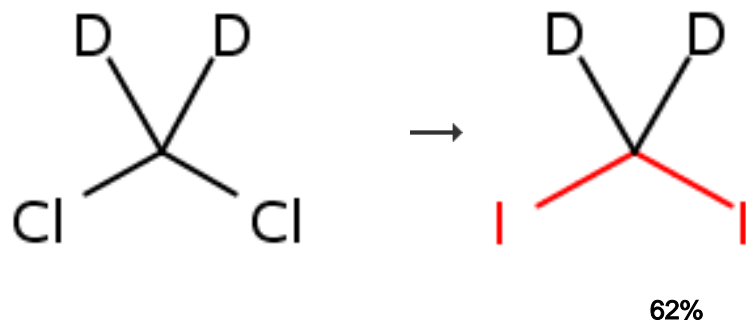
[Method for preparing diiodomethane with high yield](#)

By Xu, Bogang

From Faming Zhuanli Shenqing, 102020529, 20 Apr 2011

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10. Single Step



Overview

Steps/Stages

1.1 R:MeI, R:AlCl₃

Notes

Reactants: 1, Reagents: 2, Steps: 1, Stages: 1, Most stages in any one step: 1

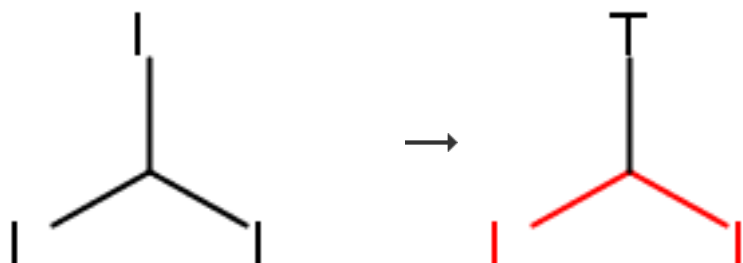
References

[Gas phase pyrolysis of \[2,2,3,3-D₄\]phenylcyclopropane](#)

By Kopinke, Frank Dieter et al

From Chemische Berichte, 122(4), 721-5; 1989

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11. Single Step[Overview](#)**Steps/Stages**

1.1 60°C

Notes

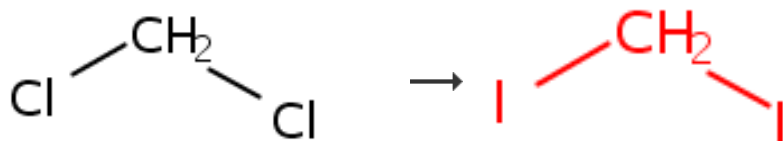
Other Applications, Reactants: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

References[Iodoform](#)

By Crich, David et al

From e-EROS Encyclopedia of Reagents for Organic Synthesis, , No pp. given; 2001

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12. Single Step[Overview](#)**Steps/Stages**1.1 R:AlI₃, S:CS₂**Notes**

Reactants: 1, Reagents: 1, Solvents: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

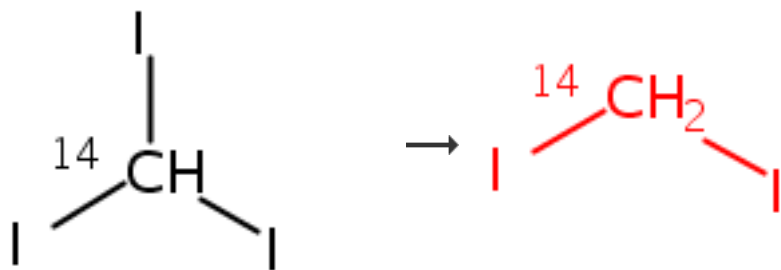
References[Preparation of alkyl iodides by reaction of aluminum iodide with alkyl chlorides](#)

By Arnaiz, F. J. and Bustillo, J. M.

From Anales de Quimica, Serie C: Quimica Organica y Bioquimica, 82(3), 270-1; 1986

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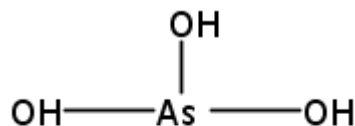
13. Single Step



Overview

Steps/Stages

1.1 R:

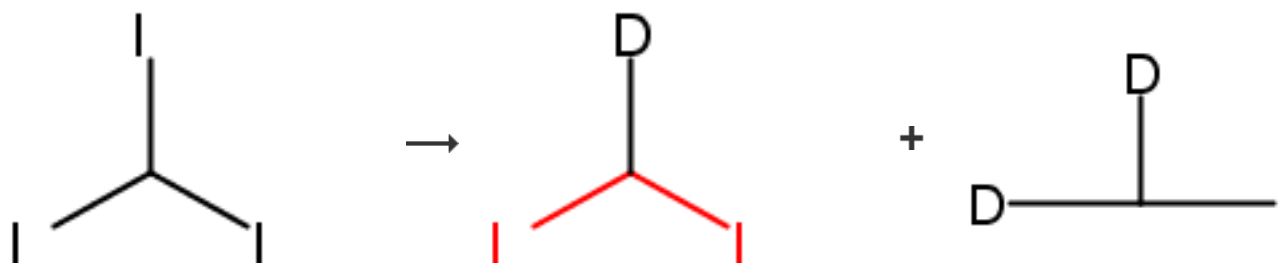


• 3 Na

S:H₂O

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14. Single Step



Overview

Steps/Stages

Notes

Reactants: 1, Reagents: 1, Solvents: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

References

[Synthesis of carbon-14-labelled dibenzo\[d,g\]\[1,3,6\]dioxazocine derivatives \(EGYT-2474 and EGYT-2509\)](#)

By Birkas-Faigl, E. et al

From Journal of Labelled Compounds and Radiopharmaceuticals, 22(10), 1061-6; 1985

Notes

1.1 R:Et₂Zn, S:CH₂Cl₂, 10 min, rt

1.2 R:D₂O, rt

alternative reaction conditions shown, product depends on stoichiometry, Reactants: 1, Reagents: 2, Solvents: 1, Steps: 1, Stages: 2, Most stages in any one step: 2

References

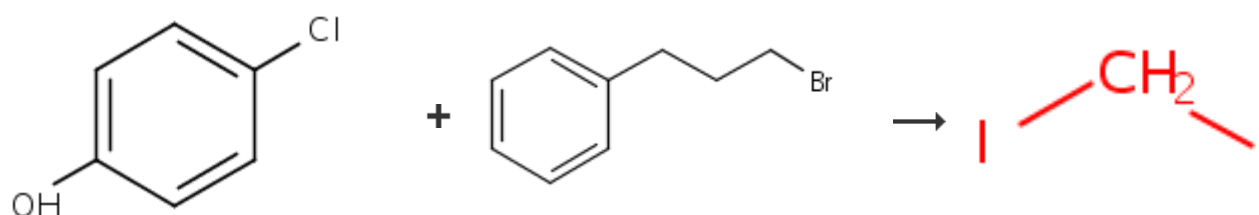
[Enantio- and Diastereoselective Iodocyclopropanation of Allylic Alcohols by Using a Substituted Zinc Carbenoid](#)

By Beaulieu, Louis-Philippe B. et al

From Chemistry - A European Journal, 15(44), 11829-11832, S11829/1-S11829/78; 2009

