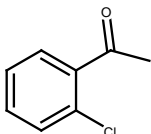
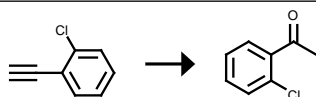
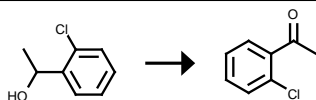


Query

	Query	Results	Date
1. Query	 <p>Search as: Product, As drawn, No salts, No mixtures</p>	58 reactions in Reaxys	2015-02-11 02h:28m:42s (EST)


 Rx-ID: 9248566 [View in Reaxys](#) 1/58

Yield	Conditions & References
94 %	<p>With anhydrous iron chloride, water, AgNTf₂ in 1,4-dioxane, Time= 40h, T= 80 °C , regioselective reaction</p> <p>Cabrero-Antonino, Jose R.; Leyva-Perez, Antonio; Corma, Avelino; Chemistry - A European Journal; vol. 18; nb. 35; (2012); p. 11107 - 11114 View in Reaxys</p>
83 %	<p>With methanesulfonic acid, ferrous chloride tetrahydrate in 1,2-dichloro-ethane, Time= 1h, T= 60 °C , Inert atmosphere</p> <p>Park, Jungmin; Yeon, Jihee; Lee, Phil Ho; Lee, Kooyeon; Tetrahedron Letters; vol. 54; nb. 33; (2013); p. 4414 - 4417 View in Reaxys</p>
66 %	<p>With Ph₃PAuMe, sulfuric acid in methanol, water, Time= 1h, T= 70 °C</p> <p>Mizushima, Eiichiro; Sato, Kazuhiko; Hayashi, Teruyuki; Tanaka, Masato; Angewandte Chemie - International Edition; vol. 41; nb. 23; (2002); p. 4563 - 4565 View in Reaxys</p>
66 %	<p>33 : Example 33 Example 33 To a solution in which 0.001 g of methyl(triphenylphosphine)gold (0.002 mmol) was dissolved in 1 ml of methanol, 0.14 g of o-chlorophenylacetylene (1 mmol) and an aqueous solution in which 0.05 g of concentrated sulfuric acid (0.5 mmol) was dissolved in 0.5 ml of water were added. After stirring at 70° C. for 1 hour, the yield of o-chloroacetophenone was 66percent (catalyst turnover number: 330).</p> <p>With water, Ph₃PAuMe, sulfuric acid in methanol, Time= 1h, T= 70 °C</p> <p>Patent; Mizushima, Eiichiro; Hayashi, Teruyuki; Sato, Kazuhiko; Tanaka, Masato; US2005/143597; (2005); (A1) English View in Reaxys</p>


 Rx-ID: 316345 [View in Reaxys](#) 2/58

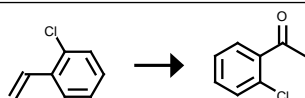
Yield	Conditions & References
> 99 %	<p>With dihydrogen peroxide, benzenesulfonic Acid, potassium bromide in dichloromethane, water, Time= 24h, T= 20 °C , Reagent/catalyst, Solvent</p> <p>Moriyama, Katsuhiko; Takemura, Misato; Togo, Hideo; Journal of Organic Chemistry; vol. 79; nb. 13; (2014); p. 6094 - 6104 View in Reaxys</p>
97 %	<p>With C₅₃H₄₆ClN₃P₂Ru, potassium <i>tert</i>-butylate, acetone, Time= 2h, T= 56 °C , p= 750.075Torr , Oppenauer Oxidation</p> <p>Du, Wangming; Wang, Liandi; Wu, Ping; Yu, Zhengkun; Chemistry - A European Journal; vol. 18; nb. 37; (2012); p. 11550 - 11554 View in Reaxys</p>
96 %	<p>With cobalt(III) acetate, sodium bromide in acetic acid, Time= 1h, T= 60 °C</p> <p>Hirano; Morimoto; Bulletin of the Chemical Society of Japan; vol. 62; nb. 12; (1989); p. 4069 - 4071 View in Reaxys</p>
95%	<p>in toluene, Time= 6h, T= 110 °C , Catalytic behavior</p>

	<p>Ganesh Babu; Krishnamoorthi; Thiruneelakandan; Karvembu; Catalysis Letters; vol. 144; nb. 7; (2014); p. 1245 - 1252 View in Reaxys</p>
91 %	<p>With alumina supported chromium(VI) oxide in hexane, Time= 24h, Ambient temperature</p> <p>Hirano, Masao; Kuroda, Hisanori; Morimoto, Takashi; Bulletin of the Chemical Society of Japan; vol. 63; nb. 8; (1990); p. 2433 - 2434 View in Reaxys</p>
91 %	<p>With copper(I) iodide, 2,2,6,6-tetramethyl-1-piperidinyloxy, free radical, potassium <i>tert</i>-butylate, <i>L</i>-proline in <i>N,N</i>-dimethyl-formamide, Time= 6h, T= 25 °C</p> <p>Zhang, Guofu; Han, Xingwang; Luan, Yuxin; Wang, Yong; Wen, Xin; Ding, Chengrong; Chemical Communications; vol. 49; nb. 72; (2013); p. 7908 - 7910 View in Reaxys</p>
90 %	<p>With dihydrogen peroxide in water, acetonitrile, Time= 1.75h, T= 25 °C</p> <p>Eshtiagh-Hosseini, Hossein; Tabari, Taymaz; Takjoo, Reza; Eshghi, Hossein; Synthesis and Reactivity in Inorganic, Metal-Organic and Nano-Metal Chemistry; vol. 43; nb. 3; (2013); p. 264 - 272 View in Reaxys</p>
90 %	<p>With dihydrogen peroxide in water, Time= 1.08333h, T= 20 °C</p> <p>Eshtiagh-Hosseini, Hossein; Tabari, Taymaz; Eshghi, Hossein; Asian Journal of Chemistry; vol. 25; nb. 6; (2013); p. 3307 - 3312 View in Reaxys</p>
88 %	<p>General procedure for the oxidation of alcohols General procedure: A vial was charged with alcohol (1 mmol), IBX (1.2 mmol, 1.2 equiv) and 2 wt percent GMPGS-2000/H₂O solution (5 mL). The mixture was stirred for 24 h at 25 °C and filtered. The solid was washed with CH₂Cl₂ and the filtrate was extracted with CH₂Cl₂ (3×10 mL). Then, the organic phase was combined and dried with anhydrous Na₂SO₄, evaporated to dryness. The crude product was purified by column chromatography on silica gel eluted with (petroleum ether/EtOAc) to afford the desired product.</p> <p>With 1-hydroxy-3H-benz[d][1,2]iodoxole-1,3-dione in water, Time= 24h, T= 25 °C , Micellar solution</p> <p>Xie, Aming; Zhou, Xiangxiang; Feng, Liandong; Hu, Xinyu; Dong, Wei; Tetrahedron; vol. 70; nb. 21; (2014); p. 3514 - 3519 View in Reaxys</p>
85 %	<p>With <i>tert</i>-butylhydroperoxide, Co(0.137)Fe₃O₄(0.863) in water, Time= 6h, T= 80 °C</p> <p>Gawande, Manoj B.; Rathi, Anuj; Nogueira, Isabel D.; Ghumman; Bundaleski; Teodoro; Branco, Paula S.; ChemPlusChem; vol. 77; nb. 10; (2012); p. 865 - 871 View in Reaxys</p>
85 %	<p>With <i>tert</i>-butylhydroperoxide in water, Time= 6h, T= 80 °C</p> <p>Gawande, Manoj B.; Rathi, Anuj; Nogueira, Isabel D.; Ghumman; Bundaleski; Teodoro; Branco, Paula S.; Collection of Czechoslovak Chemical Communications; vol. 77; nb. 10; (2012); p. 865 - 871 View in Reaxys</p>
64 %	<p>With sodium azide, [bis(acetoxy)iodo]benzene in acetonitrile, Time= 72h, T= 6 - 10 °C , Inert atmosphere</p> <p>Li, Xiao-Qiang; Wang, Wei-Kun; Han, Yi-Xin; Zhang, Chi; Advanced Synthesis and Catalysis; vol. 352; nb. 14-15; (2010); p. 2588 - 2598 View in Reaxys</p>
45 %	<p>A typical procedure for the catalytic oxidation of alcohols General procedure: The catalyst solution was prepared by dissolving complex 3(36.1 mg, 0.05 mmol) in methanol (5.0 mL). Under a nitrogen atmosphere, the mixture of an alcohol substrate (2.0 mmol) and 1.0 mL of the catalyst solution (0.01 mmol) in 20 mL acetone was stirred at 56 °C for 10 minutes. <i>t</i>BuOK(22.4 mg, 0.2 mmol) was then added to initiate the reaction. At the stated time, 0.1 mL of the reaction mixture was sampled and immediately diluted with 0.5 mL acetone pre-cooled to 0 °C for GC or NMR analysis. After the reaction was complete, the reaction mixture was condensed under</p>

