

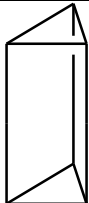
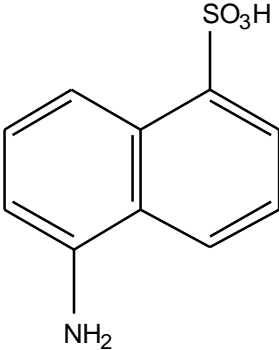
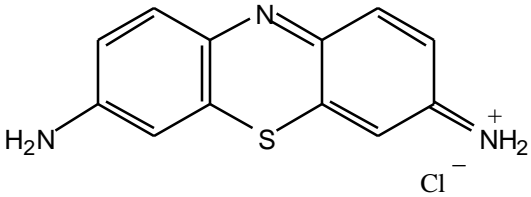
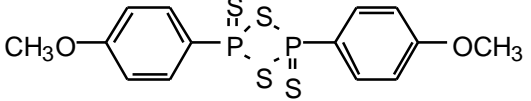
NAMED ORGANIC REAGENTS (PART 2)

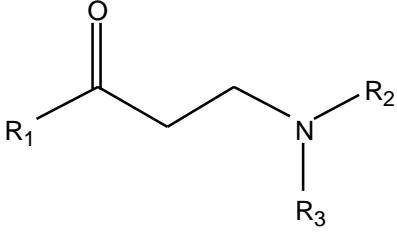
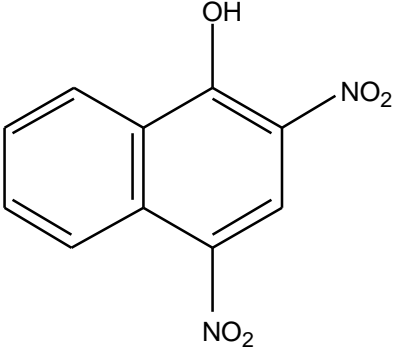
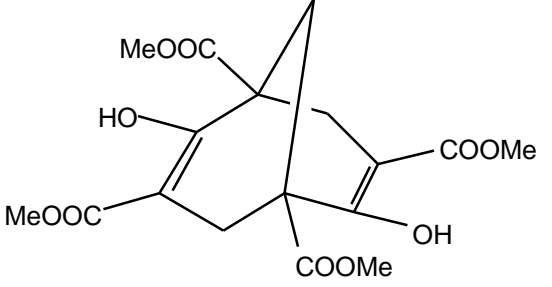
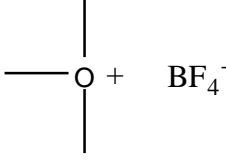
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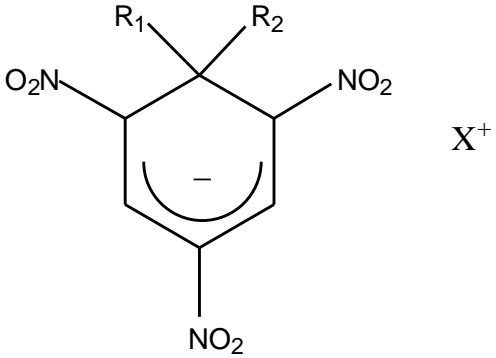
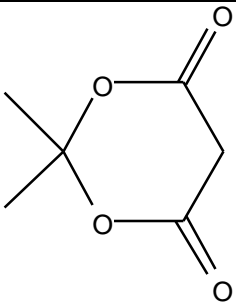
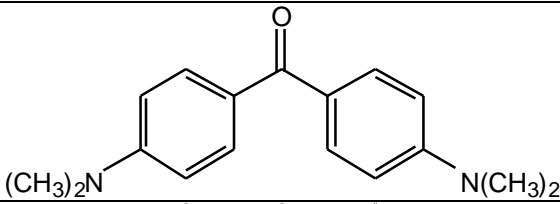
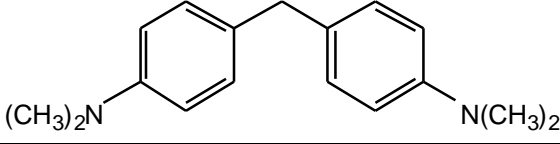
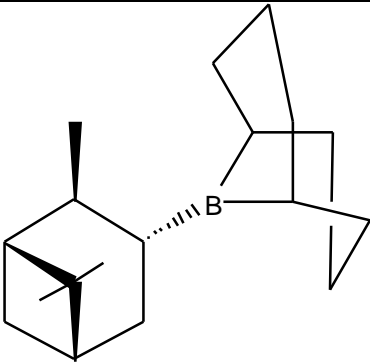
Department of Chemistry, York University
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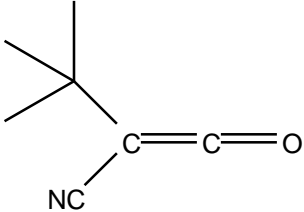
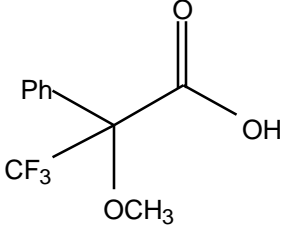
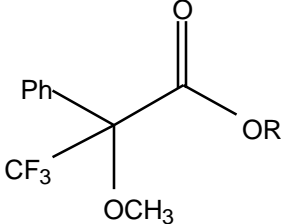
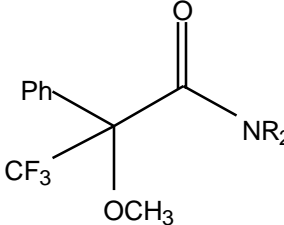
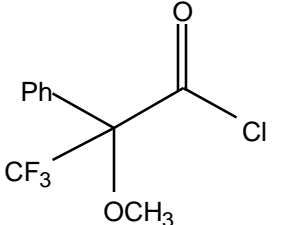
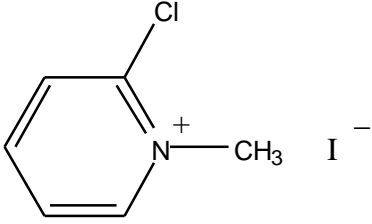
For suggestions, corrections, additional information, and comments please send e-mails to jandraos@yorku.ca