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15. 2 Steps

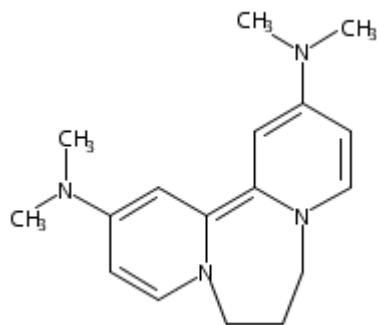


Overview

Steps/Stages

1.1 S:DMF, overnight, rt

2.1 R:



S:DMF, 72 h, rt

Notes

2) photochemical, Reactants: 2, Reagents: 1, Solvents: 1, Steps: 2, Stages: 2, Most stages in any one step: 1

References

[Electron Transfer to Benzenes by Photoactivated Neutral Organic Electron Donor Molecules](#)

By Cahard, Elise et al

From Angewandte Chemie, International Edition, 51(15), 3673-3676, S3673/1-S3673/41; 2012

Reaction Protocol

Procedure

1. Add potassium carbonate (4 g, 30 mmol, 10 eq.) to a solution of 4-chlorophenol (578 mg, 4.5 mmol, 1.5 eq.) and 1-bromo-3-phenylpropane (597 mg, 0.456 ml, 3 mmol, 1.0 eq.) in DMF (20 ml).
2. Stir the suspension overnight.

[View more...](#)

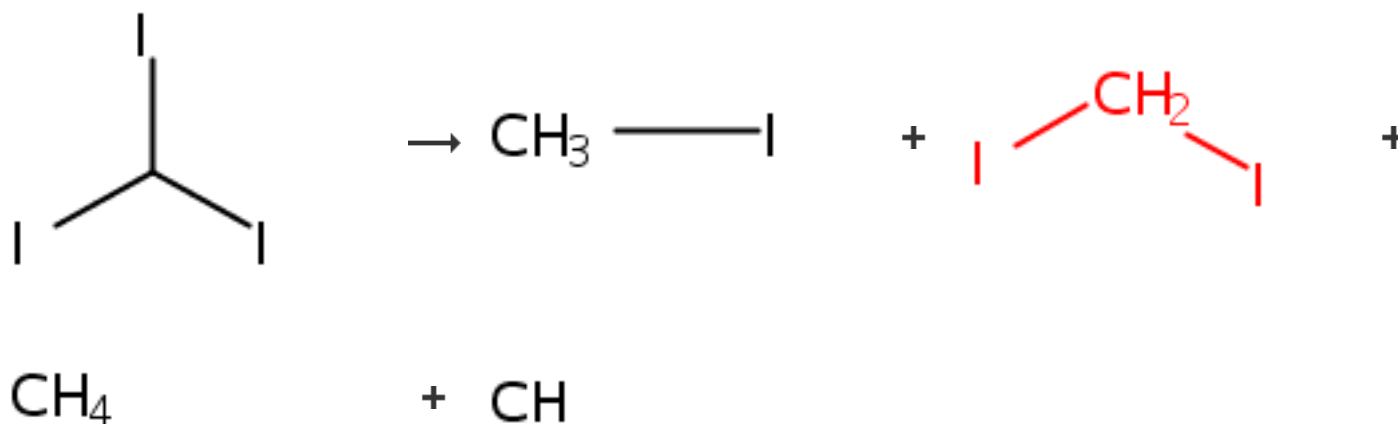
Available Experimental Data

¹H NMR, ¹³C NMR, IR, Elemental Analysis, Mass Spec, State

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16. Single Step



Overview

Steps/Stages

1.1 592K

Notes

thermal, other products also detected, kinetic study, Reactants: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

References

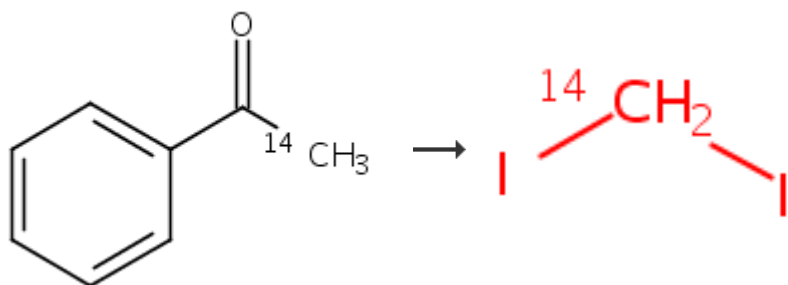
[Isotope Effects and Final Products in Pyrolysis of Halomethanes and Perfluoroalkyl Iodides](#)

By Skorobogatov, G. A. et al

From Russian Journal of General Chemistry, 75(9), 1411-1420; 2005

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17. 2 Steps



Overview

Steps/Stages

Notes

1.1 R:NaOCl

2.1 R:NaOH, R:As

2) H 60.deg., Reactants: 1, Reagents: 3,
Steps: 2, Stages: 2, Most stages in any one
step: 1

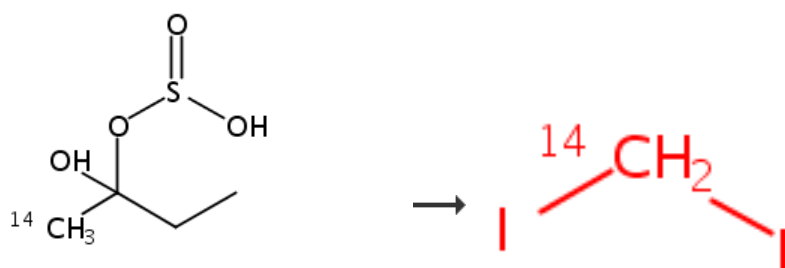
References

[Synthesis of carbon 14 labeled
Eschenmoser's salt:
dimethyl\(\[14C\]methylene\)ammonium iodide](#)

By Kupczyk-Subotkowska, Lidia and Shine,
Henry J.

From Journal of Labelled Compounds and
Radiopharmaceuticals, 33(4), 301-4; 1993

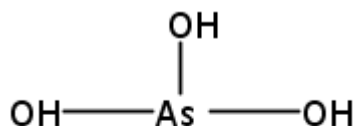
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18. 2 Steps

• Na

[Overview](#)**Steps/Stages**1.1 R:KI, R:NaOCl, S:H₂O

2.1 R:



• 3 Na

S:H₂O**Notes**

Reactants: 1, Reagents: 3, Solvents: 1, Steps:
2, Stages: 2, Most stages in any one step: 1

References

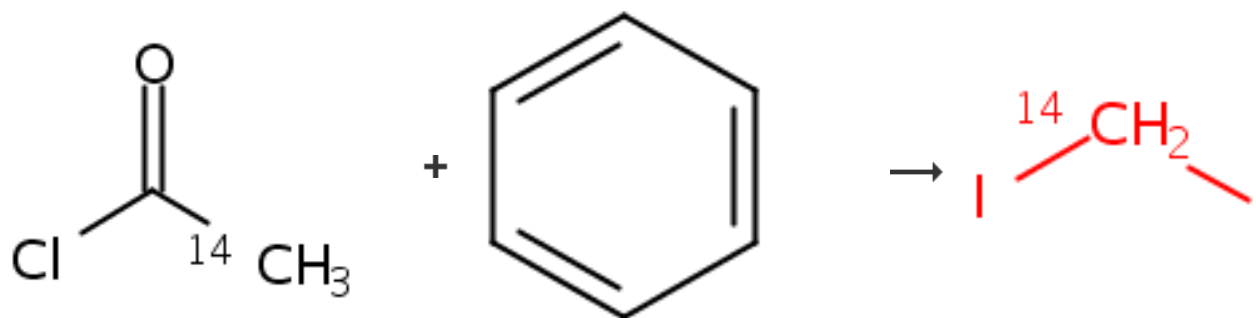
[Synthesis of carbon-14-labelled
dibenzo\[d,g\]\[1,3,6\]dioxazine derivatives
\(EGYT-2474 and EGYT-2509\)](#)