	<p>reduced pressure and subject to purification by flash silica gel column chromatography to afford the corresponding ketone product, which was identified by comparison with the authentic sample through NMR and GC analysis.</p> <p>With [(2-(benzimidazol-2-yl)-6-(3,5-dimethylpyrazol-1-yl)pyridine)RuCl₂(PPh₃)], potassium <i>tert</i>-butylate, acetone in methanol, Time= 1h, T= 56 °C , p= 750.075Torr , Inert atmosphere, Oppenauer Oxidation, Catalytic behavior</p> <p>Wang, Qingfu; Du, Wangming; Liu, Tingting; Chai, Huining; Yu, Zhengkun; Tetrahedron Letters; vol. 55; nb. 9; (2014); p. 1585 - 1588 View in Reaxys</p>
44 %	<p>3 : 2.2. General procedure of oxidation of secondary alcohols General procedure: Substrate (1 mmol) and the desired amounts of Fe(NO₃)₃·9H₂O and NHPI were added to 1.5 mL of acetonitrile in a 15 mL test tube. The solution was maintained for 20 h under an atmospheric pressure of O₂ and at 25°C. After the reaction was quenched by Na₂S₂O₃ solution, 60 mg of nitrobenzene, serving as an internal standard, was added to the reaction system. The solution was centrifuged and the supernatant was diluted with diethyl ether and dried with anhydrous Na₂SO₄ for 30 min. The products were analyzed by GC, and further confirmed by GC-MS. The isolated yield was obtained through column chromatography generally performed on silica gel (200–300 mesh).</p> <p>With Iron (III) nitrate nonahydrate, 2-hydroxy-1,3-isindolinedione, oxygen in acetonitrile, T= 25 °C , p= 760.051Torr</p> <p>Zhao, Hanqing; Sun, Wei; Miao, Chengxia; Zhao, Quanyi; Journal of Molecular Catalysis A: Chemical; vol. 393; (2014); p. 62 - 67 View in Reaxys</p>
41 %	<p>With <i>tert</i>-butylhydroperoxide, 1-<i>n</i>-butyl-3-methylimidazolium hexafluorophosphate, copper acetylacetonate, Time= 5h, T= 20 °C</p> <p>Liu, Chong; Han, Jinyu; Wang, Juan; Synlett; nb. 4; (2007); p. 643 - 645 View in Reaxys</p>
41 %	<p>With sodium azide, iodobenzene dichloride in acetonitrile, Time= 72h, T= 0 °C</p> <p>Li, Xiao-Qiang; Wang, Wei-Kun; Zhang, Chi; Advanced Synthesis and Catalysis; vol. 351; nb. 14-15; (2009); p. 2342 - 2350 View in Reaxys</p>
30 %	<p>The oxidation of alcohols was carried out under O₂ in a 50-mL two-necked, round-bottom flask equipped with a magnetic stirrer. Typically, Fe₂(SO₄)₃ (0.25 mmol) and TMHPO (0.25 mmol) were added to the flask, followed by 15 mL of a CH₃CN/H₂O (1:2) solvent mixture. After stirring for 5 min, the alcohol (5 mmol) was added, followed by NaNO₂ (0.25 mmol). The resulting mixture was stirred at room temperature and 1 atm pressure of oxygen. When the reactions were completed, the reaction mixture was transferred to a separating funnel and extracted with dichloromethane. The organic layer was dried over anhydrous Na₂SO₄ and concentrated and further purified by flash chromatography to give the desired product.</p> <p>With Fe₂(SO₄)₃, 4-hydroxy-2,2,6,6-tetramethyl piperidinyloxy, free radical, oxygen, sodium nitrite in water, acetonitrile, Time= 24h, T= 20 °C , p= 760.051Torr</p> <p>Shi, Xiang-Jun; Qian, Jie; Tan, Fan-Fan; Yu, Chuan-Ming; Journal of Chemical Research; vol. 37; nb. 7; (2013); p. 398 - 401 View in Reaxys</p>
26 %	<p>4.4. A typical example for alcohol oxidation General procedure: The reaction was carried out in a 150 mL Teflon-lined 316 L stainless steel autoclave and a magnetic stirrer. A mixture of 0.1 mmol of PdCl₂, 0.2 mmol of NaOAc, 2 mmol of 2-octanol and 4 mL of DMA were placed in the 150 mL Teflon-lined 316 L stainless steel autoclave and stirred for 5 min. Then, 0.1 MPa of O₂ was introduced. The mixture was stirred for 4 h at 60 °C. After the reaction, the reactor was quickly cooled to room temperature. The excess of O₂ was depressurized slowly. GC analysis of the solution using biphenyl as an internal standard gave a 89 percent yield of 2-octanone with >99 percent selectivity.</p> <p>Stage 1: With sodium acetate, palladium dichloride in isobutyramide, Time= 0.0833333h, Autoclave Stage 2: With oxygen in isobutyramide, Time= 24h, T= 60 °C , p= 750.075Torr , Autoclave</p> <p>Wang, Lian-Yue; Li, Jun; Lv, Ying; Zhang, Heng-Yun; Gao, Shuang; Journal of Organometallic Chemistry; vol. 696; nb. 20; (2011); p. 3257 - 3263</p>

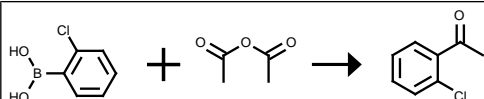
	<p>View in Reaxys</p> <p>With hydrogenchloride, sodium dichromate</p> <p>Fieser; Seligman; Journal of the American Chemical Society; vol. 61; (1939); p. 136,140</p> <p>View in Reaxys</p>
	<p>With chloroform, dinitrogen tetraoxide</p> <p>Grundy; Journal of the Chemical Society; (1957); p. 5087</p> <p>View in Reaxys</p>
	<p>With Catalyst M-Chromium oxide, sulfuric acid</p> <p>v. Auwers; Lechner; Bundesmann; Chemische Berichte; vol. 58; (1925); p. 48</p> <p>View in Reaxys</p>
13 % Chromat.	<p>With Geotrichum candidum IFO 4597 cells on BL-100 polymer, cyclohexanone in hexane, Time= 24h, T= 30 °C , Oxidation</p> <p>Nakamura, Kaoru; Inoue, Yuko; Matsuda, Tomoko; Misawa, Ibuki; Journal of the Chemical Society - Perkin Transactions 1; nb. 16; (1999); p. 2397 - 2402</p> <p>View in Reaxys</p>
58 %Chromat.	<p>With C₄₈H₄₅As₂Cl₂N₂ORuS, 4-methylmorpholine N-oxide in dichloromethane, Time= 12h, T= 70 °C</p> <p>Gunasekaran; Karvembu; Inorganic Chemistry Communications; vol. 13; nb. 8; (2010); p. 952 - 955</p> <p>View in Reaxys</p>
78 %Chromat.	<p>With periodic acid in water, Time= 13h, T= 27 °C , chemoselective reaction</p> <p>Babu, S. Ganesh; Priyadarsini, P. Aruna; Karvembu; Applied Catalysis A: General; vol. 392; nb. 1-2; (2011); p. 218 - 224</p> <p>View in Reaxys</p>
94 %Chromat.	<p>With C₅₁H₅₁ClN₂O₂P₂RuS, 4-methylmorpholine N-oxide in acetonitrile, Time= 12h, T= 27 °C</p> <p>Gunasekaran; Remya; Radhakrishnan; Karvembu; Journal of Coordination Chemistry; vol. 64; nb. 3; (2011); p. 491 - 501</p> <p>View in Reaxys</p>
25 %Chromat.	<p>With tert.-butylhydroperoxide, [Co(III)(N-(dibenzylcarbamothioyl)benzamide(-H))₃] in acetonitrile, Time= 42h, T= 80 °C</p> <p>Gunasekaran; Jerome; Ng, Seik Weng; Tiekink, Edward R.T.; Karvembu; Journal of Molecular Catalysis A: Chemical; vol. 353-354; (2012); p. 156 - 162</p> <p>View in Reaxys</p>
85 %Chromat.	<p>2.5. Catalytic oxidation of alcohols</p> <p>General procedure: To a solution of alcohol (1 mmol) in dichloromethane (20 mL), ruthenium(II) complex (1 molpercent) and NMO (351 mg; 3 mmol) were added. The mixture was stirred at 27 °C for 12 h. Then the solution was concentrated and the alcohol and aldehyde/ketone were obtained by passing the solution through a short silica gel column (hexane/ethyl acetate). The extract was then analyzed by GC.</p> <p>With [Ru(S(C₆H₄)NCH(C₆H₄)O(Br))(CO)(PPh₃)₂], 4-methylmorpholine N-oxide in dichloromethane, Time= 12h, T= 27 °C</p> <p>Muthu Tamizh; Mereiter; Kirchner; Karvembu; Journal of Organometallic Chemistry; vol. 700; (2012); p. 194 - 201</p> <p>View in Reaxys</p>
94.1 %Chromat.	<p>With FeCl₃·6H₂O, sodium nitrite in toluene, Time= 28h, T= 25 °C , p= 760.051Torr , Catalytic behavior, Reagent/catalyst</p> <p>Wang, Lianyue; Li, Jun; Zhao, Xiaoping; Lv, Ying; Zhang, Hengyun; Gao, Shuang; Tetrahedron; vol. 69; nb. 30; (2013); p. 6041 - 6045</p> <p>View in Reaxys</p>

99 %Chromat.	<p>With periodic acid in water, Time= 3h, T= 27 °C</p> <p>Ganesamoorthy; Muthu Tamizh; Shanmugasundaram; Karvembu; Tetrahedron Letters; vol. 54; nb. 51; (2013); p. 7035 - 7039</p> <p>View in Reaxys</p>
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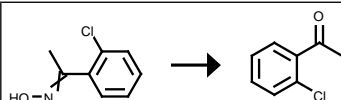
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Yield	Conditions & References
95 %	<p>With oxygen, palladium diacetate, trifluoroacetic acid in water, dimethyl sulfoxide, Time= 10h, T= 70 °C , p= 760.051Torr , Sealed tube, Wacker Oxidation, regioselective reaction</p> <p>Wang, Yu-Fei; Gao, Ya-Ru; Mao, Shuai; Zhang, Yan-Lei; Guo, Dong-Dong; Yan, Zhao-Lei; Guo, Shi-Huan; Wang, Yong-Qiang; Organic Letters; vol. 16; nb. 6; (2014); p. 1610 - 1613</p> <p>View in Reaxys</p>
84 %	<p>With perchloric acid, oxygen, palladium diacetate, p-benzoquinone, sodium nitrite in methanol, water, Time= 5h, T= 20 °C , Schlenk technique, Sealed tube, Green chemistry, Wacker Oxidation</p> <p>Zhang, Guofu; Xie, Xiaoqiang; Wang, Yong; Wen, Xin; Zhao, Yun; Ding, Chengrong; Organic and Biomolecular Chemistry; vol. 11; nb. 18; (2013); p. 2947 - 2950</p> <p>View in Reaxys</p>
56 %Chromat.	<p>With oxygen, copper(I) chloride in ethanol, water, 1,3,5-trimethyl-benzene, Time= 36h, T= 75 °C , p= 760.051Torr , Wacker Oxidation</p> <p>Byun, Sangmoon; Chung, Jooyoung; Jang, Youngjin; Kwon, Jungmin; Hyeon, Taeghwan; Kim, B. Moon; RSC Advances; vol. 3; nb. 37; (2013); p. 16296 - 16299</p> <p>View in Reaxys</p>



