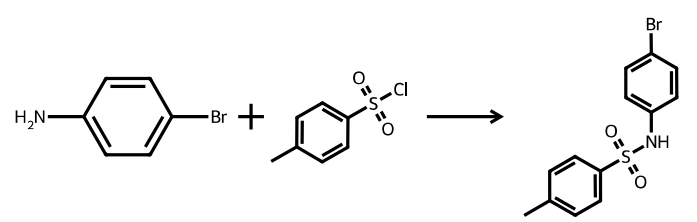
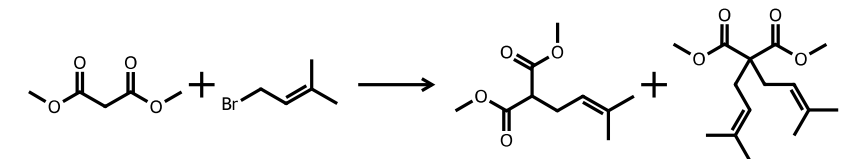
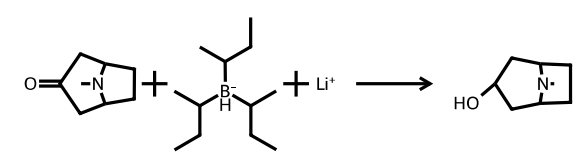
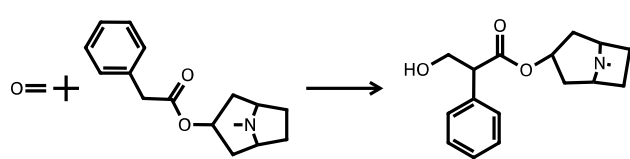
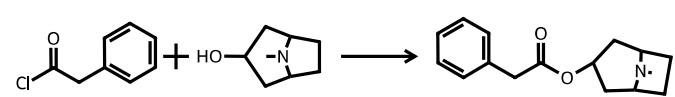
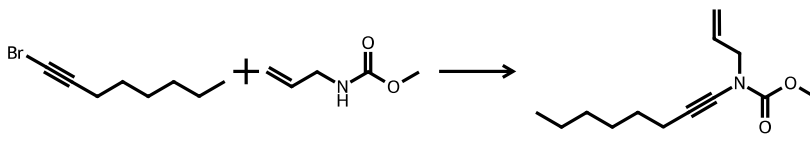
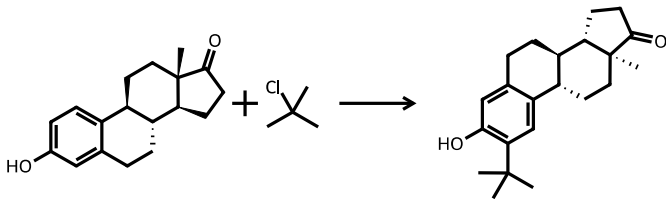
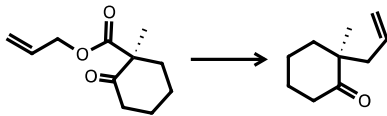
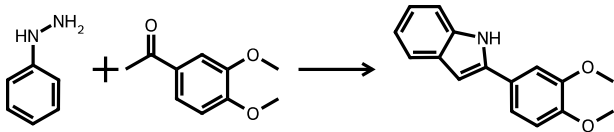
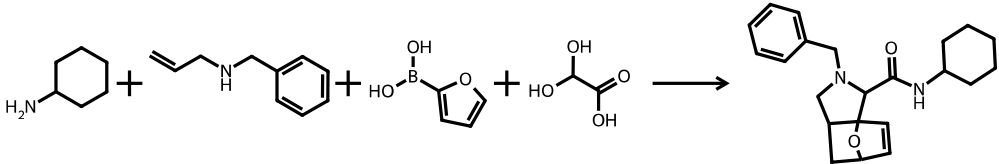
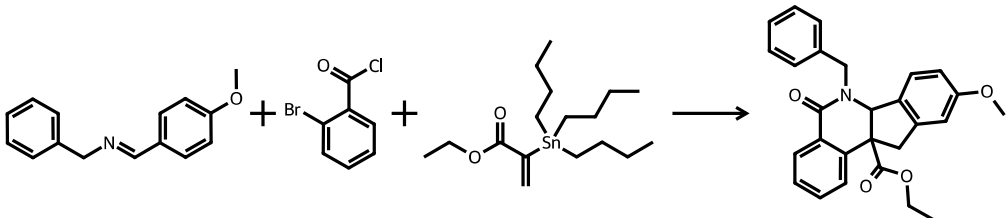
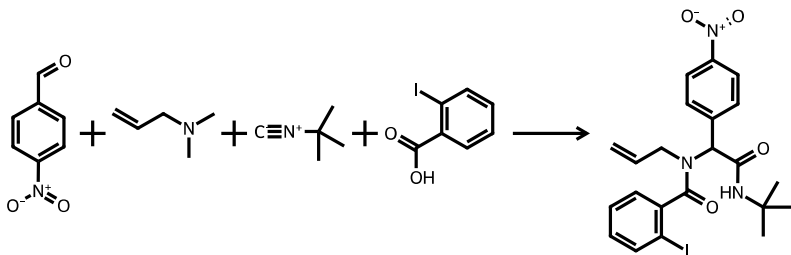
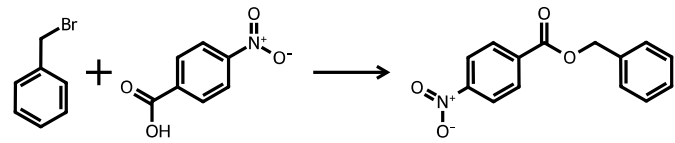
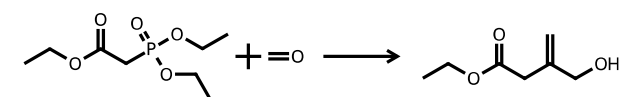
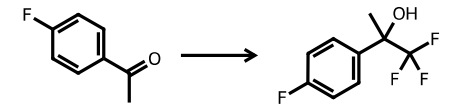


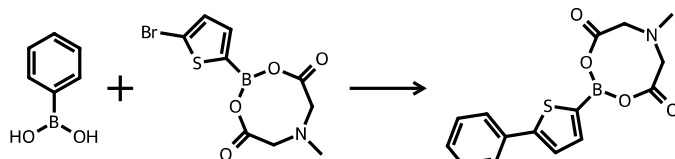
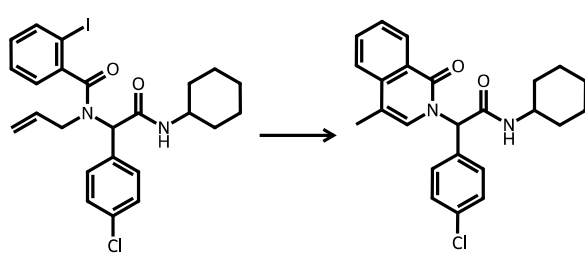
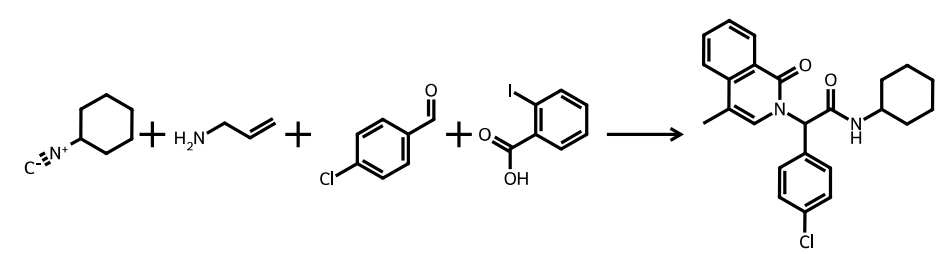
ID	Step	Yield	Scale	Reaction
CHEMIFY-0001	Step 1	98 %	8.8 mmol	
CHEMIFY-0002	Step 1	56 %	20.0 mmol	
CHEMIFY-0004	Step 1	84 %	10.0 mmol	