By Birkas-Faigl, E. et al

From Journal of Labelled Compounds and
Radiopharmaceuticals, 22(10), 1061-6; 1985

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19. 3 Steps



Overview

Steps/Stages

- 1.1 R:AlCl₃
- 2.1 R:NaOCl
- 3.1 R:NaOH, R:As

Notes

3) H 60.deg., Reactants: 2, Reagents: 4, Steps: 3, Stages: 3, Most stages in any one step: 1

References

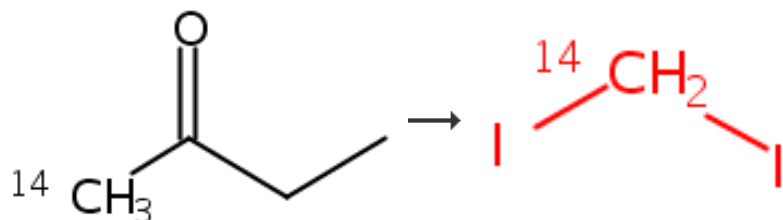
[Synthesis of carbon 14 labeled Eschenmoser's salt: dimethyl\(\[¹⁴C\]methylene\)ammonium iodide](#)

By Kupczyk-Subotkowska, Lidia and Shine, Henry J.

From Journal of Labelled Compounds and Radiopharmaceuticals, 33(4), 301-4; 1993

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20. 3 Steps



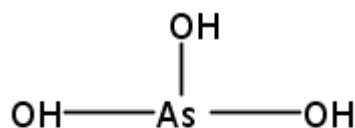
Overview

Steps/Stages

Notes

1.1 R:NaHSO₃, S:Et₂O, S:H₂O2.1 R:KI, R:NaOCl, S:H₂O

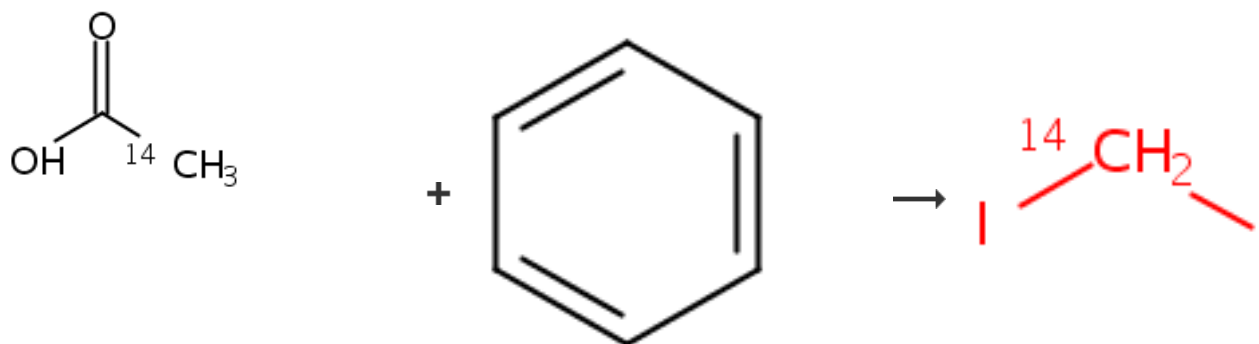
3.1 R:



• 3 Na

S:H₂O

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21. 4 Steps

• Na

[Step 2.1]

[Overview](#)**Steps/Stages**

1.1

2.1 R:AlCl₃

3.1 R:NaOCl

4.1 R:NaOH, R:As

Notes

4) H 60.deg., Reactants: 2, Reagents: 4, Steps: 4, Stages: 4, Most stages in any one step: 1

References

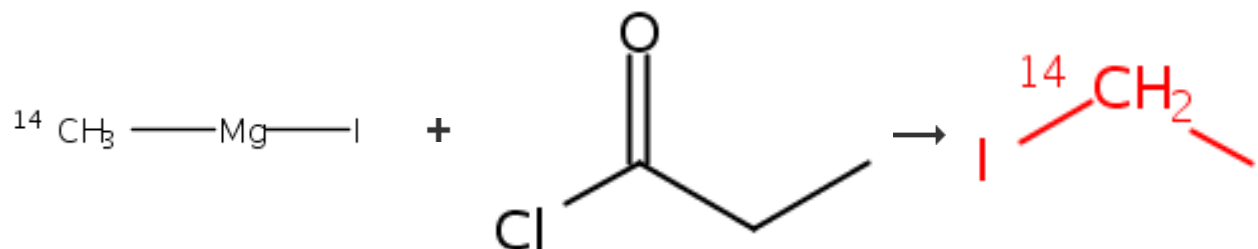
[Synthesis of carbon 14 labeled Eschenmoser's salt: dimethyl\(\[14C\]methylene\)ammonium iodide](#)

By Kupczyk-Subotkowska, Lidia and Shine, Henry J.

From Journal of Labelled Compounds and Radiopharmaceuticals, 33(4), 301-4; 1993

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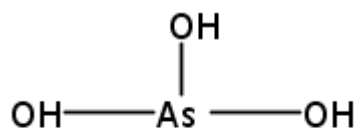
22. 4 Steps



Overview

Steps/Stages

- 1.1 C:Cu, S:Et₂O
- 2.1 R:NaHSO₃, S:Et₂O, S:H₂O
- 3.1 R:KI, R:NaOCl, S:H₂O
- 4.1 R:



Notes

Reactants: 2, Reagents: 4, Catalysts: 1, Solvents: 2, Steps: 4, Stages: 4, Most stages in any one step: 1

References

[Synthesis of carbon-14-labelled dibenzo\[d,g\]\[1,3,6\]dioxazocine derivatives \(EGYT-2474 and EGYT-2509\)](#)

By Birkas-Faigl, E. et al

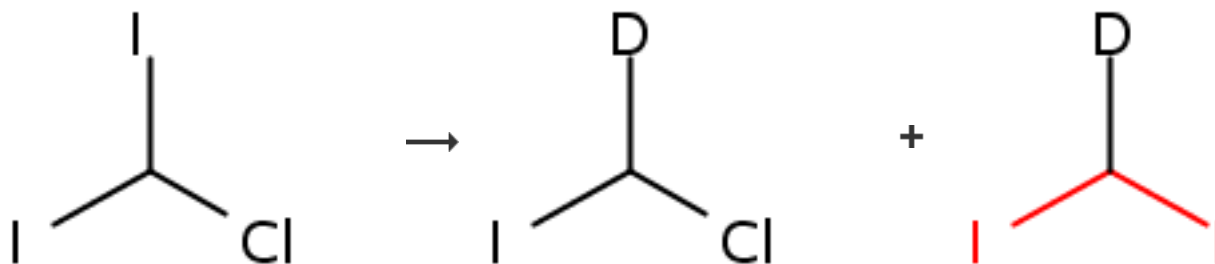
From Journal of Labelled Compounds and Radiopharmaceuticals, 22(10), 1061-6; 1985