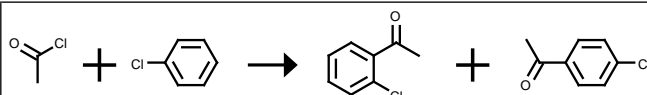
Rx-ID: 36371742 [View in Reaxys](#) 4/58

Yield	Conditions & References
59 %	<p>General procedure for the acyldeboronation reaction of arylboronic acids with acetic anhydride. General procedure: A 5 mL flask charged with acetic anhydride (1.0 mmol), arylboronic acid (0.5mmol), KHCO₃ (1.0 mmol), complex 1 (0.5 molpercent, 3.1 mg), PPh₃ (0.01 mmol, 1.3 mg) and toluene (2.0 mL) was evacuated and back-filled with N₂ for three times before the reaction was put into a preheated 110 °C oil bath. After the reaction was finished in 3h, the reaction mixture was cooled to room temperature, filtered through a short silica column and washed with ethylacetate. Then the combined filtrates were concentrated in vacuo and the residue was purified by flash chromatography (eluent: ethylacetate/petroleum ether). All the products were known compounds and characterized by comparing mp, ¹H NMR and ¹³C NMR spectra with literature.</p> <p>With 2C₆₀H₈₀NaO₁₂⁽²⁺⁾·Cl₆Pd₂⁽²⁻⁾, potassium hydrogencarbonate, triphenylphosphine in toluene, Time= 3h, T= 110 °C , Inert atmosphere</p> <p>Zhang, Jinli; Han, Zixing; Li, Junmiao; Wu, Yangjie; Arkivoc; vol. 2013; nb. 4; (2013); p. 251 - 271</p> <p>View in Reaxys</p>



Rx-ID: 4424260 [View in Reaxys](#) 5/58

Yield	Conditions & References
94 %	<p>With dihydrogen peroxide, PFC in acetone, Time= 6h, T= 0 - 10 °C</p> <p>Ganguly; Sukai; De; Synthetic Communications; vol. 31; nb. 10; (2001); p. 1607 - 1612 View in Reaxys</p>
94 %	<p>With NTPPODS in water, acetonitrile, Time= 0.3h, Reflux</p> <p>Lakouraj, Moslem Mansour; Tajbakhsh, Mahmood; Ramzani-Lehmali, Farhad; Phosphorus, Sulfur and Silicon and the Related Elements; vol. 183; nb. 6; (2008); p. 1388 - 1395 View in Reaxys</p>
80 %	<p>With KMnO₄/alumina, Time= 0.166667h, T= 50 °C</p> <p>Imanzadeh; Hajipour; Mallakpour; Synthetic Communications; vol. 33; nb. 5; (2003); p. 735 - 740 View in Reaxys</p>
70 %	<p>With CPCC in dichloromethane, Time= 1.5h, Heating</p> <p>Baltork; Pouranshirvani; Synthetic Communications; vol. 26; nb. 1; (1996); p. 1 - 7 View in Reaxys</p>

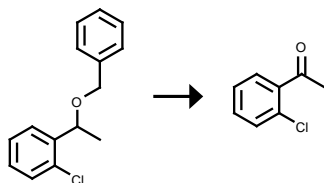


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Yield	Conditions & References
2 %, 97 %	<p>With aluminium trichloride, 1-ethyl-3-methyl-1H-imidazolium chloride, Time= 24h, T= 20 °C</p> <p>Adams, Christopher J.; Earle, Martyn J.; Roberts, Glyn; Seddon, Kenneth R.; Chemical Communications; nb. 19; (1998); p. 2097 - 2098 View in Reaxys</p>
97 %, 2 %	<p>With aluminium trichloride, 1-ethyl-3-methyl-1H-imidazolium chloride, Time= 24h, T= 20 °C</p> <p>Adams, Christopher J.; Earle, Martyn J.; Roberts, Glyn; Seddon, Kenneth R.; Chemical Communications; nb. 19; (1998); p. 2097 - 2098 View in Reaxys</p>
73 %, 8.3 %	<p>With Fe₂(S₀ 4)₃ in hexane, Time= 0.75h, T= 20 °C , Sonication, Friedel-Crafts acylation</p> <p>Sridharan, Anandhi; Gopalakrishnan, Geetha; Indian Journal of Chemistry - Section B Organic and Medicinal Chemistry; vol. 50; nb. 9; (2011); p. 1192 - 1195 View in Reaxys</p>
	<p>With iron(III) oxide in water, Time= 2h, T= 20 °C , Friedel Crafts acylation, regioselective reaction</p> <p>Sharghi, Hashem; Jokar, Mahboubeh; Doroodmand, Mohammad Mahdi; Khalifeh, Reza; Advanced Synthesis and Catalysis; vol. 352; nb. 17; (2010); p. 3031 - 3044 View in Reaxys</p>
	<p>With Silica gel supported aluminium trichloride, Time= 1.3h, T= 20 °C , neat (no solvent), Friedel Crafts acylation, regioselective reaction</p> <p>Boroujeni, Kaveh Parvanak; Chinese Chemical Letters; vol. 21; nb. 12; (2010); p. 1395 - 1398 View in Reaxys</p>
	<p>With zinc oxide nanoparticles supported on polyaniline, Time= 0.166667h, T= 20 °C , Neat (no solvent), Friedel Crafts acylation</p> <p>Rezaei, Seyed Jamal Tabatabaei; Nabid, Mohammad Reza; Hosseini, Seyedeh Zahra; Abedi, Mahvash; Synthetic Communications; vol. 42; nb. 10; (2012); p. 1432 - 1444 View in Reaxys</p>

With polystyrene supported aluminium triflate, Time= 1.9h, T= 20 °C , Neat (no solvent), Friedel-Crafts acylation, regioselective reaction

Boroujeni, Kaveh Parvanak; Bulletin of the Korean Chemical Society; **vol.** 31; nb. 11; (2010); p. 3156 - 3158
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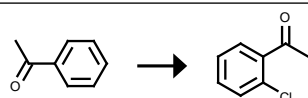
Rx-ID: 38415011 [View in Reaxys](#) 7/58

Yield Conditions & References

85 %

With Oxonereg; potassium bromide in acetonitrile, Time= 24.5h, T= 0 - 30 °C , Green chemistry

Moriyama, Katsuhiko; Nakamura, Yu; Togo, Hideo; Organic Letters; **vol.** 16; nb. 14; (2014); p. 3812 - 3815
[View in Reaxys](#)



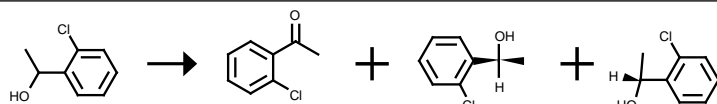
Rx-ID: 9603811 [View in Reaxys](#) 8/58

Yield Conditions & References

75 %

With sodium periodate, sulfuric acid, sodium chloride in water, acetonitrile, Time= 3h, T= 80 °C

Dewkar, Gajanan K.; Narina, Srinivasarao V.; Sudalai, Arumugam; Organic Letters; **vol.** 5; nb. 23; (2003); p. 4501 - 4504
[View in Reaxys](#)



Rx-ID: 4518049 [View in Reaxys](#) 9/58

Yield Conditions & References

With sodium hypochlorite, potassium bromide, (-)-(S)-3,5-dihydro-3,3,5,5-tetramethyl-4H-dinaphth[2,1-c:1',2'-eg];azepine-N-oxyl in dichloromethane, water, Time= 0.5h, T= 0 °C , Title compound not separated from byproducts

Rychnovsky, Scott D.; McLernon, Terri L.; Rajapakse, Hemaka; Journal of Organic Chemistry; **vol.** 61; nb. 4; (1996); p. 1194 - 1195
[View in Reaxys](#)

With [bis(acetoxy)iodo]benzene, tetraethylammonium bromide, [Mn{CHCH₂CHPhNCH[OC₆H₂(t-Bu)₂}]₂Cl in water, Time= 1h, T= 20 °C

Sun, Wei; Wang, Hongwang; Xia, Chungu; Li, Jingwei; Zhao, Peiqing; Angewandte Chemie - International Edition; **vol.** 42; nb. 9; (2003); p. 1042 - 1044
[View in Reaxys](#)

With [bis(acetoxy)iodo]benzene, (S,S)-7-aza-2,5-dimethylnorbornan-7-yloxy radical in dichloromethane, Time= 3h, T= -35 °C , Product distribution, Further Variations: Reagents

Graetz, Benjamin; Rychnovsky, Scott; Leu, Wen-Hao; Farmer, Patrick; Lin, Rong; Tetrahedron Asymmetry; **vol.** 16; nb. 21; (2005); p. 3584 - 3598
[View in Reaxys](#)