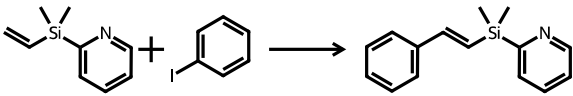
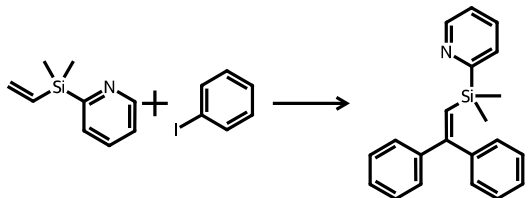
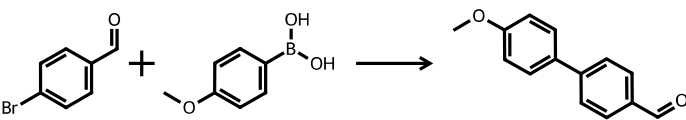
ID	Step	Yield	Scale	Reaction
CHEMIFY-0005	Step 1	37 %	13.0 mmol	
CHEMIFY-0006	Step 1	65 %	20.0 mmol	
CHEMIFY-0010	Step 1	43 %	10.0 mmol	

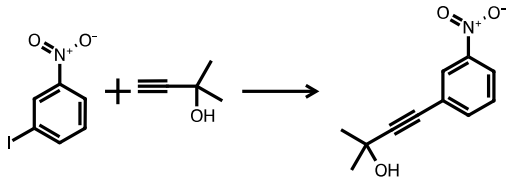
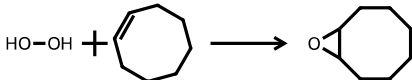
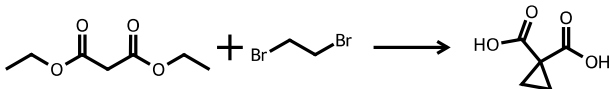
ID	Step	Yield	Scale	Reaction
CHEMIFY-0011	Step 1	94 %	5.0 mmol	
CHEMIFY-0012	Step 1	92 %	2.0 mmol	
CHEMIFY-0013	Step 1	62 %	15.0 mmol	

ID	Step	Yield	Scale	Reaction
CHEMIFY-0014	Step 1	60 %	25.1 mmol	
CHEMIFY-0015	Step 1	56 %	0.5 mmol	
CHEMIFY-0016	Step 1	64 %	12.0 mmol	

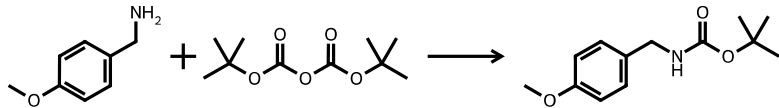
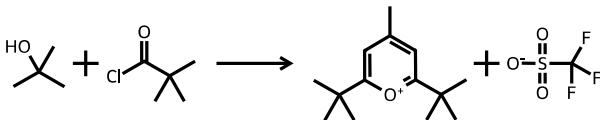
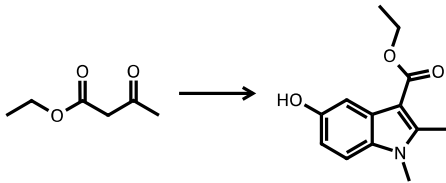
ID	Step	Yield	Scale	Reaction
CHEMIFY-0017	Step 1	86 %	5.0 mmol	
CHEMIFY-0018	Step 1	36 %	100.0 mmol	
CHEMIFY-0020	Step 1		4.0 mmol	

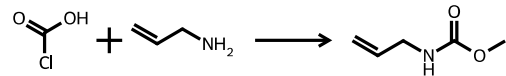
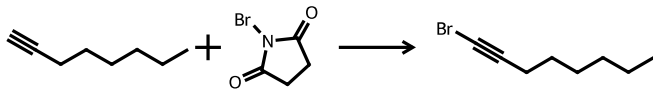
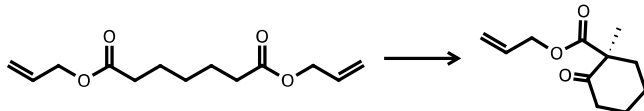
ID	Step	Yield	Scale	Reaction
CHEMIFY-0021	Step 1	68.8 %	2.64 mmol	
CHEMIFY-0022	Step 1	32 %	1.86 mmol	
CHEMIFY-0023	Step 1	35 %	6.0 mmol	

ID	Step	Yield	Scale	Reaction
CHEMIFY-0024	Step 1	65 %	3.10 mmol	 <chem>C[Si](C)(C)C=Cc1ccncc1 + Ic1ccc(cc1) &gt;&gt; C[Si](C)(C)C=Cc1ccc(cc1)c2ccncc2</chem>
CHEMIFY-0025	Step 1	74 %	3.10 mmol	 <chem>C[Si](C)(C)C=Cc1ccncc1 + Ic1ccc(cc1) &gt;&gt; C[Si](C)(C)C=Cc1ccc(cc1)c2ccncc2</chem>
CHEMIFY-0026	Step 1	61 %	5.02 mmol	 <chem>O=Cc1ccc(Br)cc1 + COc1ccc(B(O)O)cc1 &gt;&gt; COc1ccc(cc1)-c2ccc(C=O)cc2</chem>

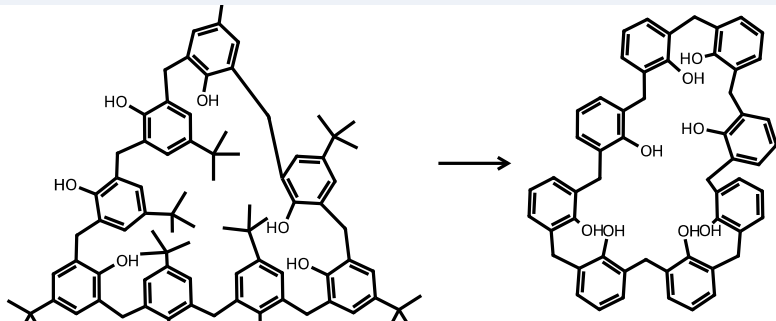
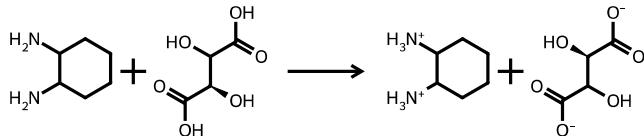
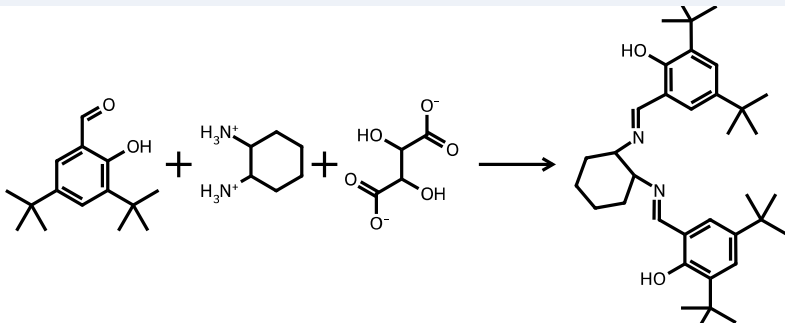
ID	Step	Yield	Scale	Reaction
CHEMIFY-0027	Step 1	84 %	5.0 mmol	 <chem>[O-][N+]([O-])c1ccc(I)cc1.CC(C)(C)C#CC(C)(C)O&gt;&gt;[O-][N+]([O-])c1ccc(cc1)C#CC(C)(C)C(C)(C)O</chem>
CHEMIFY-0028	Step 1	66 %	50.0 mmol	 <chem>HO-OH.C1=CCCCC=C1&gt;&gt;C12OC1CCCCC2</chem>
CHEMIFY-0029	Step 1	62 %	25.0 mmol	 <chem>CCOC(=O)CC(=O)OCC.BrCCBr&gt;&gt;OC(=O)C1(Br)C(Br)C1C(=O)O</chem>

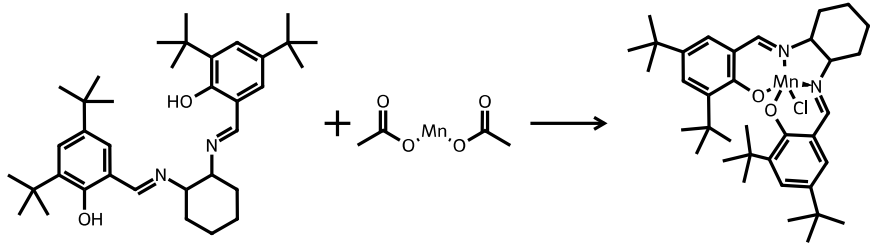
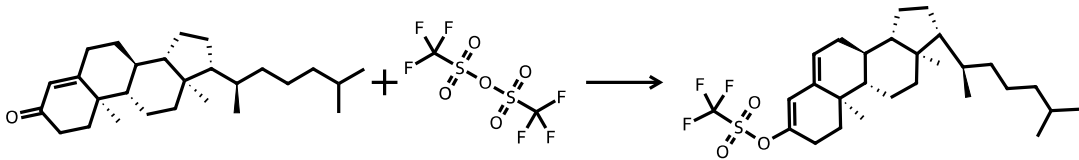
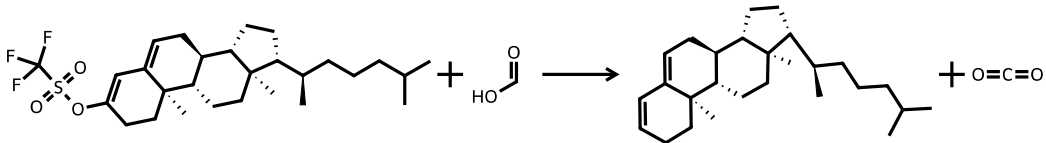