• 3 Na

S:H₂O

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23. Single Step



Overview

Steps/Stages

Notes

- 1.1 R:Et₂Zn, S:CH₂Cl₂, 10 min, -78°C; 1 h, -40°C
 1.2 R:AcOD, -40°C; -40°C → rt; 5 min, rt
 1.3 R:HCl, S:H₂O, rt

CHDCII:CHDI2 = 61:39, Reactants: 1,
 Reagents: 3, Solvents: 2, Steps: 1, Stages: 3,
 Most stages in any one step: 3

References

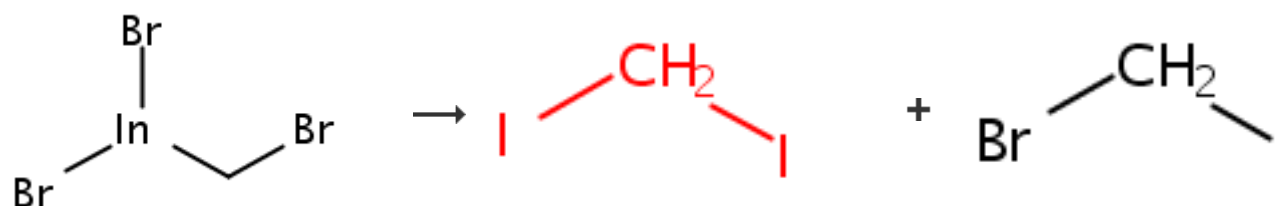
[Highly Enantioselective Synthesis of 1,2,3-Substituted Cyclopropanes by Using α-Iodo- and α-Chloromethylzinc Carbenoids](#)

By Beaulieu, Louis-Philippe B. et al

From Chemistry - A European Journal, 18(46), 14784-14791, S14784/1-S14784/201; 2012

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24. Single Step



Overview

Steps/Stages

- 1.1 R:I₂, S:Et₂O

Notes

Reactants: 1, Reagents: 1, Solvents: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

References

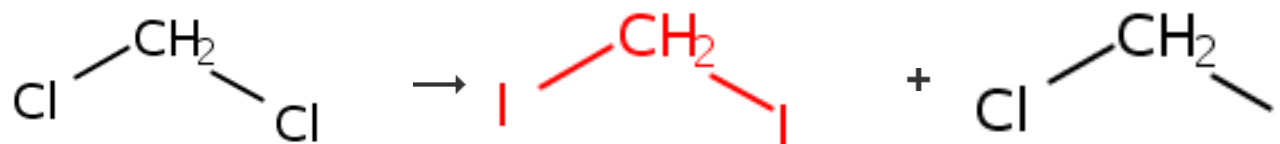
[Coordination Chemistry of Br₂InCH₂Br: Coordination at the Metal Center](#)

By De Carvalho, Antonio B. et al

From Organometallics, 18(1), 99-105; 1999

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25. Single Step



Overview

Steps/Stages

Notes

1.1 R:AlI₃, S:CS₂

excess methylene chloride, Reactants: 1,
Reagents: 1, Solvents: 1, Steps: 1, Stages: 1,
Most stages in any one step: 1

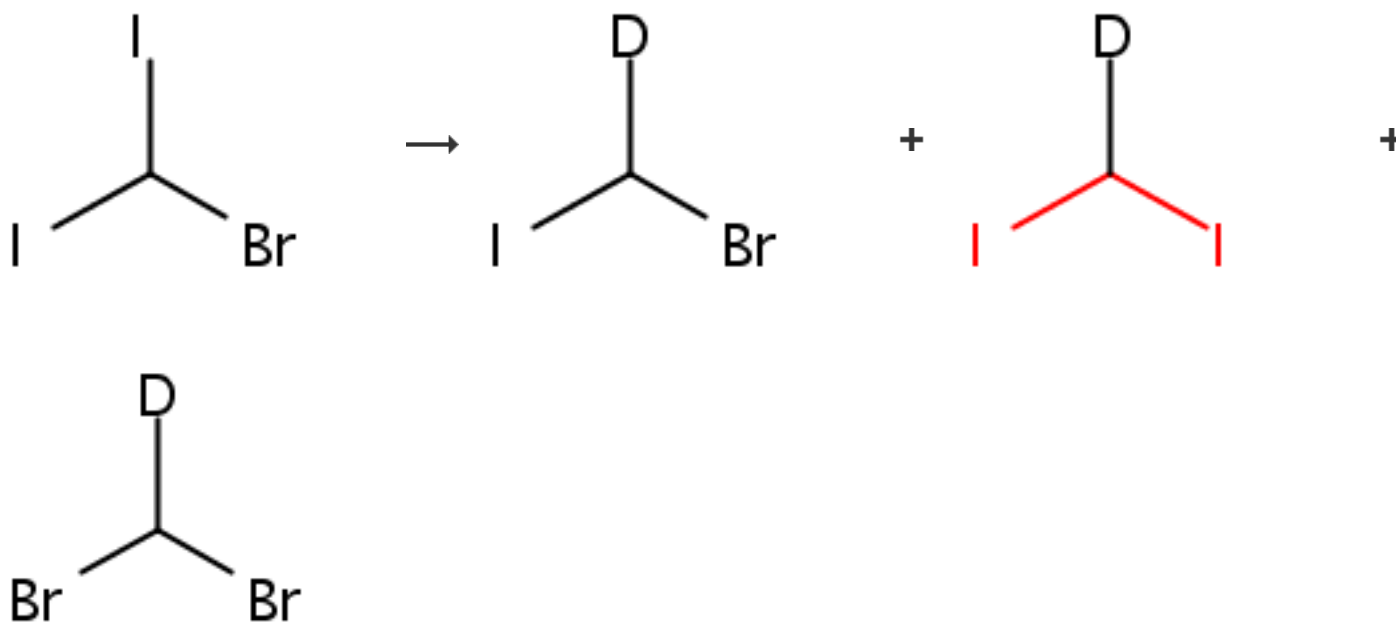
References

[Preparation of alkyl iodides by reaction of aluminum iodide with alkyl chlorides](#)

By Arnaiz, F. J. and Bustillo, J. M.