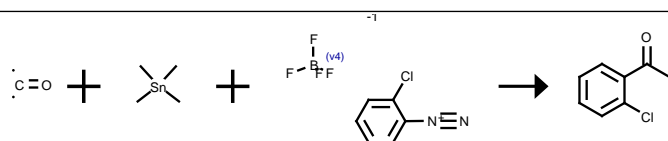
	<p>Stage 1: With $\text{Br}^{(1-)*}\text{C}_{75}\text{H}_{107}\text{Cl}_2\text{Mn}_2\text{N}_8\text{O}_4^{(1+)}$, potassium bromide in dichloromethane, water, Time= 0.166667h, T= 20 °C</p> <p>Stage 2: With [bis(acetoxy)iodo]benzene in dichloromethane, water, optical yield given as percent ee</p> <p>Li, Chengyong; Zhao, Jiangfeng; Tan, Rong; Peng, Zhigang; Luo, Rongchang; Peng, Ming; Yin, Donghong; Catalysis Communications; vol. 15; nb. 1; (2011); p. 27 - 31 View in Reaxys</p>
	<p>2.5. Typical procedure for the OKR of racemic secondary alcohols</p> <p>General procedure: Racemic secondary alcohols (0.25 mmol), catalyst (1.5 molpercent of substrate), and KBr (0.02 mmol, 0.0024 g) were added to H₂O(1.5 mL). The mixture was stirred for 10 min at room temperature, and then PhI(OAc)₂ (0.175 mmol, 0.056 g) was added in four equal parts. The reaction progress was monitored by gas chromatography (GC). After achieving the desired oxidation level, the reaction mixture was heated to 40 °C. The catalyst was precipitated out of the reaction system, washed with diethyl ether(3x 5 mL), dried in a vacuum, and finally recharged with fresh substrate, additive, and oxidant for the next catalytic cycle. The supernatants separated from the reaction system were extracted with ether three times. The collected organic phase was dried over sodium sulfate and concentrated in a vacuum. The resultant mixture was purified by column chromatography on silica gel at the stationary phase (petroleum ether/ethyl acetate, 90/10). Enantioselectivity was determined by a Agilent Technologies 6890NGC system equipped with a 19091G-B213 chiral capillary column(30 m x 0.32 mm x 0.25 m) with an FID.</p> <p>Stage 1: With potassium bromide in water, Time= 0.166667h, T= 25 °C , Resolution of racemate</p> <p>Stage 2: With [bis(acetoxy)iodo]benzene in water, Time= 2h, T= 25 °C , enantioselective reaction</p> <p>Tan, Rong; Dong, Yan; Peng, Ming; Zheng, Weiguo; Yin, Donghong; Applied Catalysis A: General; vol. 458; (2013); p. 1 - 10 View in Reaxys</p>
	<p>2.2. Catalytic procedure.</p> <p>General procedure: In a typical process, a mixture of (±)-1-phenylethanol (0.122 g, 1 mmol), chiral Mn(III)-salen complex (0.0127 g, 2 molpercent), Br₂ (4.1 μL, 8 molpercent), KOAC (0.1962 g, 2 mmol), CH₂Cl₂ (2.0 mL), and water (4.0 mL) was magnetically stirred in a 10-mL two-necked flask at 20 °C. The oxidant NaClO (0.289 g, 0.80 mmol) was then added slowly within 40 min, and the reaction was monitored by GC/HPLC equipped with a suitable chiral column.</p> <p>With sodium hypochlorite, C₃₈H₅₆ClMnN₂O₂, bromine, potassium acetate in dichloromethane, water, Time= 0.666667h, T= 20 °C , Kinetics, Mechanism, enantioselective reaction</p> <p>Zhang, Yuecheng; Zhou, Qiao; Ma, Wenchan; Zhao, Jiquan; Catalysis Communications; vol. 45; (2014); p. 114 - 117 View in Reaxys</p>

Rx-ID: 36555093 View in Reaxys 10/58	
Yield	Conditions & References
92 %	<p>With dihydrogen peroxide, bromine in dichloromethane, water, Time= 24h, T= 20 °C</p> <p>Amati, Alessandro; Dosualdo, Gabriele; Zhao, Lihua; Bravo, Anna; Fontana, Francesca; Minisci, Francesco; Bjorsvik, Hans-Rene; Organic Process Research and Development; vol. 2; nb. 4; (1998); p. 261 - 269 View in Reaxys</p>

Rx-ID: 8643109 View in Reaxys 11/58	
Yield	Conditions & References
88 %	<p>With [bis(acetoxy)iodo]benzene in water, acetone, Time= 0.05h, T= 20 °C , Ring cleavage</p>

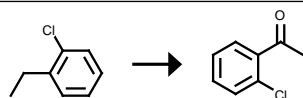
Shi; Wu; Synthetic Communications; **vol.** 30; **nb.** 22; (2000); p. 4081 - 4086

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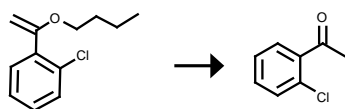
Rx-ID: 2315890 [View in Reaxys](#) 12/58

Yield	Conditions & References
76 %	With palladium diacetate in acetonitrile, Time= 1.5h, p= 6619.6Torr , Heating Kikukawa, Kiyoshi; Kono, Kiyoshi; Wada, Fumio; Matsuda, Tsutomu; Chemistry Letters; (1982); p. 35 - 36 View in Reaxys
76 %	With palladium diacetate in acetonitrile, Time= 0.5h, Ambient temperature Kikukawa, Kiyoshi; Idemoto, Tohru; Katayama, Atsuhiko; Kono, Kiyoshi; Wada, Fumio; Matsuda, Tsutomu; Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999); (1987); p. 1511 - 1514 View in Reaxys



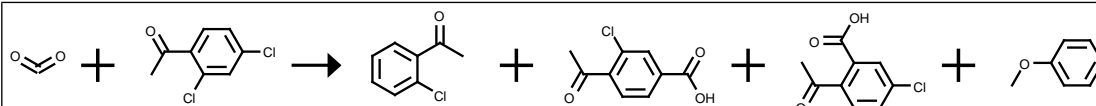
Rx-ID: 9456741 [View in Reaxys](#) 13/58

Yield	Conditions & References
76 %	With oxygen, silica gel, 4-aminoperbenzoic acid in dichloromethane, Time= 12h, T= 20 °C Hashemi, Mohammed M.; Ghazanfari, Dadkhoda; Karimi-Jaberi, Zahed; Monatshefte fur Chemie; vol. 135; nb. 2; (2004); p. 185 - 188 View in Reaxys



Rx-ID: 25971028 [View in Reaxys](#) 14/58

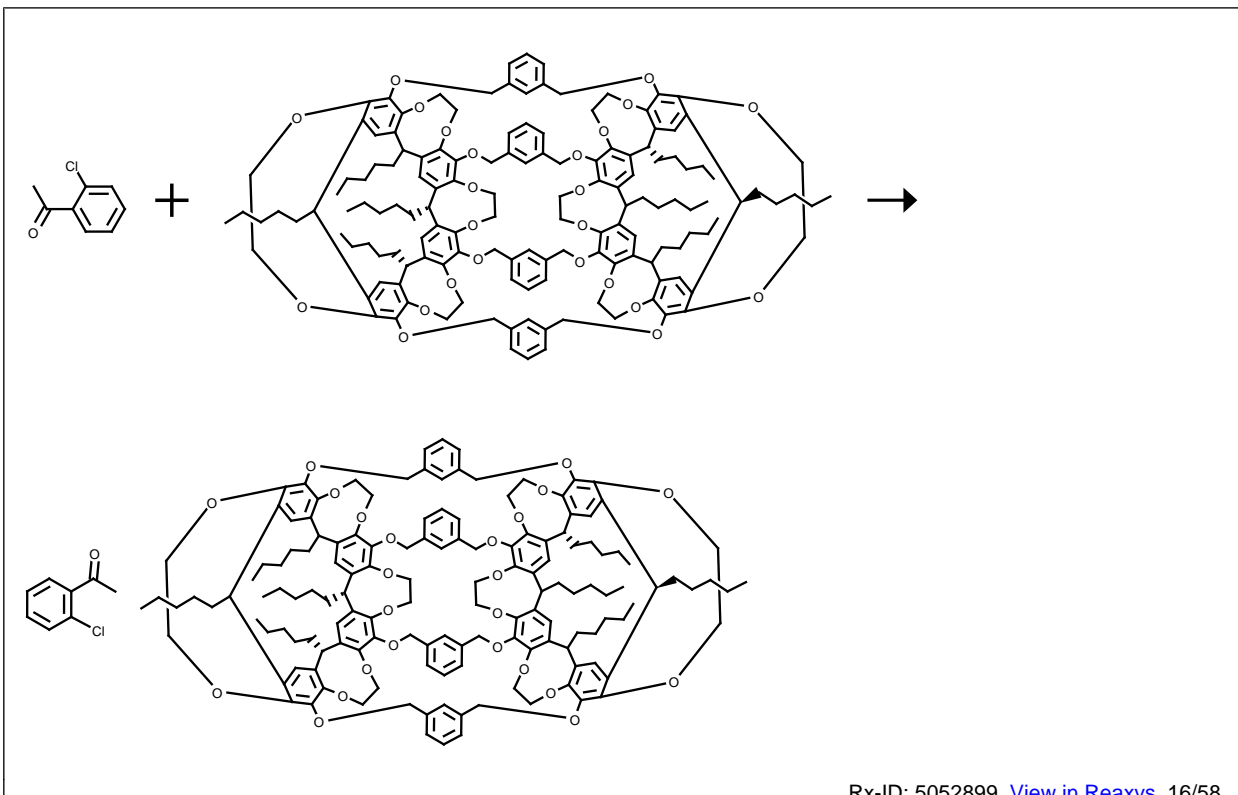
Yield	Conditions & References
	With hydrogenchloride in acetone, Time= 1h, T= 20 °C Ruan, Jiwu; Li, Xinming; Saidi, Ourida; Xiao, Jianliang; Journal of the American Chemical Society; vol. 130; nb. 8; (2008); p. 2424 - 2425 View in Reaxys