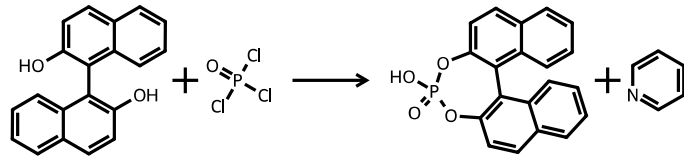
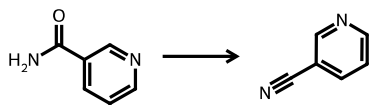
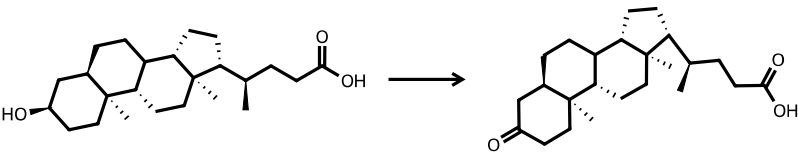
ID	Step	Yield	Scale	Reaction
CHEMIFY-0030	Step 1	88 %	5.0 mmol	 <chem>COc1ccc(CN)cc1.CC(C)(C)OC(=O)OC(=O)OC(C)(C)C&gt;&gt;COc1ccc(CNC(=O)OC(C)(C)C)cc1</chem>
CHEMIFY-0032	Step 1	36 %	40.0 mmol	 <chem>CC(C)C(C)O.CC(C)C(=O)Cl&gt;&gt;CC1=C(C)C(OC2(C)C(C)C)C=C(C)C1.[O-]S(=O)(=O)C(F)(F)F</chem>
CHEMIFY-0033	Step 1	59 %	33.8 mmol	 <chem>CCOC(=O)CC(=O)C&gt;&gt;CCOC(=O)C1=C(C)N(C)C2=CC=C(C=C1C2)O</chem>

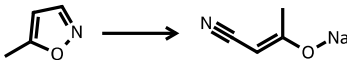
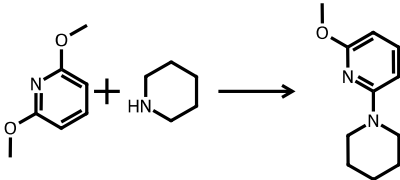
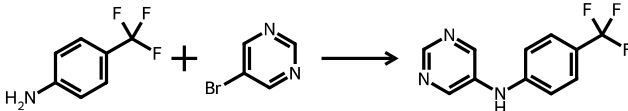
ID	Step	Yield	Scale	Reaction
CHEMIFY-0034	Step 1	81 %	90.5 mmol	 <chem>CC(=O)OCCl.C=CCN&gt;&gt;CCOC(=O)C=C</chem>
CHEMIFY-0035	Step 1	91 %	10.0 mmol	 <chem>CCCCC#CCCC1C(=O)N(Br)C1=O&gt;&gt;BrC#CCCCCCCC1C(=O)N1C(=O)CCC1=O</chem>
CHEMIFY-0037	Step 1	74 %	9.0 mmol	 <chem>C=CCOC(=O)CCCCCCCC(=O)OCC=C.C1CCC2(C1)C(=O)OC2=O&gt;&gt;C=CCOC(=O)C12C(=O)OC1CCC2</chem>

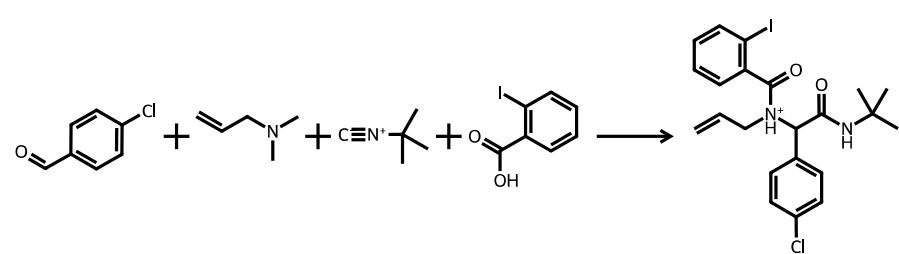
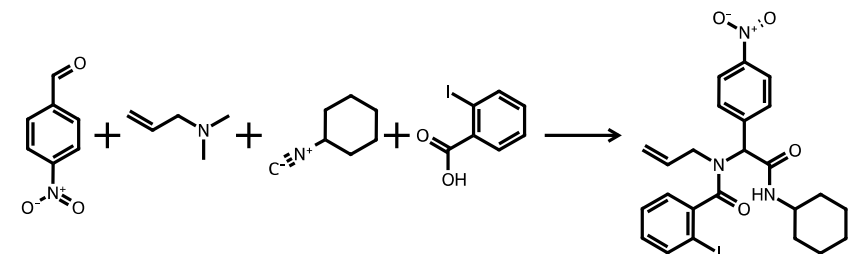
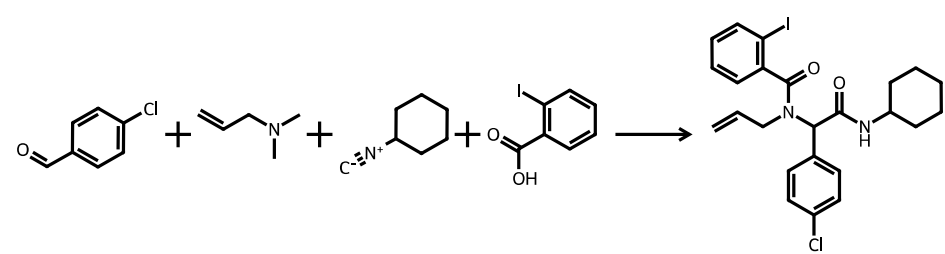


ID	Step	Yield	Scale	Reaction
CHEMIFY-0042	Step 1	58 %	0.77 mmol	
CHEMIFY-0043	Step 1	76 %	100.0 mmol	
CHEMIFY-0044	Step 1	85 %	11.2 mmol	

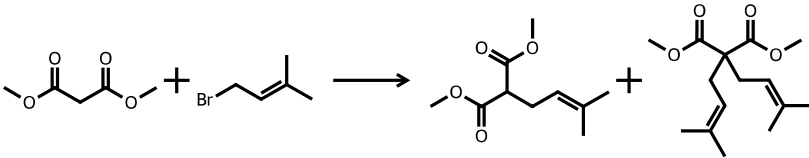
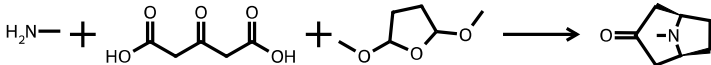
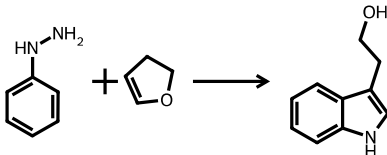
ID	Step	Yield	Scale	Reaction
CHEMIFY-0045	Step 1	70 %	1.5 mmol	
CHEMIFY-0046	Step 1	99 %	15.0 mmol	
CHEMIFY-0047	Step 1	71 %	5.00 mmol	

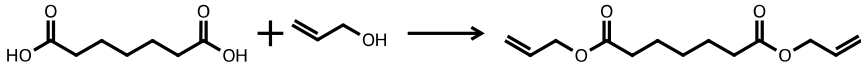
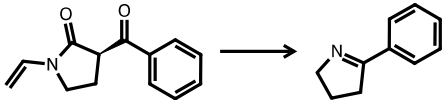
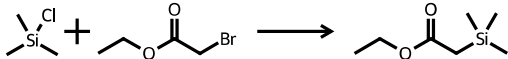
ID	Step	Yield	Scale	Reaction
CHEMIFY-0048	Step 1	40 %	34.9 mmol	
CHEMIFY-0049	Step 1		20.0 mmol	
CHEMIFY-0050	Step 1	65 %	1.35 mmol	