From *Anales de Quimica, Serie C: Quimica Organica y Bioquimica*, 82(3), 270-1; 1986

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26. Single Step[Overview](#)**Steps/Stages**1.1 R:Et₂Zn, S:CH₂Cl₂, 10 min, -78°C; 1 h, -40°C

1.2 R:AcOD, -40°C; -40°C → rt; 5 min, rt

1.3 R:HCl, S:H₂O, rt**Notes**

CHDBrI:CHDI2:CHDBr2 = 58:41:1, Reactants:
1, Reagents: 3, Solvents: 2, Steps: 1, Stages:
3, Most stages in any one step: 3

References

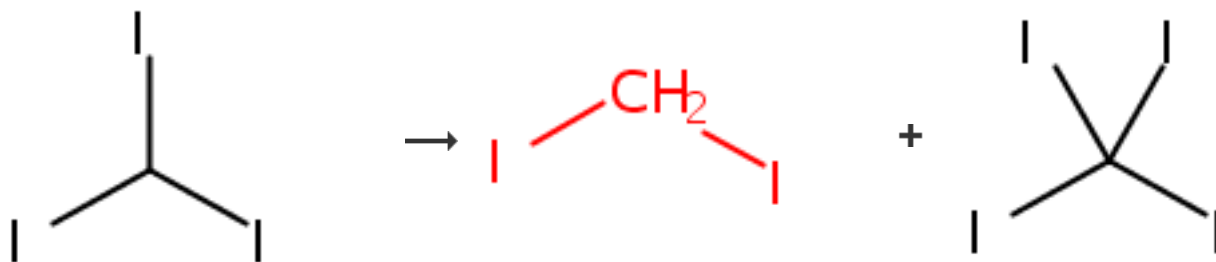
[Highly Enantioselective Synthesis of 1,2,3-Substituted Cyclopropanes by Using α-Iodo- and α-Chloromethylzinc Carbenoids](#)

By Beaulieu, Louis-Philippe B. et al

From *Chemistry - A European Journal*, 18(46), 14784-14791, S14784/1-S14784/201; 2012

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27. Single Step



Overview

Steps/Stages

1.1 R:NaOH

Notes

Reactants: 1, Reagents: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

References

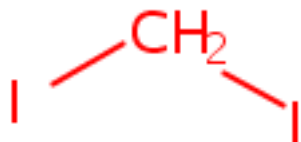
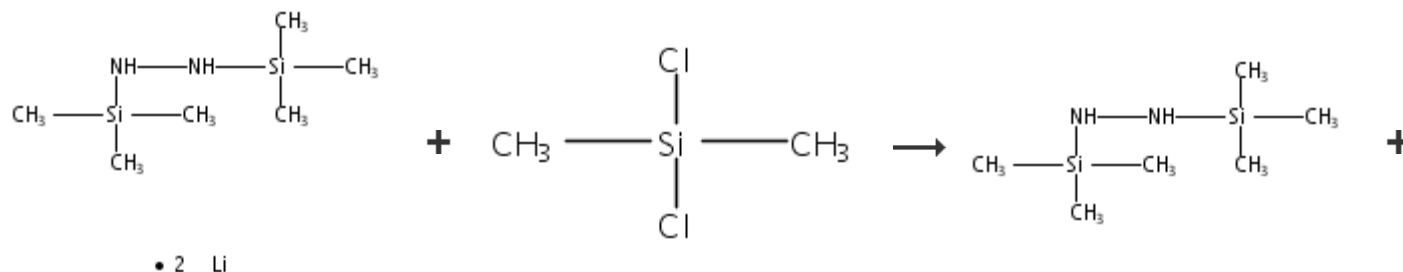
[Iodoform - First Update to document cited in CA149:223287](#)

By Crich, David et al

From e-EROS Encyclopedia of Reagents for Organic Synthesis, , No pp. given; 2007

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28. Single Step



Overview

Steps/Stages

Notes

1.1 S:Et₂O

other products also formed, Reactants: 2,
Solvents: 1, Steps: 1, Stages: 1, Most stages
in any one step: 1

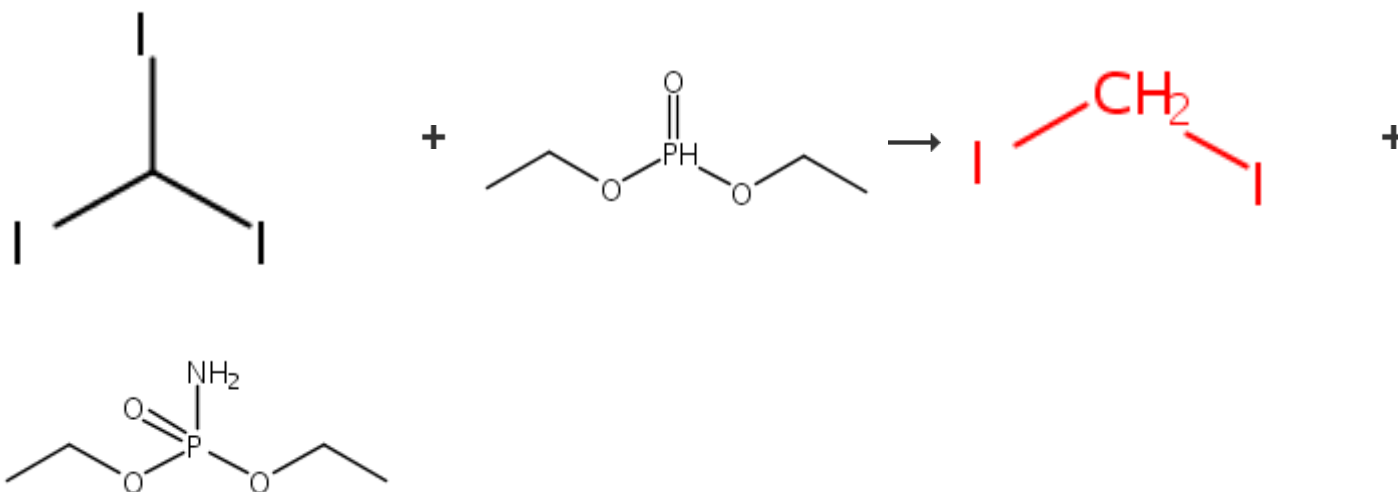
References

[Silyl-nitrogen compounds. I. Reactions of dilithium bis\(trimethylsilyl\)hydrazine with Group IV halides](#)

By Vasisht, Sham Kumar et al

From Journal of Organometallic Chemistry, 301(1), 15-25; 1986

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29. Single Step[Overview](#)**Steps/Stages**1.1 R:NH₃, S:CHCl₃, 22°C**Notes**

Reactants: 2, Reagents: 1, Solvents: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

References

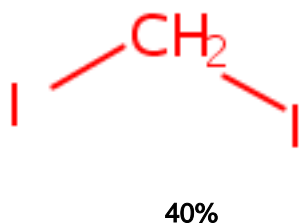
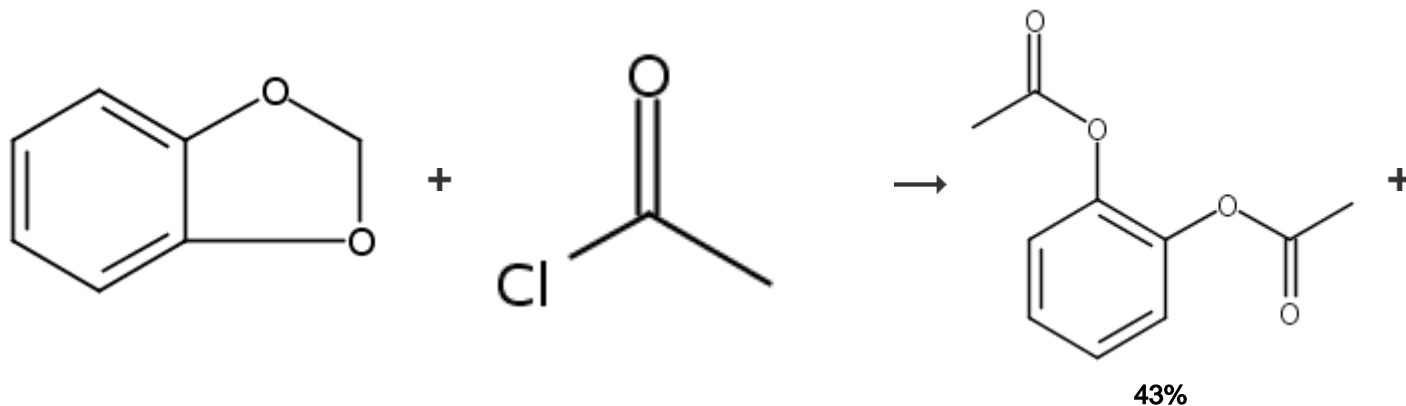
[Iodoform - First Update to document cited in CA149:223287](#)