Rx-ID: 3565228 [View in Reaxys](#) 15/58

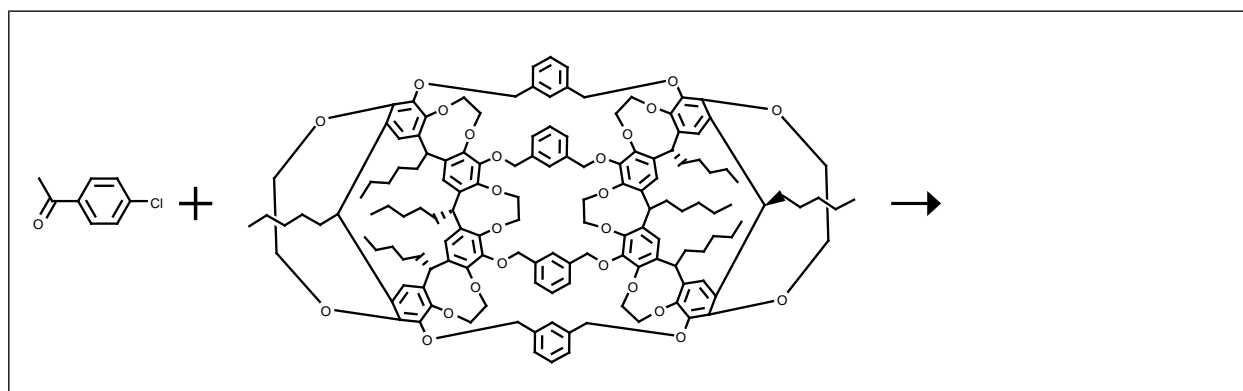
Yield	Conditions & References
78 %	With tetrabutylammomium bromide in N,N-dimethyl-formamide, T= 5 °C , electrolysis (I=0.4 A), Yields of byproduct given Heintz, Monique; Sock, Oumar; Saboureau, Christophe; Perichon, Jacques; Troupel, Michel; Tetrahedron; vol. 44; nb. 6; (1988); p. 1631 - 1636 View in Reaxys

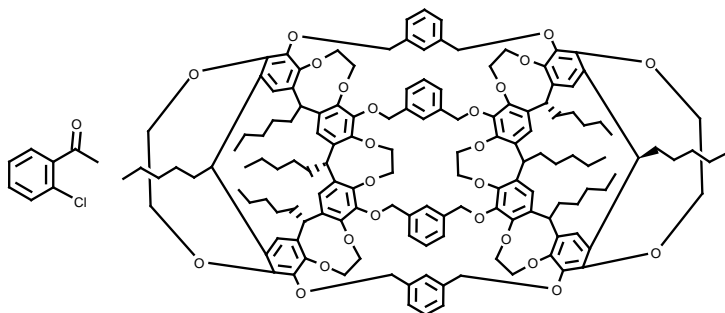
78 %	<p>With tetrabutylammomium bromide in N,N-dimethyl-formamide, T= 5 °C , electrolysis (I=0.4 A), Yields of byproduct given</p> <p>Heintz, Monique; Sock, Oumar; Saboureau, Christophe; Perichon, Jacques; Troupel, Michel; Tetrahedron; vol. 44; nb. 6; (1988); p. 1631 - 1636</p> <p>View in Reaxys</p>
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Rx-ID: 5052899 [View in Reaxys](#) 16/58

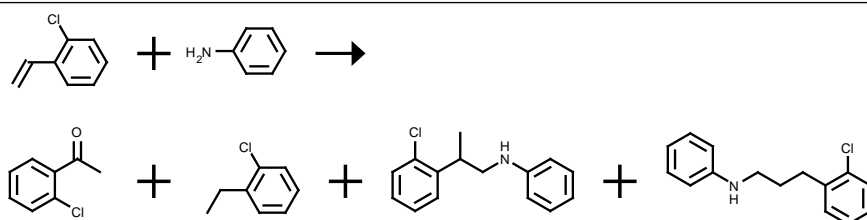
Yield	Conditions & References
70 %	<p>Time= 96h, T= 150 °C , complexation</p> <p>Helgeson, Roger C.; Knobler, Carolyn B.; Cram, Donald J.; Journal of the American Chemical Society; vol. 119; nb. 14; (1997); p. 3229 - 3244</p> <p>View in Reaxys</p>





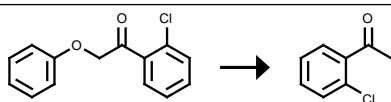
Rx-ID: 5058263 [View in Reaxys](#) 17/58

Yield	Conditions & References
55 %	Time= 96h, T= 150 °C , complexation Helgeson, Roger C.; Knobler, Carolyn B.; Cram, Donald J. ; Journal of the American Chemical Society; vol. 119; nb. 14; (1997); p. 3229 - 3244 View in Reaxys



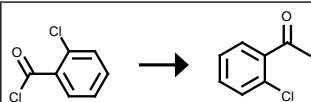
Rx-ID: 37459831 [View in Reaxys](#) 18/58

Yield	Conditions & References
78 %, 8 %, 9 %, 5 %	With propan-1-ol, carbon monoxide, hydrogen, N-hexadecyl-N,N,N-trimethylammonium bromide in water, T= 60 °C , Inert atmosphere, regioselective reaction Nairoukh, Zackaria; Blum, Jochanan ; Journal of Organic Chemistry; vol. 79; nb. 6; (2014); p. 2397 - 2403 View in Reaxys



Rx-ID: 2093025 [View in Reaxys](#) 19/58

Yield	Conditions & References
34.6 %	With [Ru(tris(2,2'-bipyridyl)) ₃](ClO ₄) ₂ , 1,3-dimethyl-2-phenyl-2,3-dihydro-1H-benzo[d]imidazole in acetonitrile, Time= 35h, T= 20 °C , Irradiation, Rate constant Tanner, Dennis D.; Chen, Jian Jeffrey; Chen, Lucia; Luelo, Christine ; Journal of the American Chemical Society; vol. 113; nb. 21; (1991); p. 8074 - 8081 View in Reaxys



Rx-ID: 581696 [View in Reaxys](#) 20/58

Yield	Conditions & References
	With diethyl ether, Ethoxymagnesiummalonsaeure-diethylester, Kochen des erhaltenen Reaktionsprodukts mit wss. H ₂ SO ₄ und Essigsaeure

	<p>Walker; Hauser; Journal of the American Chemical Society; vol. 68; (1946); p. 1386 View in Reaxys</p> <p>Reynolds; Hauser; ; vol. IV; (1963); p. 708 View in Reaxys</p>
	<p>With dimethyl cadmium, benzene</p> <p>Forbes; Mueller; Canadian Journal of Chemistry; vol. 35; (1957); p. 488,498 View in Reaxys</p>

Rx-ID: 4940957 View in Reaxys 21/58	
Yield	Conditions & References
76 %	<p>With N,N,N',N',N'',N''-hexamethylphosphoric triamide, poly-γ-(diphenylphosphino)propylsiloxane palladium⁽⁰⁾, Time= 20h, T= 65 °C</p> <p>Cai, Ming-Zhong; Song, Cai-Sheng; Huang, Xian; Journal of Chemical Research - Part S; nb. 5; (1998); p. 264 - 265 View in Reaxys</p>

Rx-ID: 9979344 View in Reaxys 22/58	
Yield	Conditions & References
72 %	<p>With aluminum oxide, potassium permanganate, Time= 0.0166667h, T= 20 °C</p> <p>Imanzadeh Karkaragh; Eskandari; Indian Journal of Chemistry - Section A Inorganic, Physical, Theoretical and Analytical Chemistry; vol. 44; nb. 7; (2005); p. 1392 - 1394 View in Reaxys</p>

Rx-ID: 25976676 View in Reaxys 23/58	
Yield	Conditions & References
5 %	<p>With aluminium trichloride, tetrabutylammomium bromide in dichloromethane, T= 30 - 35 °C , Electrolysis, Friedel-Crafts acylation</p> <p>Karthik; Kulangiappar; Marken, Frank; Kulandainathan, M. Anbu; Tetrahedron Letters; vol. 49; nb. 16; (2008); p. 2625 - 2627 View in Reaxys</p>