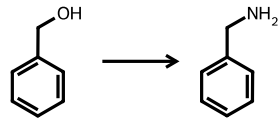
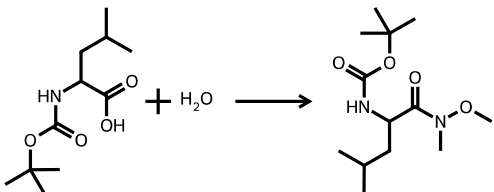
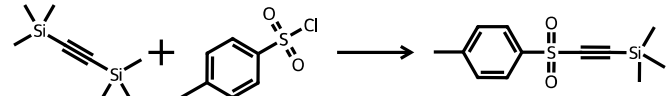
ID	Step	Yield	Scale	Reaction
CHEMIFY-0051	Step 1	76 %	33.0 mmol	 <chem>CC1=CN=CO1&gt;&gt;[Na]OC(=C)C#N</chem>
CHEMIFY-0052	Step 1	53 %	10.1 mmol	 <chem>COc1cc(OC)c(I)nc1.C1CCNCC1&gt;&gt;COc1ccc(NC2CCCCC2)nc1</chem>
CHEMIFY-0053	Step 1	75 %	5.0 mmol	 <chem>Nc1ccc(C(F)(F)F)cc1.BrC1=CN=CC=N1&gt;&gt;Nc1cc(C(F)(F)F)ccc1-c2ccncc2</chem>

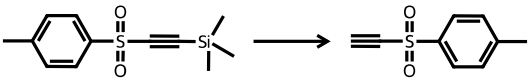
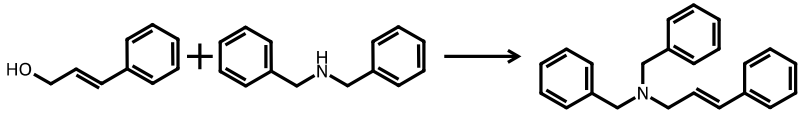
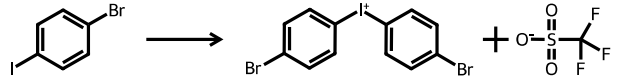
ID	Step	Yield	Scale	Reaction
CHEMIFY-0054	Step 1	56 %	12.0 mmol	
CHEMIFY-0055	Step 1	80 %	12.0 mmol	
CHEMIFY-0056	Step 1	78 %	12.0 mmol	

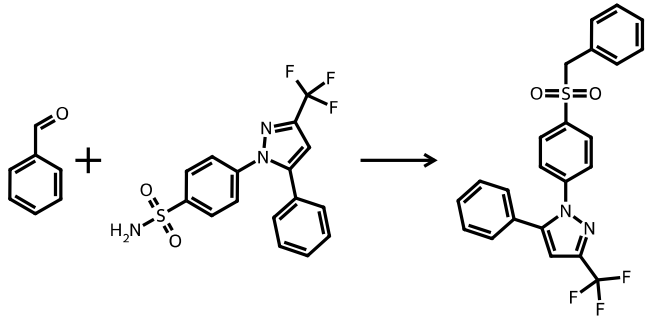
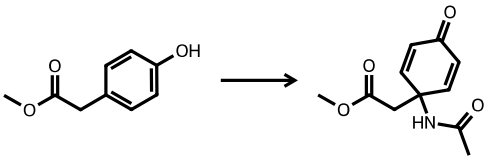
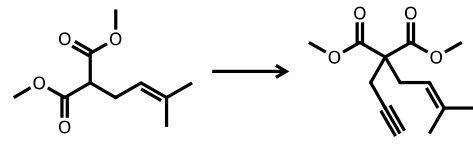


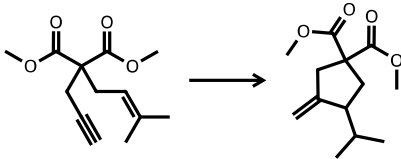
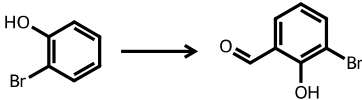
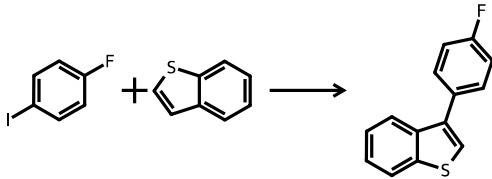
ID	Step	Yield	Scale	Reaction
CHEMIFY-0057	Step 1	31 %	20.0 mmol	
CHEMIFY-0075	Step 1	56 %	20 mmol	
CHEMIFY-0077	Step 1	33 %	30 mmol	

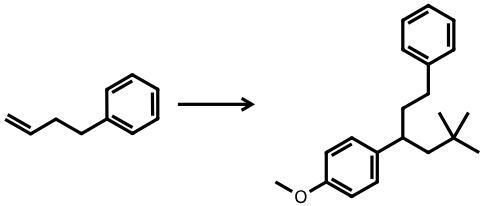
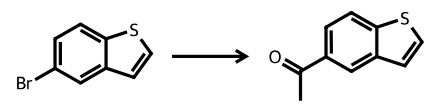
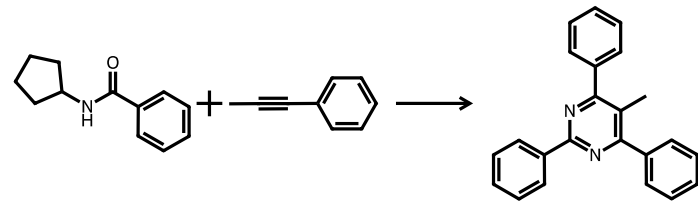
ID	Step	Yield	Scale	Reaction
CHEMIFY-0078	Step 1	64 %	40 mmol	 <chem>OC(=O)CCCCC(=O)O.C=CCO&gt;&gt;C=CCOC(=O)CCCCC(=O)OCC=C</chem>
CHEMIFY-0079	Step 1	38 %	10 mmol	 <chem>O=C1CN(C(=O)C(=O)c2ccccc2)CC1&gt;&gt;O=C1CN(Cc2ccccc2)CC1</chem>
CHEMIFY-0080	Step 1			 <chem>CCl[Si](C)(C)C.ClCOC(=O)CCBr&gt;&gt;CCOC(=O)CC[Si](C)(C)C</chem>

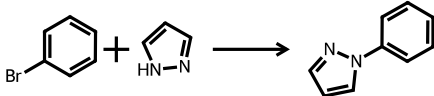
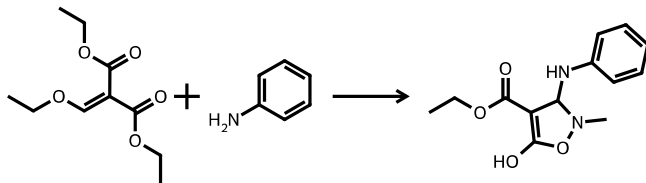
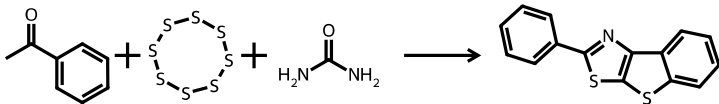
ID	Step	Yield	Scale	Reaction
CHEMIFY-0081	Step 1			
CHEMIFY-0082	Step 1			
CHEMIFY-0084	Step 1			

ID	Step	Yield	Scale	Reaction
CHEMIFY-0085	Step 1			 <chem>CS(=O)(=O)C#CSi(C)(C)C&gt;&gt;CS(=O)(=O)C#Cc1ccc(C)cc1</chem>
CHEMIFY-0086	Step 1			 <chem>OCC=Oc1ccc(C)cc1.Nc2ccccc2CNc3ccccc3&gt;&gt;Cc1ccc(CCN(Cc2ccccc2)Cc3ccccc3)cc1</chem>
CHEMIFY-0087	Step 1			 <chem>BrC1=CC=C(I)C=C1&gt;&gt;BrC1=CC=C(I)C=C1.[O-]S(=O)(=O)C(F)(F)F</chem>