By Crich, David et al

From e-EROS Encyclopedia of Reagents for Organic Synthesis, , No pp. given; 2007

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30. Single Step



Overview

Steps/Stages

1.1 R:Nal, S:MeCN

Notes

Reactants: 2, Reagents: 1, Solvents: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

References

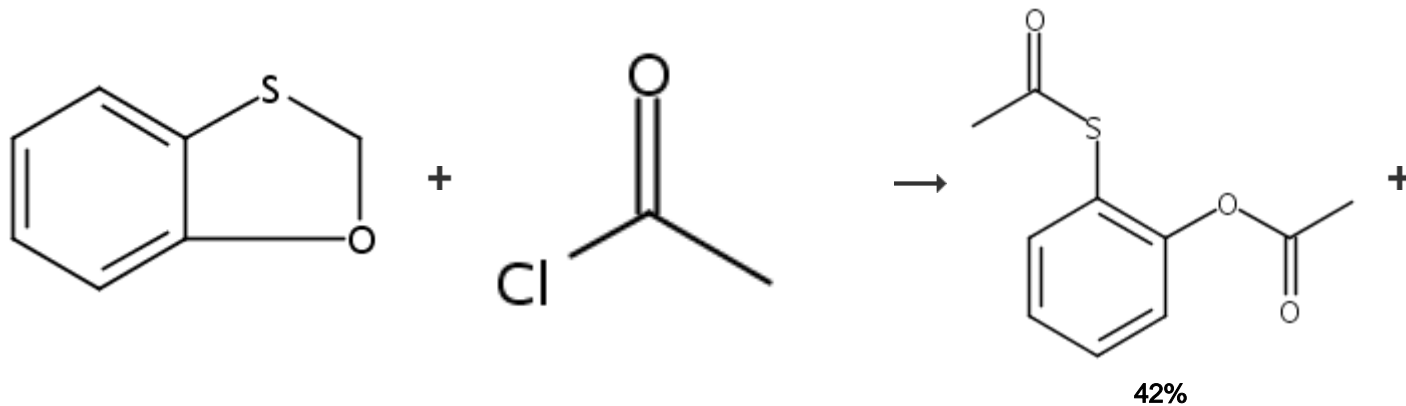
Studies on the synthesis of heterocyclic compounds. XVI. Cleavage of 1,3-benzodioxoles and -benzoxathioles by sodium iodide-acetyl chloride

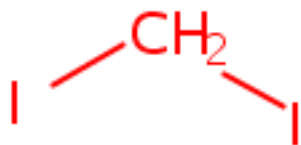
By Corda, Luciana et al

From Journal of Heterocyclic Chemistry, 25(1), 311-14; 1988

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31. Single Step





42%

[Overview](#)**Steps/Stages**

1.1 R:Nal, S:MeCN

Notes

Reactants: 2, Reagents: 1, Solvents: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

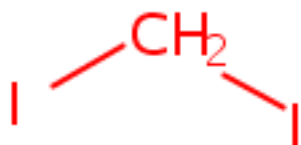
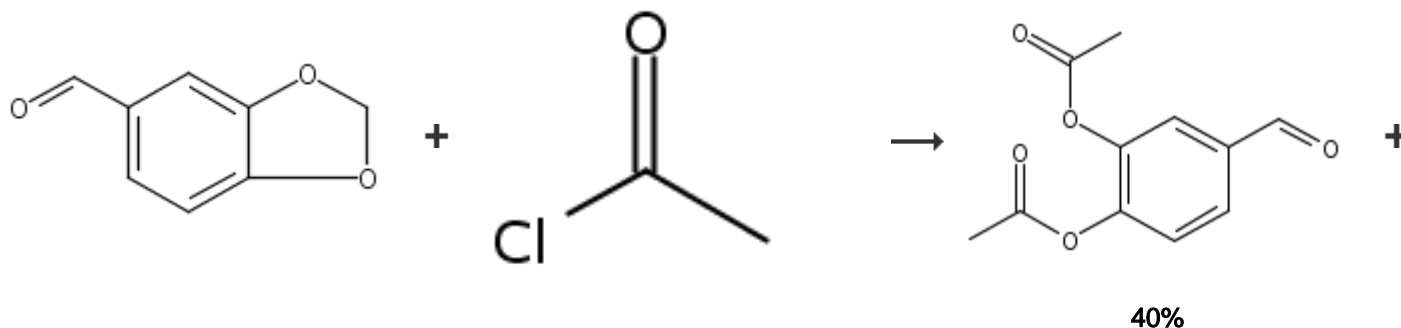
References

[Studies on the synthesis of heterocyclic compounds. XVI. Cleavage of 1,3-benzodioxoles and -benzoxathioles by sodium iodide-acyl chloride](#)

By Corda, Luciana et al

From Journal of Heterocyclic Chemistry, 25(1), 311-14; 1988

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32. Single Step

38%

[Overview](#)**Steps/Stages****Notes**

1.1 R:NaI, S:MeCN

Reactants: 2, Reagents: 1, Solvents: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

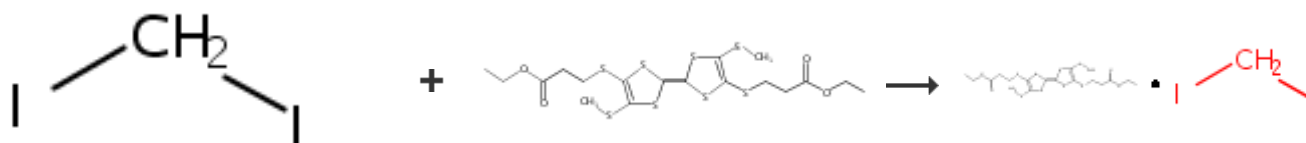
References

[Studies on the synthesis of heterocyclic compounds. XVI. Cleavage of 1,3-benzodioxoles and -benzoxathioles by sodium iodide-acyl chloride](#)

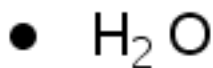
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From Journal of Heterocyclic Chemistry, 25(1), 311-14; 1988