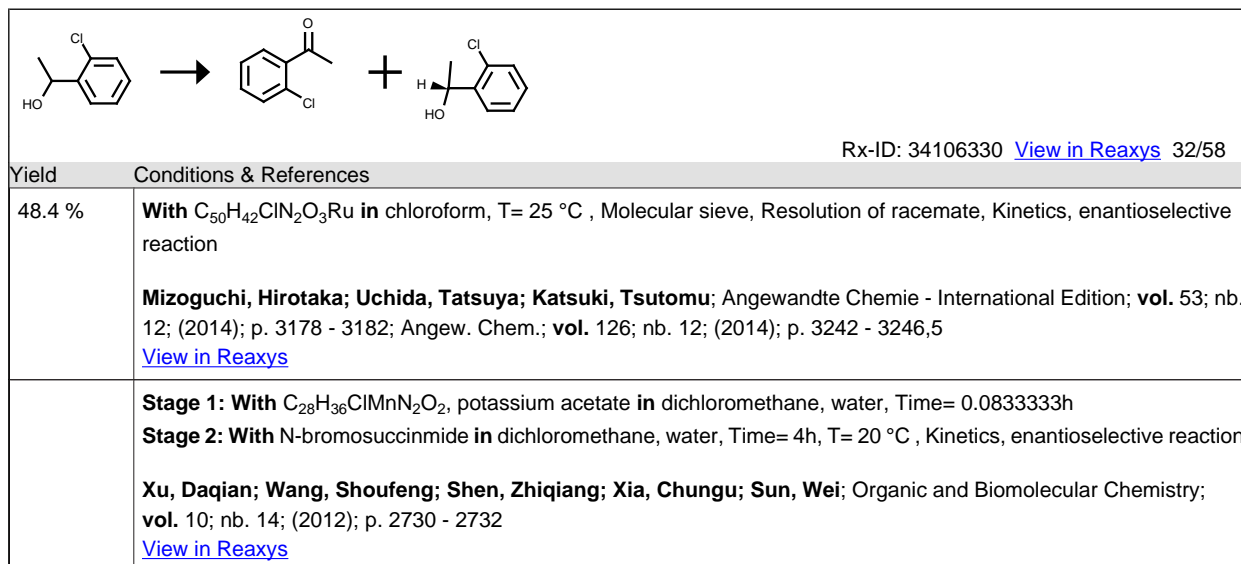
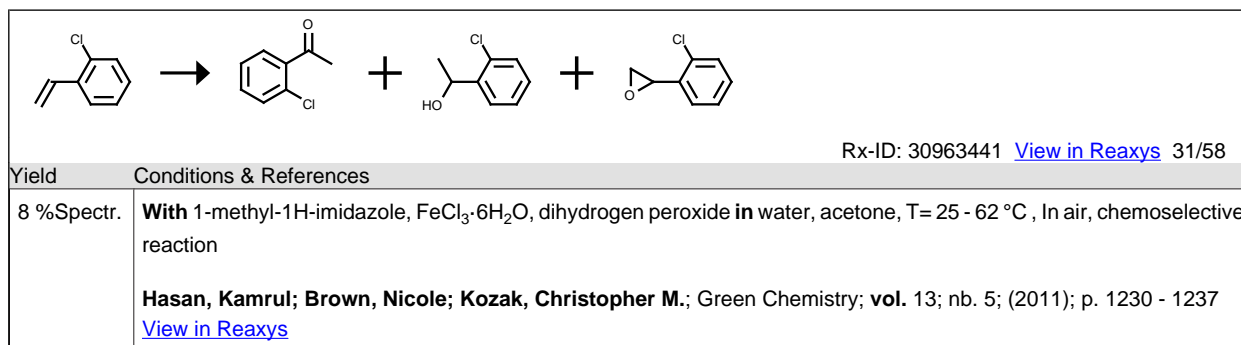
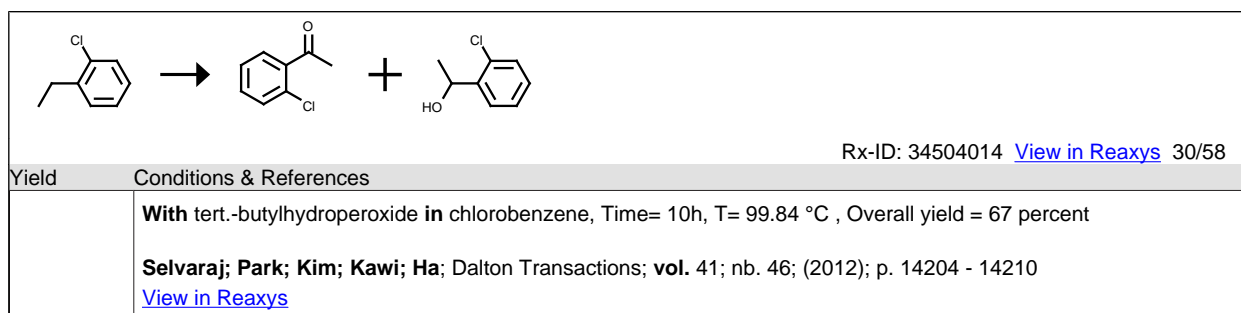
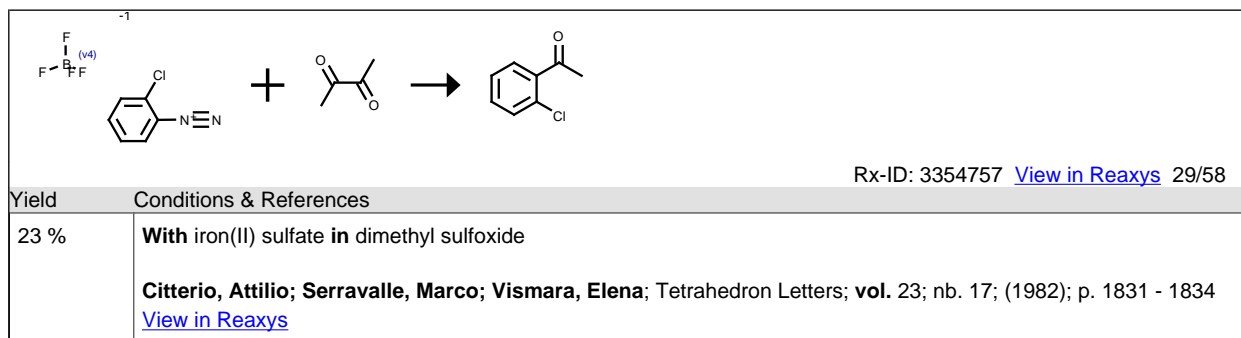
Rx-ID: 8577846 View in Reaxys 24/58	
Yield	Conditions & References
26 %, 14 %	<p>With N,N,N',N',N'',N''-hexamethylphosphoric triamide, samarium diiodide in tetrahydrofuran, Heating, Decomposition</p> <p>Bradley; Williams; Blann, Kevin; Holzapfel, Cedric W.; Journal of Organic Chemistry; vol. 65; nb. 9; (2000); p. 2834 - 2836 View in Reaxys</p>

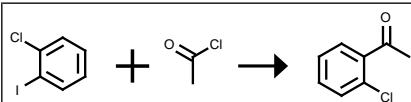
		Rx-ID: 8821911 View in Reaxys 25/58
Yield	Conditions & References	
85 %	<p>With bismuth(III) chloride, benzyltriphenylphosphonium peroxymonosulfate in dichloromethane, Time= 0.0833333h, microwave irradiation</p> <p>Hajipour; Mallakpour; Baltork; Adibi; Synthetic Communications; vol. 31; nb. 11; (2001); p. 1625 - 1631 View in Reaxys</p>	
85 %	<p>With aluminum oxide, potassium permanganate, Time= 0.25h, Product distribution, Further Variations: Reagents, reaction times</p> <p>Hajipour; Mallakpour; Baltork; Backnezhad; Synthetic Communications; vol. 32; nb. 5; (2002); p. 771 - 779 View in Reaxys</p>	
85 %	<p>With aluminium trichloride, benzyltriphenylphosphonium peroxymonosulfate, Time= 0.216667h, T= 20 °C</p> <p>Hajipour, Abdol Reza; Mallakpour, Shadpour E.; Mohammadpoor-Baltork, Iraj; Adibi, Hadi; Molecules; vol. 7; nb. 8; (2002); p. 674 - 680 View in Reaxys</p>	

		Rx-ID: 857096 View in Reaxys 26/58
Yield	Conditions & References	
	<p>With sulfuric acid</p> <p>Thorp; Brunskill; Journal of the American Chemical Society; vol. 37; (1915); p. 1262 View in Reaxys</p>	

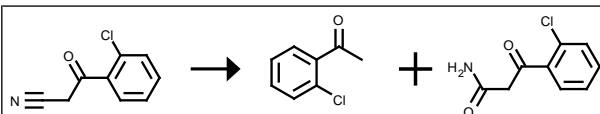
		Rx-ID: 3021227 View in Reaxys 27/58
Yield	Conditions & References	
82 % Chromat.	<p>With potassium superoxide in acetonitrile, Time= 6h, T= -35 °C</p> <p>Kim, Yong Hae; Kim, Kyoung Soo; Lee, Hyeon Kyu; Tetrahedron Letters; vol. 30; nb. 46; (1989); p. 6357 - 6360 View in Reaxys</p>	

		Rx-ID: 32132471 View in Reaxys 28/58
Yield	Conditions & References	
9 %	<p>With oxygen in 1,2-dichloro-ethane, T= 20 °C</p> <p>Bai, Xing-Feng; Gao, Guang; Zheng, Zhan-Jiang; Li, Fei; Lai, Guo-Qiao; Jiang, Kezhi; Li, Fuwei; Xu, Li-Wen; Synlett; nb. 20; (2011); p. 3031 - 3035; Art.No: W20211ST View in Reaxys</p>	

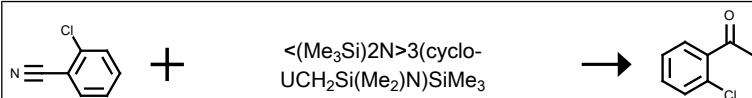



 Rx-ID: 3316426 [View in Reaxys](#) 33/58

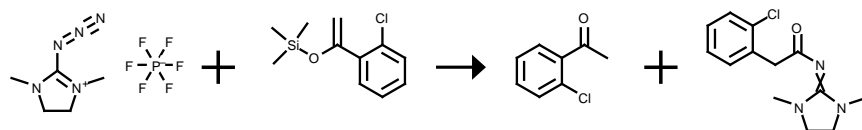
Yield	Conditions & References
	<p>With copper, 1) THF, 25 deg C, 10 min, 2a) 25 deg C, 30 min, Yield given. Multistep reaction</p> <p>Ebert, Greg W.; Pfennig, Deborah R.; Suchan, Scott D.; Donovan Jr., Thomas A.; Tetrahedron Letters; vol. 34; nb. 14; (1993); p. 2279 - 2282 View in Reaxys</p>
	<p>With CuI*P(Et)₃, naphthalenyllithium, 1.) DME, 25 deg C, 10 min, 2.) 25 deg C, 30 min, Yield given. Multistep reaction</p> <p>Ebert, Greg W.; Pfennig, Deborah R.; Suchan, Scott D.; Donovan, Thomas A.; Aouad, Emmanuel; et al.; Journal of Organic Chemistry; vol. 60; nb. 8; (1995); p. 2361 - 2364 View in Reaxys</p>