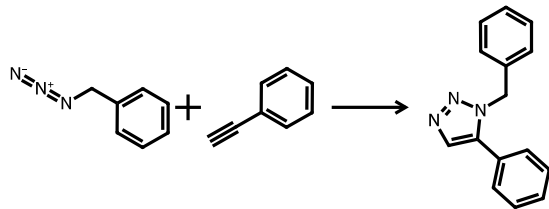
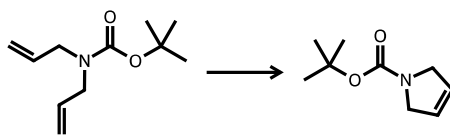
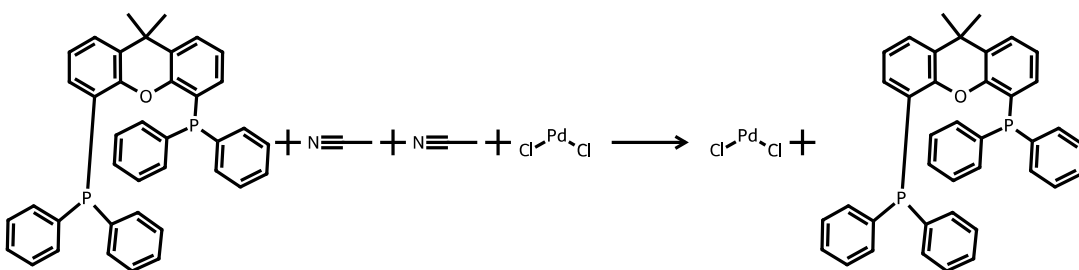
ID	Step	Yield	Scale	Reaction
CHEMIFY-0088	Step 1			 <p>Reaction scheme for CHEMIFY-0088, Step 1: Benzaldehyde reacts with a substituted indazole derivative (4-(benzenesulfonylamino)-2-(trifluoromethyl)-1H-indazole) to form a sulfonamide derivative.</p>
CHEMIFY-0089	Step 1			 <p>Reaction scheme for CHEMIFY-0089, Step 1: 4-(4-methoxyphenyl)-2-oxo-1,2,3,4-tetrahydropyridine-3-carboxylic acid methyl ester reacts to form a cyclic product.</p>
CHEMIFY-0090	Step 1			 <p>Reaction scheme for CHEMIFY-0090, Step 1: A substituted ester reacts to form a complex polycyclic product.</p>

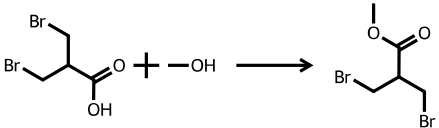
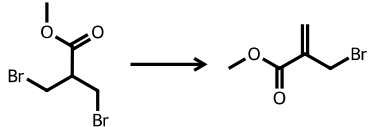
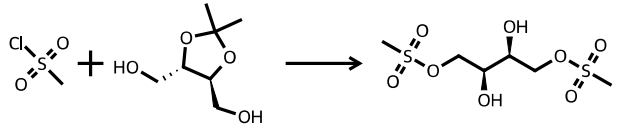
ID	Step	Yield	Scale	Reaction
CHEMIFY-0091	Step 1			
CHEMIFY-0092	Step 1			
CHEMIFY-0093	Step 1			

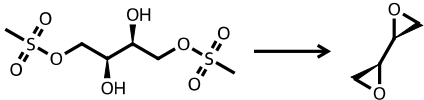
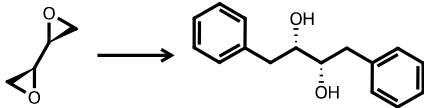
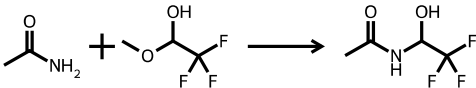
ID	Step	Yield	Scale	Reaction
CHEMIFY-0094	Step 1			 <p>Reaction scheme for CHEMIFY-0094, Step 1: 3-phenylprop-1-ene reacts to form 1-(4-methoxyphenyl)-2-phenyl-2-methylpropyl ether.</p>
CHEMIFY-0095	Step 1			 <p>Reaction scheme for CHEMIFY-0095, Step 1: 5-bromo-2-thienylbenzene reacts to form 2-(5-acetyl-2-thienyl)benzene.</p>
CHEMIFY-0096	Step 1			 <p>Reaction scheme for CHEMIFY-0096, Step 1: N-cyclopentylbenzamide reacts with phenylacetylene to form 1-methyl-2,4-diphenyl-1H-1,2,4-triazole.</p>

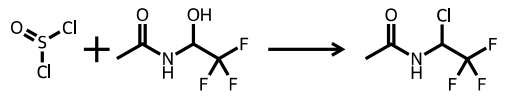
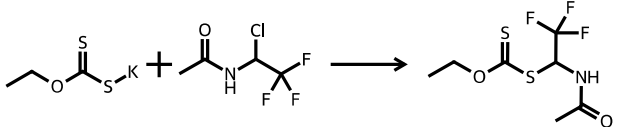
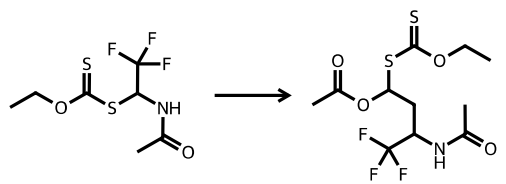
ID	Step	Yield	Scale	Reaction
CHEMIFY-0097	Step 1			 <p>Reaction scheme for CHEMIFY-0097, Step 1: 4-bromobenzene reacts with pyrazole to form 1-phenyl-1H-pyrazole.</p>
CHEMIFY-0098	Step 1			 <p>Reaction scheme for CHEMIFY-0098, Step 1: A cyclic acetal (1,3-dioxolane derivative) reacts with aniline to form a substituted isoxazoline derivative.</p>
CHEMIFY-0099	Step 1			 <p>Reaction scheme for CHEMIFY-0099, Step 1: Acetophenone reacts with 1,2,4,5-tetrathiane and urea to form a benzothiazole derivative.</p>

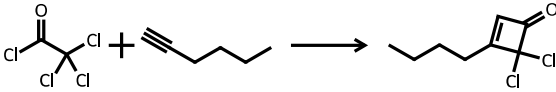
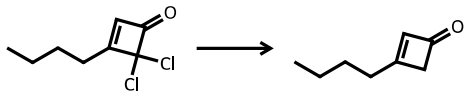
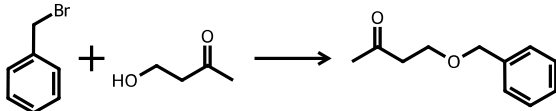


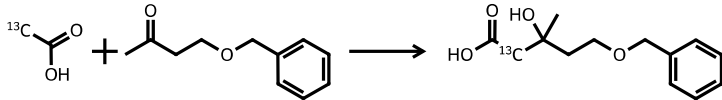
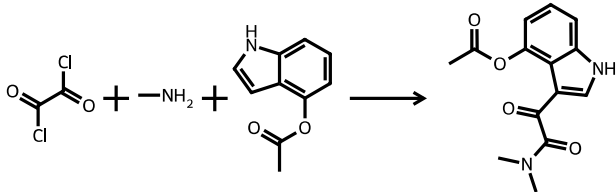
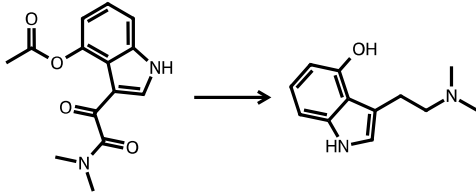
ID	Step	Yield	Scale	Reaction
CHEMIFY-0100	Step 1			 <chem>c1ccccc1C=[N+]#N + c1ccccc1C#C &gt;&gt; c1ccccc1c2ccccc2n1nnn1</chem>
CHEMIFY-0101	Step 1			 <chem>CC(C)OC(=O)CN(C)C=CC=CC=C &gt;&gt; CC(C)OC(=O)N1C=CC=C1</chem>
CHEMIFY-0102	Step 1			 <chem>c1ccc(cc1)P(c2ccccc2)c3ccccc3 + C#C + C#C + Cl[Pd]Cl &gt;&gt; Cl[Pd]Cl + c1ccc(cc1)P(c2ccccc2)c3ccccc3</chem>

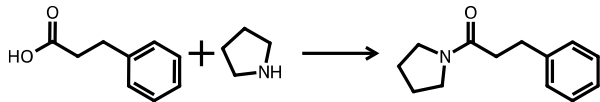
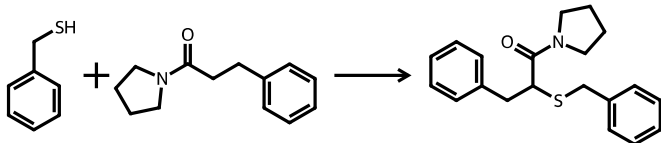
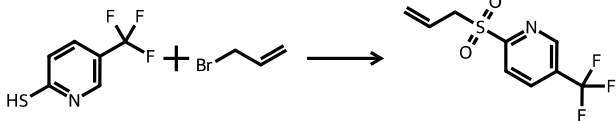
ID	Step	Yield	Scale	Reaction
CHEMIFY-0103	Step 1			
CHEMIFY-0104	Step 1			
CHEMIFY-0105	Step 1			