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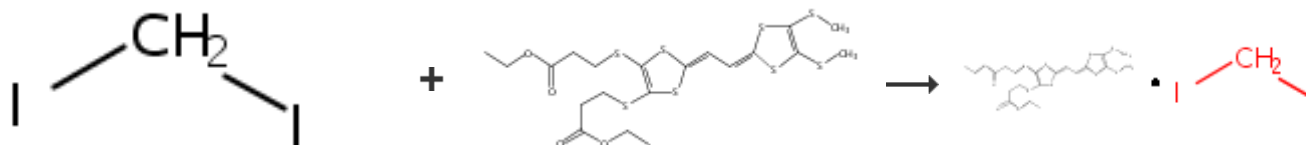
33. Single Step[Overview](#)**Steps/Stages**

1.1 R:



S:DMF, 2 h, rt

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34. Single Step[Overview](#)**Notes**

Reactants: 2, Reagents: 1, Solvents: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

References

[Electrode active material for electrical storage device, electrical storage device, electronic device, and transport device](#)

By Hojo, Nobuhiko et al

From PCT Int. Appl., 2011099311, 18 Aug 2011

Steps/Stages

Notes

1.1 R:



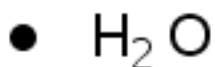
Reactants: 2, Reagents: 1, Solvents: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

References

[Electrode active material for electrical storage device, electrical storage device, electronic device, and transport device](#)

By Hojo, Nobuhiko et al

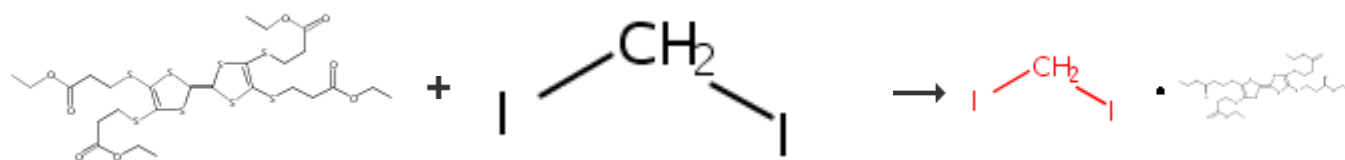
From PCT Int. Appl., 2011099311, 18 Aug 2011



S:DMF, 2 h, rt

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35. Single Step



[Overview](#)

Steps/Stages

Notes

1.1 R:



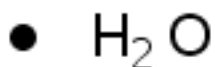
Reactants: 2, Reagents: 1, Solvents: 2, Steps: 1, Stages: 3, Most stages in any one step: 3

References

[Electrode active material for electrical storage device, electrical storage device, electronic device, and transport device](#)

By Hojo, Nobuhiko et al

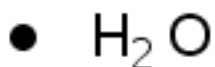
From PCT Int. Appl., 2011099311, 18 Aug 2011



S:MeOH, S:DMF, 30 min, rt

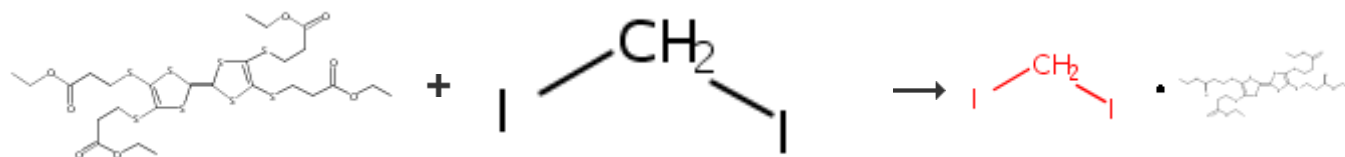
1.2 2 h, rt

1.3 R:



1 h, rt

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36. Single Step

[Overview](#)

Steps/Stages

Notes

1.1 R:



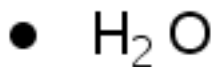
incremental addition (stage 3), Reactants: 2,
Reagents: 1, Solvents: 1, Steps: 1, Stages: 3,
Most stages in any one step: 3

References

[Electrode active material for electrical storage device, electrical storage device, electronic device, and transport device](#)

By Hojo, Nobuhiko et al

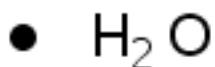
From PCT Int. Appl., 2011099311, 18 Aug 2011



S:NMP, 30 min, rt

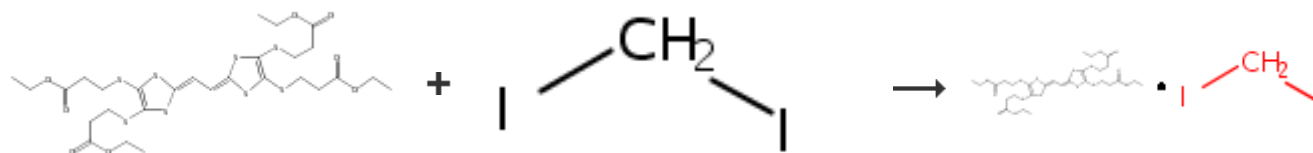
1.2 2 h, rt

1.3 R:

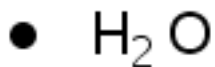


2 h, rt

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37. Single Step[Overview](#)**Steps/Stages****Notes**

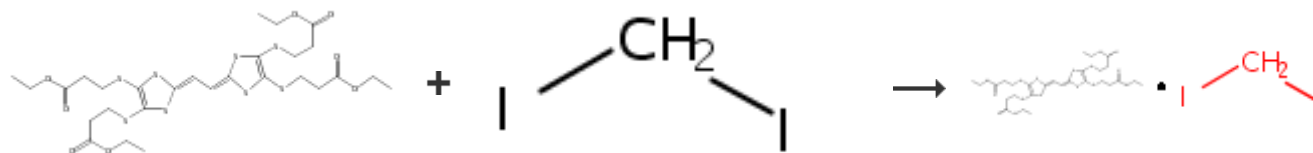
1.1 R:



S:MeOH, S:DMF, 30 min, rt

1.2 2 h, rt

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38. Single Step[Overview](#)**Steps/Stages****Notes**

Reactants: 2, Reagents: 1, Solvents: 2, Steps: 1, Stages: 2, Most stages in any one step: 2

References

[Electrode active material for electrical storage device, electrical storage device, electronic device, and transport device](#)

By Hojo, Nobuhiko et al

From PCT Int. Appl., 2011099311, 18 Aug 2011

1.1 R:



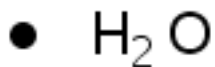
incremental addition (stage 3), Reactants: 2,
Reagents: 1, Solvents: 1, Steps: 1, Stages: 3,
Most stages in any one step: 3

References

[Electrode active material for electrical storage device, electrical storage device, electronic device, and transport device](#)

By Hojo, Nobuhiko et al

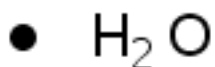
From PCT Int. Appl., 2011099311, 18 Aug 2011



S:NMP, 30 min, rt

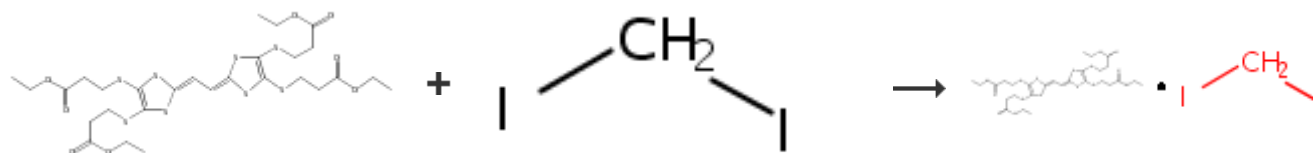
1.2 2 h, rt

1.3 R:



2 h, rt

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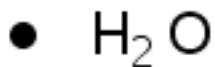
39. Single Step