 Rx-ID: 9590416 [View in Reaxys](#) 34/58

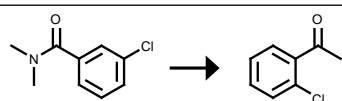
Yield	Conditions & References
27 %	<p>With Rhodococcus rhodochrous IFO 15564</p> <p>Gotor, Vicente; Liz, Ramon; Testera, Ana Ma; Tetrahedron; vol. 60; nb. 3; (2004); p. 607 - 618 View in Reaxys</p>


 Rx-ID: 7019971 [View in Reaxys](#) 35/58

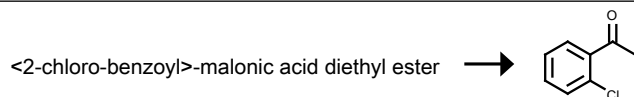
Yield	Conditions & References
72 % Chromat.	<p>in pentane, Time= 0.0833333h</p> <p>Dormond, Alain; Elbouadili, Abdelaziz; Moise, Claude; Journal of Organic Chemistry; vol. 54; nb. 15; (1989); p. 3747 - 3748 View in Reaxys</p>


 Rx-ID: 35809129 [View in Reaxys](#) 36/58

Yield	Conditions & References
50 %, 29 %	<p>in acetonitrile, Time= 5h, Reflux</p> <p>Kitamura, Mitsuru; Murakami, Kento; Shiratake, Yuichiro; Okauchi, Tatsuo; Chemistry Letters; vol. 42; nb. 7; (2013); p. 691 - 693 View in Reaxys</p>

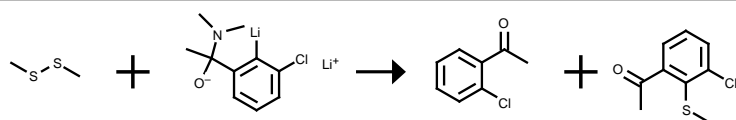

 Rx-ID: 21595745 [View in Reaxys](#) 37/58

Yield	Conditions & References
	<p>Reaction Steps: 2 1: 2.) n-BuLi / 1.) THF, -78 deg C, 45 min. 2.) -78 deg C, 7 h 2: 2.) H₂O, H⁽¹⁺⁾ / 1.) THF, -42 deg C With n-butyllithium, water, hydrogen cation</p> <p>Comins, Daniel L.; Brown, Jack D.; Tetrahedron Letters; vol. 24; nb. 49; (1983); p. 5465 - 5468 View in Reaxys</p>



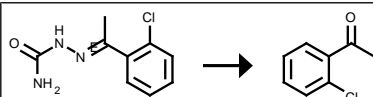
Rx-ID: 7019970 [View in Reaxys](#) 38/58

Yield	Conditions & References
	<p>With sulfuric acid, water, acetic acid</p> <p>Sen; Mukerji; Journal of the Indian Chemical Society; vol. 28; (1951); p. 161 View in Reaxys</p>



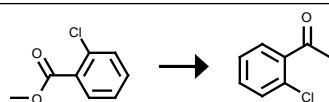
Rx-ID: 1898089 [View in Reaxys](#) 39/58

Yield	Conditions & References
	<p>With water, hydrogen cation, 1.) THF, -42 deg C, Yield given. Multistep reaction. Yields of byproduct given</p> <p>Comins, Daniel L.; Brown, Jack D.; Tetrahedron Letters; vol. 24; nb. 49; (1983); p. 5465 - 5468 View in Reaxys</p>



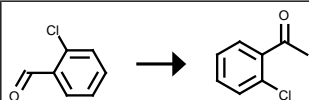
Rx-ID: 4078637 [View in Reaxys](#) 40/58

Yield	Conditions & References
	<p>With manganese triacetate in acetic acid, T= 28 °C , Mechanism, Rate constant</p> <p>Sankaran, K. R.; Ramakrishnan, Kalyani; Srinivasan, Vangalur S.; Indian Journal of Chemistry, Section A: Inorganic, Physical, Theoretical & Analytical; vol. 27; nb. 11; (1988); p. 956 - 958 View in Reaxys</p>



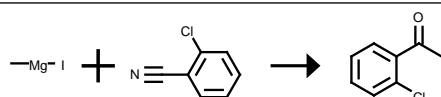
Rx-ID: 21990130 [View in Reaxys](#) 41/58

Yield	Conditions & References
	<p>Reaction Steps: 2 1: sodium / 100 °C With sodium</p> <p>Wahl; Rolland; Annales de Chimie (Cachan, France); vol. <10> 10; (1928); p. 44; Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences; vol. 186; (1928); p. 38 View in Reaxys</p>



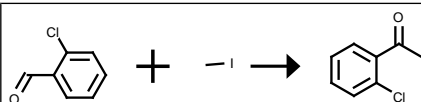
Rx-ID: 22105959 [View in Reaxys](#) 42/58

Yield	Conditions & References
	<p>Reaction Steps: 2</p> <p>1: absolute diethyl ether</p> <p>2: Cr₂O₃-H₂SO₄</p> <p>With Catalyst M-Chromium oxide, diethyl ether, sulfuric acid</p> <p>v. Auwers; Lechner; Bundesmann; Chemische Berichte; vol. 58; (1925); p. 48</p> <p>View in Reaxys</p>



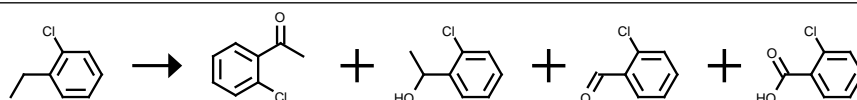
Rx-ID: 93329 [View in Reaxys](#) 43/58

Yield	Conditions & References
	<p>With diethyl ether, anschliessendes Behandeln mit wss. HCl</p> <p>Borsche; Scriba; Justus Liebigs Annalen der Chemie; vol. 541; (1939); p. 283,290</p> <p>View in Reaxys</p>



Rx-ID: 4729820 [View in Reaxys](#) 44/58

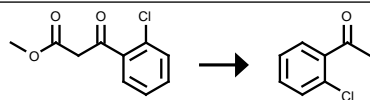
Yield	Conditions & References
	<p>With N-chloro-succinimide, magnesium, 1.) C₆H₆, THF, 10 min, 2.) C₆H₆, THF, a) 0 deg C, 5 min, b) RT, 25 min, Yield given. Multistep reaction</p> <p>Lee, Adam Shih-Yuan; Kung, Chih-Chun; Journal of the Chinese Chemical Society; vol. 44; nb. 1; (1997); p. 65 - 69</p> <p>View in Reaxys</p>



Rx-ID: 2032327 [View in Reaxys](#) 45/58

Yield	Conditions & References
12.7 %, 8.1 %, 8.7 %, 21.1 %	<p>With oxygen, cobalt(II) stearate, Time= 6h, T= 119.9 °C</p> <p>Stiwiok, Jozef; Silowiecki, Andrzej; Kowalska, Teresa; Zeitschrift fuer Chemie (Stuttgart, Germany); vol. 25; nb. 11; (1985); p. 401</p> <p>View in Reaxys</p>
21.1 %, 12.7 %, 8.1 %, 8.7 %	<p>With oxygen, cobalt(II) stearate, T= 119.9 °C , var. temperature and var. conc. of cobalt stearate, Product distribution</p> <p>Stiwiok, Jozef; Silowiecki, Andrzej; Kowalska, Teresa; Zeitschrift fuer Chemie (Stuttgart, Germany); vol. 25; nb. 11; (1985); p. 401</p> <p>View in Reaxys</p>
21.1 %, 8.1 %, 8.7 %, 12.7 %	<p>With oxygen, cobalt(II) stearate, Time= 6h, T= 119.9 °C</p> <p>Stiwiok, Jozef; Silowiecki, Andrzej; Kowalska, Teresa; Zeitschrift fuer Chemie (Stuttgart, Germany); vol. 25; nb. 11; (1985); p. 401</p>

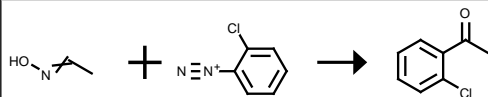
[View in Reaxys](#)



Rx-ID: 468217 [View in Reaxys](#) 46/58

Yield Conditions & References

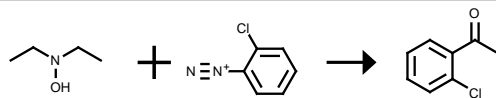
Wahl; Rolland; Annales de Chimie (Cachan, France); **vol.** <10> 10; (1928); p. 44; Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences; **vol.** 186; (1928); p. 38
[View in Reaxys](#)



Rx-ID: 100792 [View in Reaxys](#) 47/58

Yield Conditions & References

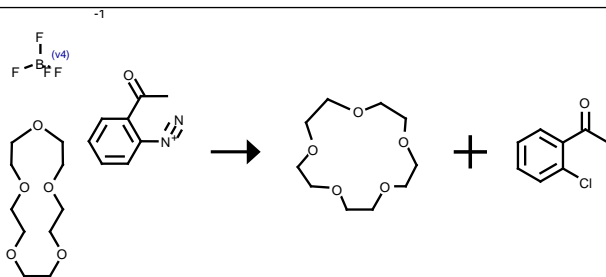
Beech; Journal of the Chemical Society; (1954); p. 1297,1300
[View in Reaxys](#)



Rx-ID: 212712 [View in Reaxys](#) 48/58

Yield Conditions & References

Rogers; Journal of the Chemical Society; (1956); p. 2784,2786
[View in Reaxys](#)