ID	Step	Yield	Scale	Reaction
CHEMIFY-0106	Step 1			
CHEMIFY-0107	Step 1			
CHEMIFY-0108	Step 1			

ID	Step	Yield	Scale	Reaction
CHEMIFY-0109	Step 1			
CHEMIFY-0110	Step 1			
CHEMIFY-0111	Step 1			

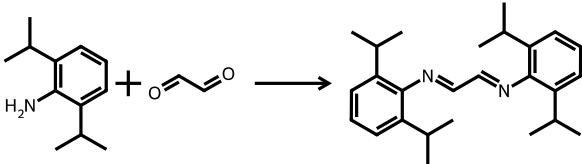
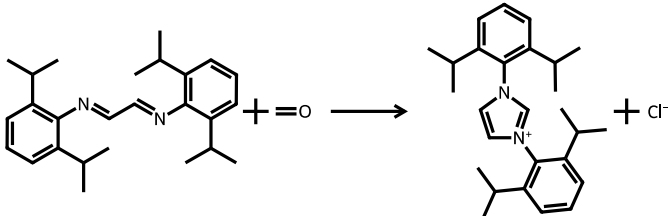
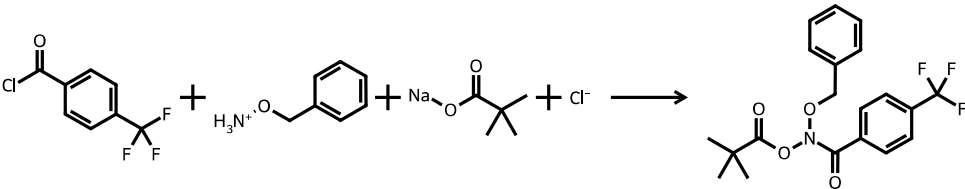
ID	Step	Yield	Scale	Reaction
CHEMIFY-0112	Step 1			 <chem>ClC(Cl)(Cl)C(=O)Cl.C#CCCC&gt;&gt;ClC1(Cl)C(=O)C=C(C1)CCCC</chem>
CHEMIFY-0113	Step 1			 <chem>ClC1(Cl)C(=O)C=C(C1)CCCC&gt;&gt;ClC1(Cl)C(=O)C=C(C1)CCCC</chem>
CHEMIFY-0114	Step 1			 <chem>Brc1ccccc1.CC(=O)CCO&gt;&gt;CC(=O)CCOCc1ccccc1</chem>

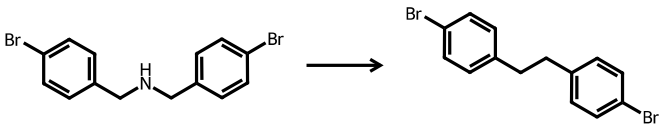
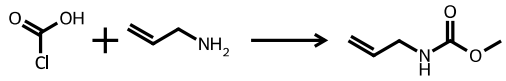
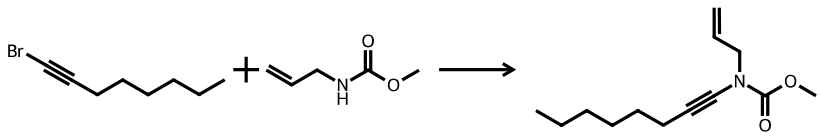
ID	Step	Yield	Scale	Reaction
CHEMIFY-0115	Step 1			 <chem>CC(=O)O[13C] + CC(=O)COc1ccccc1 &gt;&gt; CC(=O)O[13C]C(C)COc1ccccc1</chem>
CHEMIFY-0116	Step 1			 <chem>ClCCl(=O)Cl + NH2 + CC(=O)Oc1ccc2c(c1)c(c[nH]2)C(=O)N(C)C &gt;&gt; CC(=O)Oc1ccc2c(c1)c(c[nH]2)C(=O)N(C)CC(=O)N(C)C</chem>
CHEMIFY-0117	Step 1			 <chem>CC(=O)Oc1ccc2c(c1)c(c[nH]2)C(=O)N(C)CC(=O)N(C)C &gt;&gt; CC(=O)Oc1ccc2c(c1)c(c[nH]2)C(=O)N(C)CC(=O)N(C)C</chem>

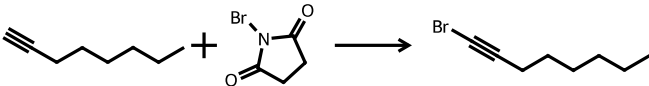
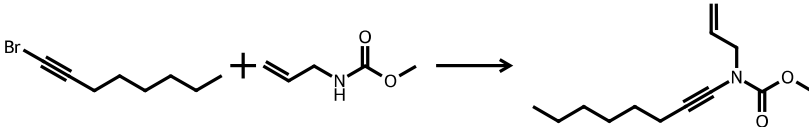
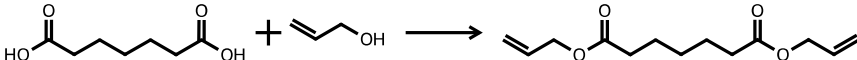
ID	Step	Yield	Scale	Reaction
CHEMIFY-0118	Step 1			 <chem>O=C(O)CCc1ccccc1.C1CCNC1&gt;&gt;O=C(NC1CCCN1)CCc2ccccc2</chem>
CHEMIFY-0119	Step 1			 <chem>c1ccccc1CS.CC(=O)N1CCCN1Cc2ccccc2&gt;&gt;CC(=O)N1CCCN1Cc2ccccc2CSCc3ccccc3</chem>
CHEMIFY-0120	Step 1			 <chem>SC1=CC=C(C(F)(F)F)N=C1.BrCC=C&gt;&gt;C=CCS(=O)(=O)C1=CC=C(C(F)(F)F)N=C1</chem>

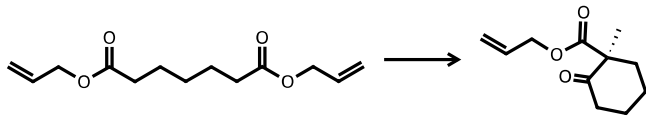
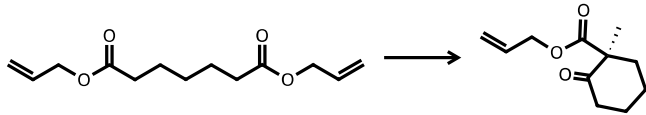
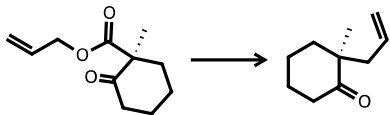


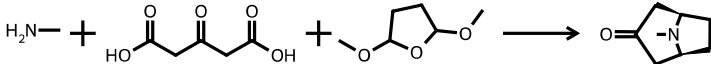
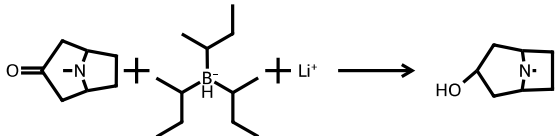
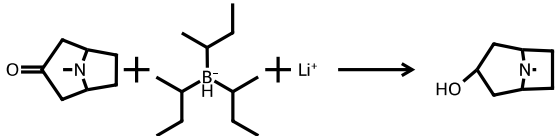