[Overview](#)

Steps/Stages

Notes

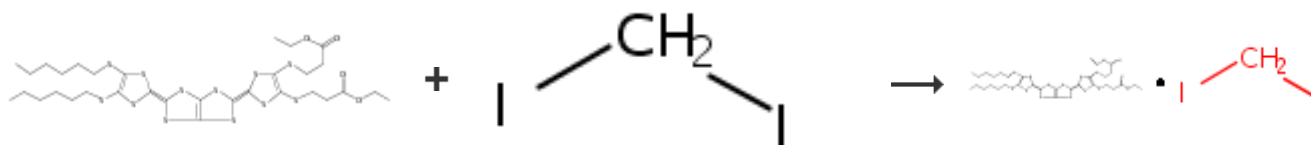
1.1 R:



S:NMP, 30 min, rt

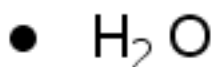
1.2 2 h, rt

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40. Single Step[Overview](#)**Steps/Stages****Notes**

1.1 R:Me(CH₂)₁₅NMe₃ •Br

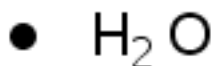
R:



S:MeOH, S:THF, 20 min, rt

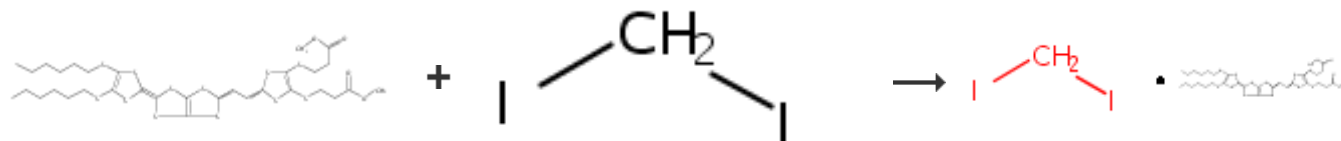
1.2 R:Et₃N, S:DMF, 2 h, rt

1.3 R:



2 h, rt

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41. Single Step[Overview](#)**Steps/Stages**

incremental addition (stage 3), Reactants: 2,
Reagents: 3, Solvents: 3, Steps: 1, Stages: 3,
Most stages in any one step: 3

References

[Electrode active material for electrical storage device, electrical storage device, electronic device, and transport device](#)

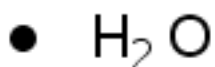
By Hojo, Nobuhiko et al

From PCT Int. Appl., 2011099311, 18 Aug 2011

Notes

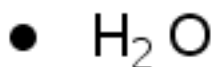
1.1 R:Me(CH₂)₁₅NMe₃ •Br

R:

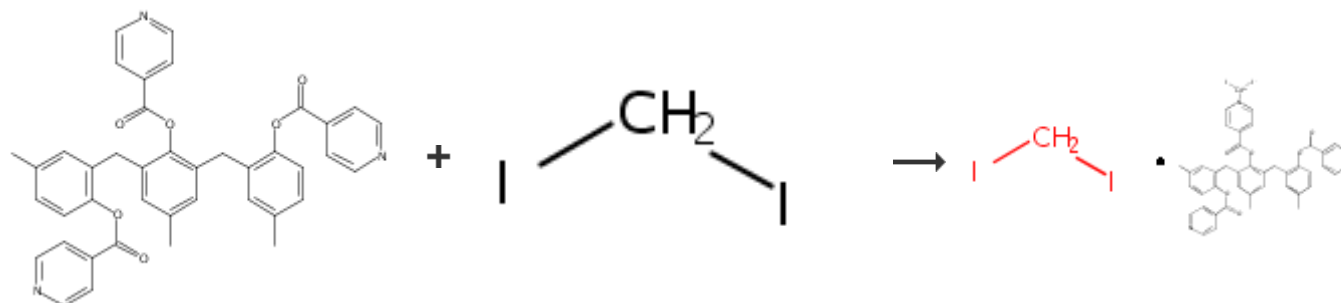


S:MeOH, S:DMF, 30 min, rt

1.2 R:

R:Et₃N, S:MeOH, 2 h, rt

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42. Single Step

78%

[Overview](#)**Steps/Stages****Notes**

Reactants: 2, Reagents: 3, Solvents: 2, Steps: 1, Stages: 2, Most stages in any one step: 2

References

[Electrode active material for electrical storage device, electrical storage device, electronic device, and transport device](#)

By Hojo, Nobuhiko et al

From PCT Int. Appl., 2011099311, 18 Aug 2011

1.1 R: CdI₂, S: EtOH, S: CH₂Cl₂, 4 d, rt

Reactants: 2, Reagents: 1, Solvents: 2, Steps: 1, Stages: 1, Most stages in any one step: 1

References

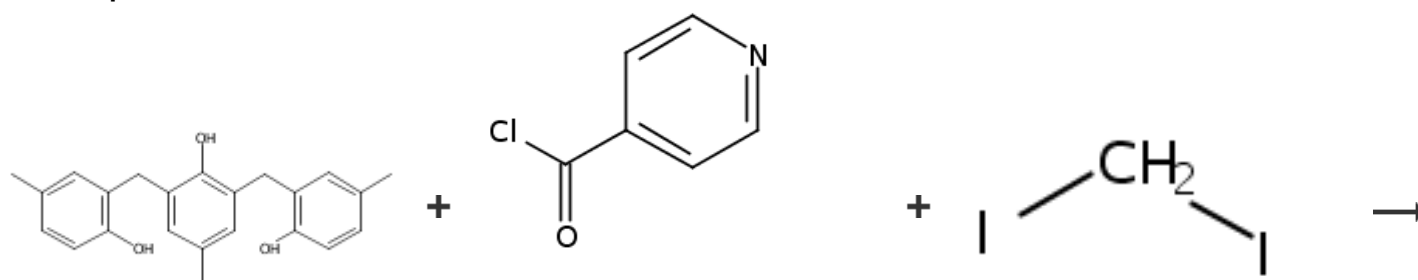
[A triple-function nanotube as a reactant reservoir, reaction platform, and byproduct scavenger for photo-cyclopropanation](#)

By Kim, Jeong Gyun et al

From Chemical Communications (Cambridge, United Kingdom), 52(12), 2545-2548; 2016

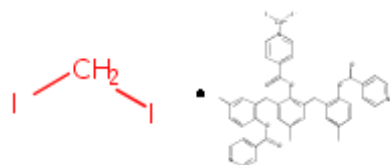
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43. 2 Steps



• HCl

[Step 2.1]



Overview

Steps/Stages

1.1 R: Et₃N, S: CHCl₃, rt; 24 h, reflux

2.1 R: CdI₂, S: EtOH, S: CH₂Cl₂, 4 d, rt

Notes

Reactants: 3, Reagents: 2, Solvents: 3, Steps: 2, Stages: 2, Most stages in any one step: 1

References

[A triple-function nanotube as a reactant reservoir, reaction platform, and byproduct scavenger for photo-cyclopropanation](#)

By Kim, Jeong Gyun et al

From Chemical Communications (Cambridge, United Kingdom), 52(12), 2545-2548; 2016

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