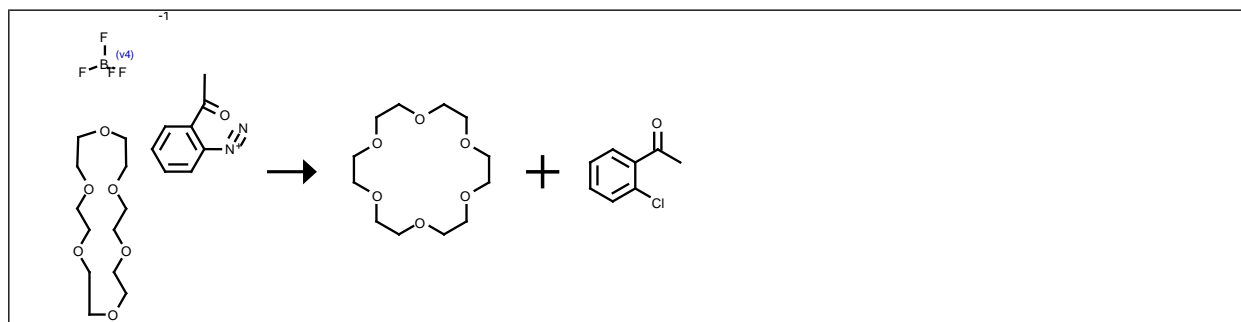


Rx-ID: 2765253 [View in Reaxys](#) 49/58

Yield Conditions & References

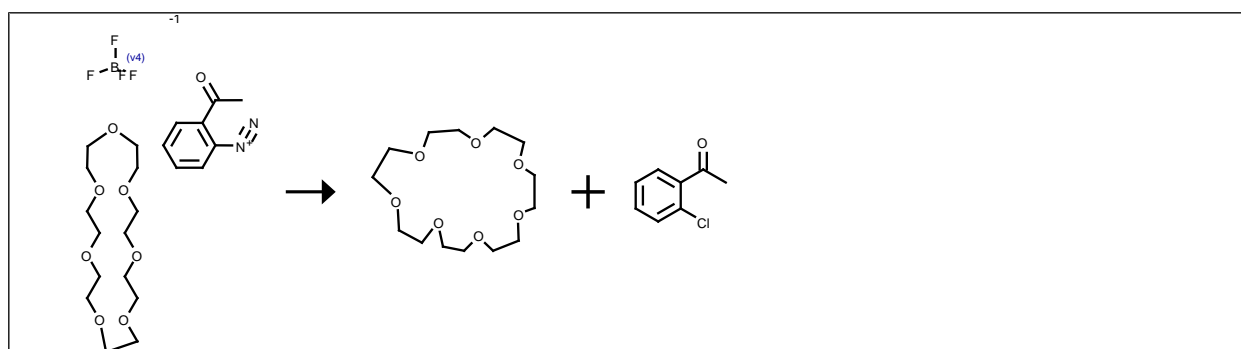
in 1,2-dichloro-ethane, T= 20 °C , var. crown ethers, ΔH(excit.), ΔS(excit.), Rate constant, Kinetics, Thermodynamic data

Kuokkanen, Toivo; Slotte, Thomas; Virtanen, Vesa; Acta Chemica Scandinavica; **vol.** 45; nb. 7; (1991); p. 674 - 680
[View in Reaxys](#)



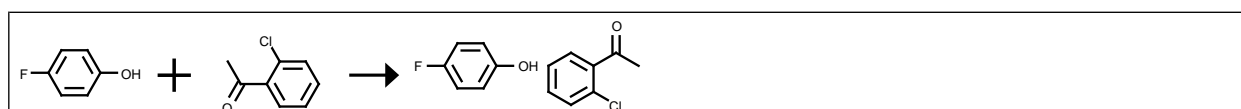
Rx-ID: 2765337 [View in Reaxys](#) 50/58

Yield	Conditions & References
	<p>in 1,2-dichloro-ethane, T= 20 °C , var. crown ethers, $\Delta H(\text{excit.})$, $\Delta S(\text{excit.})$, Rate constant, Kinetics, Thermodynamic data</p> <p>Kuokkanen, Toivo; Slotte, Thomas; Virtanen, Vesa; Acta Chemica Scandinavica; vol. 45; nb. 7; (1991); p. 674 - 680</p> <p>View in Reaxys</p>



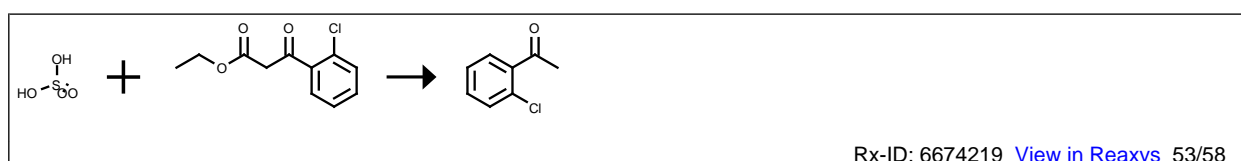
Rx-ID: 2765383 [View in Reaxys](#) 51/58

Yield	Conditions & References
	<p>in 1,2-dichloro-ethane, T= 20 °C , var. crown ethers, $\Delta H(\text{excit.})$, $\Delta S(\text{excit.})$, Rate constant, Kinetics, Thermodynamic data</p> <p>Kuokkanen, Toivo; Slotte, Thomas; Virtanen, Vesa; Acta Chemica Scandinavica; vol. 45; nb. 7; (1991); p. 674 - 680</p> <p>View in Reaxys</p>



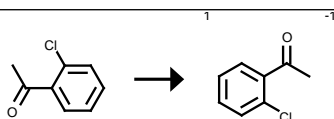
Rx-ID: 4818119 [View in Reaxys](#) 52/58

Yield	Conditions & References
	<p>in tetrachloromethane, T= 24.9 °C , formation 4-fluorophenol-aldehyde or ketone complexes; thermodynamic hydrogen-bond basicity pK_{HB} scale of aldehydes and ketones; electronic and steric effects; ring size effect; substituent effect; structure-basicity relationships, Equilibrium constant</p> <p>Besseau, Francois; Lucon, Maryvonne; Laurence, Christian; Berthelot, Michel; Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1972-1999); nb. 1; (1998); p. 101 - 108</p> <p>View in Reaxys</p>



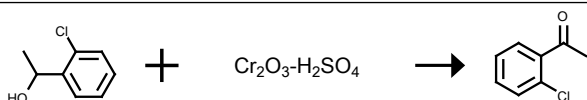
Rx-ID: 6674219 [View in Reaxys](#) 53/58

Yield	Conditions & References
	Thorp; Brunskill ; Journal of the American Chemical Society; vol. 37 ; (1915); p. 1262 View in Reaxys



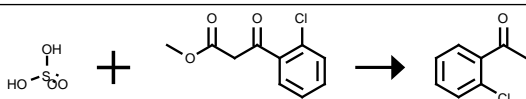
Rx-ID: 1983360 [View in Reaxys](#) 54/58

Yield	Conditions & References
	cyclic voltammetry, Rate constant Wipf, David O.; Wightman, R. Mark ; Journal of Physical Chemistry; vol. 93 ; nb. 10; (1989); p. 4286 - 4291 View in Reaxys



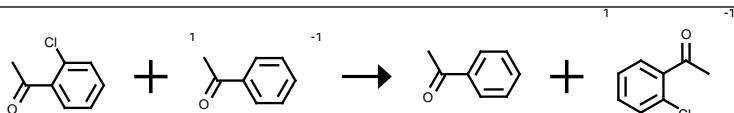
Rx-ID: 7156159 [View in Reaxys](#) 55/58

Yield	Conditions & References
	v. Auwers; Lechner; Bundesmann ; Chemische Berichte; vol. 58 ; (1925); p. 48 View in Reaxys



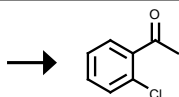
Rx-ID: 7980162 [View in Reaxys](#) 56/58

Yield	Conditions & References
	Wahl; Rolland ; Annales de Chimie (Cachan, France); vol. <10> 10 ; (1928); p. 44; Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences; vol. 186 ; (1928); p. 38 View in Reaxys



Rx-ID: 1983325 [View in Reaxys](#) 57/58

Yield	Conditions & References
	cyclic voltammetry, Equilibrium constant Wipf, David O.; Wightman, R. Mark ; Journal of Physical Chemistry; vol. 93 ; nb. 10; (1989); p. 4286 - 4291 View in Reaxys



Rx-ID: 7019969 [View in Reaxys](#) 58/58

Yield	Conditions & References
	Dhami, K.S.; Stothers, J.B. ; Canadian Journal of Chemistry; vol. 43 ; (1965); p. 479 View in Reaxys Musil et al. ; Cesko-Slovenska Farmacie; vol. 15 ; (1966); p. 460,461 View in Reaxys Chapman et al. ; Journal of the Chemical Society [Section] C: Organic; (1971); p. 1202 View in Reaxys

	<p>Cheng et al.; Journal of the Chemical Society [Section] B: Physical Organic; (1971); p. 1198 View in Reaxys</p>
	<p>38 : EXAMPLE 38 EXAMPLE 38 10 g of toluene and 25 g of 5percent hydrochloric acid were added to 7.9 g of the oil obtained in Example 37. The mixture was stirred at 60° C. for 1 hour and was phase-separated at the same temperature for 30 minutes to obtain the aqueous layer and the toluene layer. 17 g of toluene was added to the aqueous layer, followed by extraction at 60° C. The resulting toluene layer and the above toluene layer were combined, and the solvent was distilled off to obtain 4.1 g of 2'-chloroacetophenone.</p> <p>Patent; Sumitomo Chemical Company, Limited; US5739401; (1998); (A1) English View in Reaxys</p>
	<p>Hereinafter there are listed examples of ketones obtainalbe or obtained by the process of the invention: hexanone-3 decanone-4 ... propiophenone 3-methoxyacetophenone 3-phenoxyacetophenone o-chloroacetophenone o-chloropropiophenone m-chloroacetophenone 3-chloro-5-methylpropiophenone ...</p> <p>Patent; Hoechst Aktiengesellschaft; US4266066; (1981); (A1) English View in Reaxys</p>
	<p>256</p> <p>Patent; ELI LILLY AND COMPANY; WO2005/821; (2005); (A1) English View in Reaxys</p>