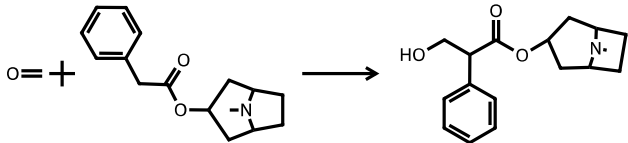
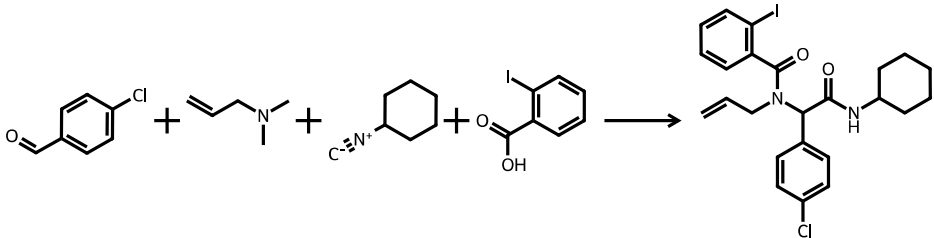
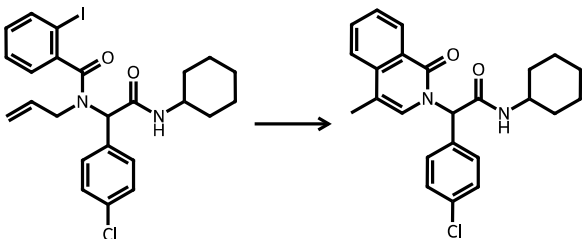
ID	Step	Yield	Scale	Reaction
CHEMIFY-0124	Step 1			 <chem>CC1=C(C)C=C(N)C(C)=C1.C=O&gt;&gt;CC1=C(C)C=C(N=C(C1)C=C2C(C)=CC(C)=NC2=CC(C)=C2)C=C3C(C)=CC(C)=NC3=CC(C)=C3</chem>
CHEMIFY-0125	Step 1			 <chem>CC1=C(C)C=C(N=C(C1)C=C2C(C)=CC(C)=NC2=CC(C)=C2)C=C3C(C)=CC(C)=NC3=CC(C)=C3.CO&gt;&gt;CC1=C(C)C=C(N2C=CC(C)=CC(C)=N2C3C(C)=CC(C)=NC3=CC(C)=C3)C=C4C(C)=CC(C)=NC4=CC(C)=C4.[Cl-]</chem>
CHEMIFY-0126	Step 1			 <chem>ClC(=O)c1ccc(C(F)(F)F)cc1.CCN(CC)CC.CC(=O)O[Na].[Cl-]&gt;&gt;CC(C)(C)C(=O)ON(C(=O)c1ccc(C(F)(F)F)cc1)OCc2ccccc2</chem>

ID	Step	Yield	Scale	Reaction
CHEMIFY-0127	Step 1			 <chem>BrC1=CC=C(C=C1)CSCC2=CC=CC(=C2)Br &gt;&gt; BrC1=CC=C(C=C1)CC2=CC=CC(=C2)Br</chem>
TwoStep-1 (0034+0010)	Step 1	81 %, 43 %	90.5 mmol, 10.0 mmol	 <chem>ClCC(=O)O + C=CCN &gt;&gt; C=CCNC(=O)OC</chem>
	Step 2			 <chem>BrC#CCCCCI + C=CCNC(=O)OC &gt;&gt; C=CCNC(=O)OC#CCCCCI</chem>

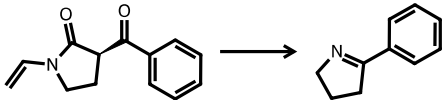
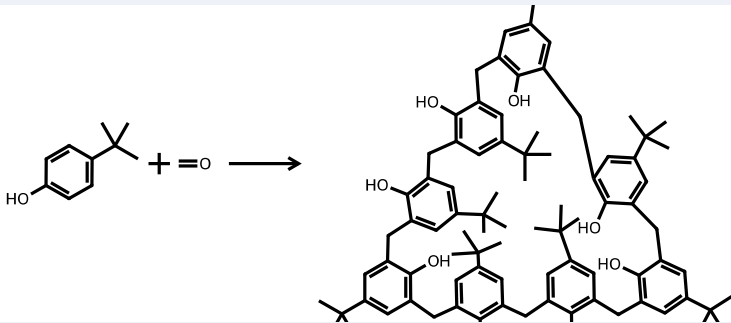
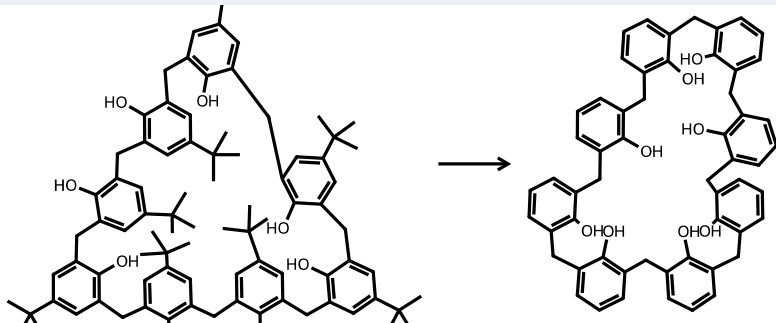
ID	Step	Yield	Scale	Reaction
TwoStep-2 (0035+0010)	Step 1	91 %, 43 %	10.0 mmol, 10.0 mmol	 <chem>CCCCCCC#C + O=C1CCC(=O)N1Br &gt;&gt; BrC#CCCCCCC</chem>
	Step 2			 <chem>BrC#CCCCCCC + C=CCNC(=O)OC &gt;&gt; C=CCN(C#CCCCCCC)C(=O)OC</chem>
TwoStep-3 (0078+0037)	Step 1	64 %, 74 %	40 mmol, 9.0 mmol	 <chem>OC(=O)CCCCCCCC(=O)O + C=CCO &gt;&gt; C=CCOC(=O)CCCCCCCC(=O)OCC=C</chem>

ID	Step	Yield	Scale	Reaction
	Step 2			
TwoStep-4 (0037+0012)	Step 1	74 %, 92 %	9.0 mmol, 2.0 mmol	
	Step 2			

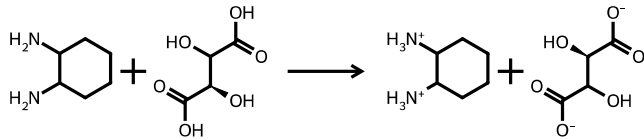
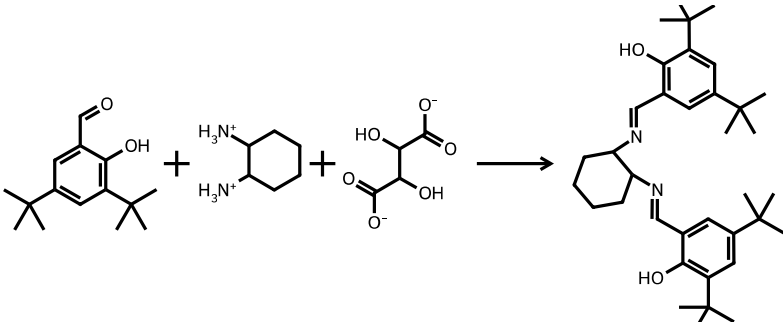
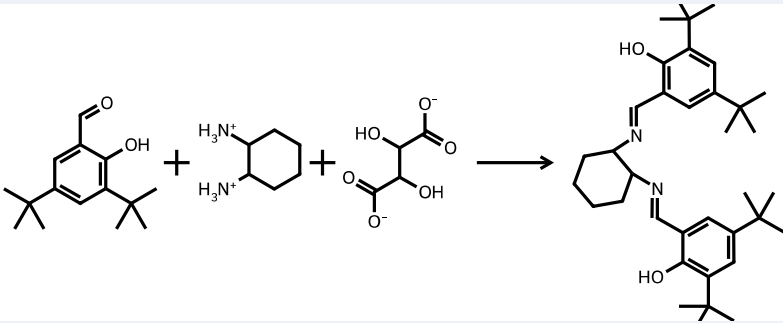
ID	Step	Yield	Scale	Reaction
TwoStep-5 (0075+0004)	Step 1	56 %, 84 %	20 mmol, 10.0 mmol	
	Step 2			
TwoStep-6 (0004+0005)	Step 1	84 %, 37 %	10.0 mmol, 13.0 mmol	

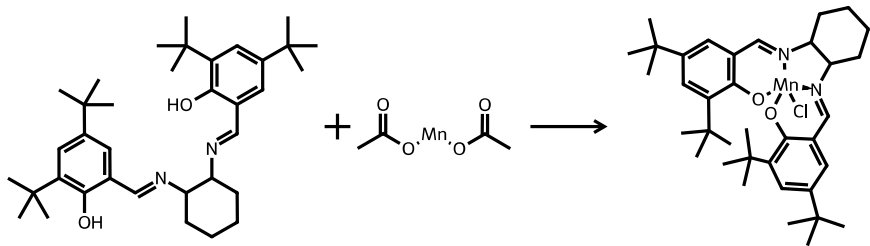
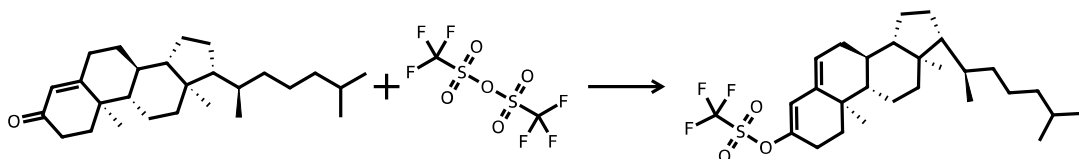
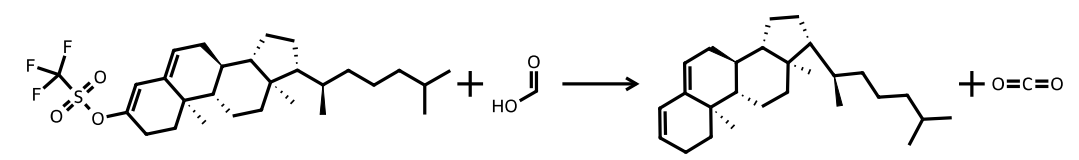
ID	Step	Yield	Scale	Reaction
	Step 2			
TwoStep-7 (0056+0022)	Step 1	78 %, 32 %	12.0 mmol, 1.86 mmol	
	Step 2			

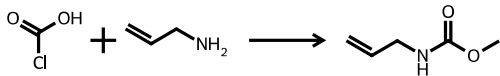
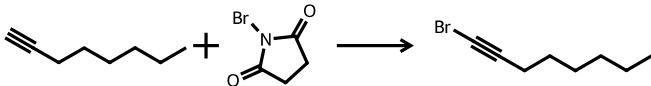
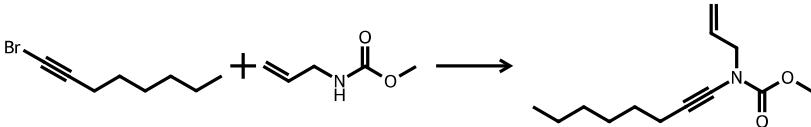
ID	Step	Yield	Scale	Reaction
TwoStep-8 (0056+0023)	Step 1	78 %, 35 %	12.0 mmol, 6.0 mmol	
	Step 2			
TwoStep-9 (0038+0079)	Step 1	52 %, 38 %	45.0 mmol, 10 mmol	

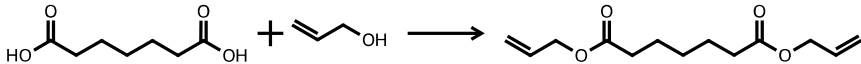
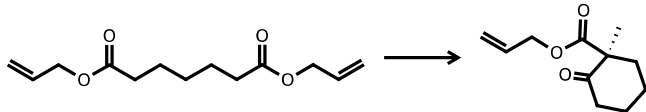
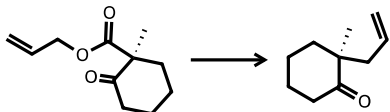
ID	Step	Yield	Scale	Reaction
	Step 2			
TwoStep-10 (0040+0042)	Step 1	36 %, 58 %	33.3 mmol, 0.77 mmol	
	Step 2			



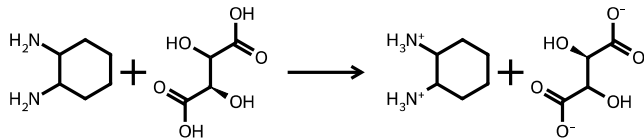
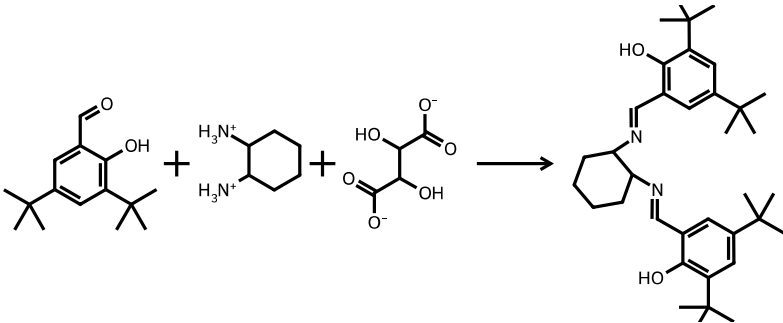
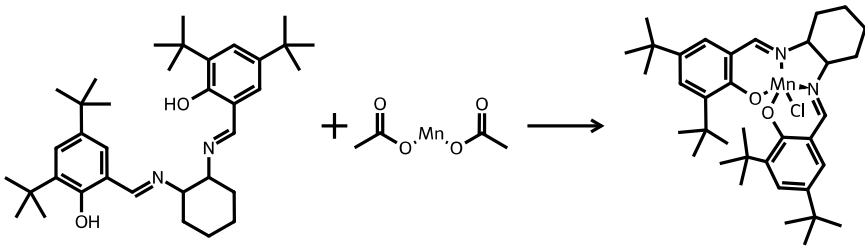
ID	Step	Yield	Scale	Reaction
TwoStep-11 (0043+0044)	Step 1	76 %, 85 %	100.0 mmol, 11.2 mmol	
	Step 2			
TwoStep-12 (0044+0045)	Step 1	85 %, 70 %	11.2 mmol, 1.5 mmol	

ID	Step	Yield	Scale	Reaction
	Step 2			 <p>The reaction shows two substituted phenols reacting with a manganese catalyst (Mn) to form a biaryl product. The reactants are 2,4,6-tri-tert-butylphenol and 2,4,6-tri-tert-butylphenol. The product is a biaryl compound with a central Mn atom coordinated by two phenoxide groups and a chlorine atom.</p>
TwoStep-13 (0046+0047)	Step 1	99 %, 71 %	15.0 mmol, 5.00 mmol	 <p>The reaction shows a complex polycyclic ketone reacting with a sulfonating agent (F<sub>3</sub>SO<sub>2</sub>SO<sub>2</sub>CF<sub>3</sub>) to form a sulfonate ester product.</p>
	Step 2			 <p>The reaction shows a sulfonate ester reacting with a base (HO-C≡O) to form a polycyclic ketone product and carbon dioxide (CO<sub>2</sub>).</p>

ID	Step	Yield	Scale	Reaction
ThreeStep-1 (0034+0035+0010)	Step 1	81 %, 91 %, 43 %	90.5 mmol, 10.0 mmol, 10.0 mmol	 <chem>COC(=O)/C=C/Cl + C=CCN &gt;&gt; COC(=O)/C=C/CN</chem>
	Step 2			 <chem>CCCCC#C + BrN1C(=O)CCC1=O &gt;&gt; BrC#CCCCC</chem>
	Step 3			 <chem>BrC#CCCCC + COC(=O)/C=C/CN &gt;&gt; COC(=O)/C=C/CN#CCCCC</chem>

ID	Step	Yield	Scale	Reaction
ThreeStep-2 (0078+0037+0012)	Step 1	64 %, 74 %, 92 %	40 mmol, 9.0 mmol, 2.0 mmol	 <chem>OC(=O)CCCCC(=O)O.C=CCO&gt;&gt;C=CCOC(=O)CCCCC(=O)OCC=C</chem>
	Step 2			 <chem>C=CCOC(=O)CCCCC(=O)OCC=C&gt;&gt;C=CCOC(=O)C1(C)C(=O)OCC1</chem>
	Step 3			 <chem>C=CCOC(=O)C1(C)C(=O)OCC1&gt;&gt;C=CC(=O)C1(C)CCCC1</chem>

ID	Step	Yield	Scale	Reaction
ThreeStep-3 (0075+0004+0005)	Step 1	56 %, 84 %, 37 %	20 mmol, 10.0 mmol, 13.0 mmol	
	Step 2			
	Step 3			

ID	Step	Yield	Scale	Reaction
ThreeStep-4 (0043+0044+0045)	Step 1	76 %, 85 %, 70 %	100.0 mmol, 11.2 mmol, 1.5 mmol	 <chem>NCC1CCCCC1.NC(CO)C(=O)O&gt;&gt;[NH3+]C1CCCCC1.[O-]C(CO)C(=O)O</chem>
	Step 2			 <chem>CC(C)(C)c1cc(C(C)(C)C)c(C(C)(C)C)c1C=O.O[C+]1CCCCC1.[O-]C(CO)C(=O)O&gt;&gt;CC(C)(C)c1cc(C(C)(C)C)c(C(C)(C)C)c1C=N[C@H]2CCCC[C@H]2N=Cc3cc(C(C)(C)C)c(C(C)(C)C)c3O</chem>
	Step 3			 <chem>CC(C)(C)c1cc(C(C)(C)C)c(C(C)(C)C)c1C=N[C@H]2CCCC[C@H]2N=Cc3cc(C(C)(C)C)c(C(C)(C)C)c3O.CC(=O)O[Mn](OC(=O)C)OC(=O)C&gt;&gt;CC(C)(C)c1cc(C(C)(C)C)c(C(C)(C)C)c1C=N[C@H]2CCCC[C@H]2N=Cc3cc(C(C)(C)C)c(C(C)(C)C)c3O[Mn](OC(=O)C)OC(=O)C</chem>