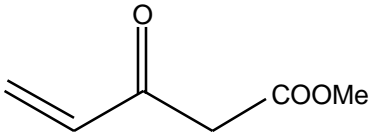
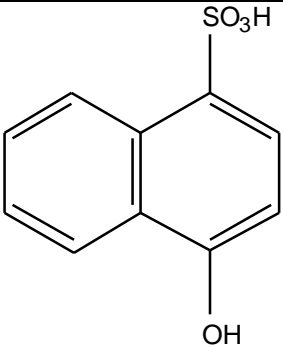
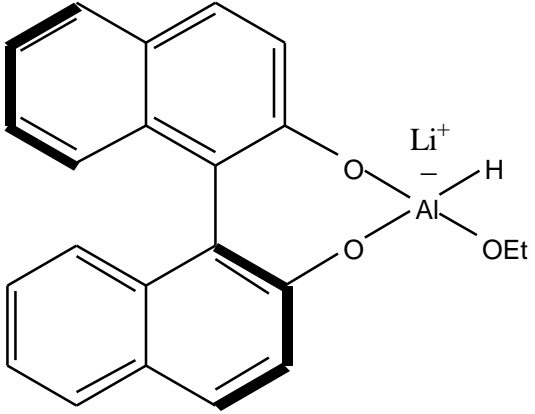
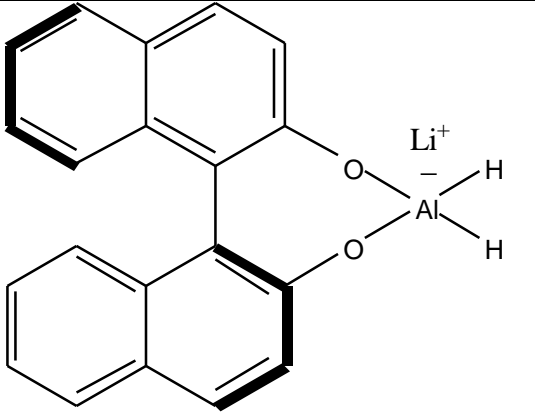
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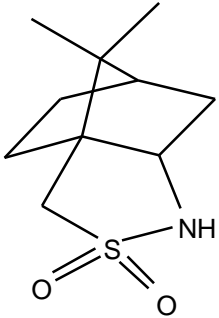
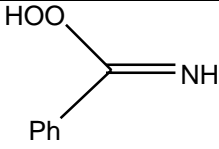
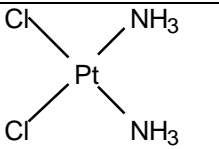
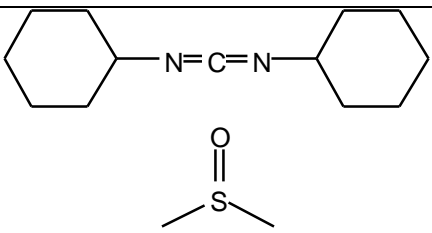
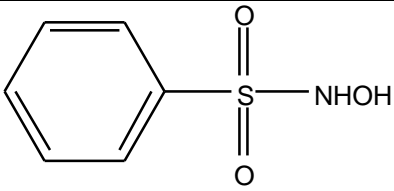
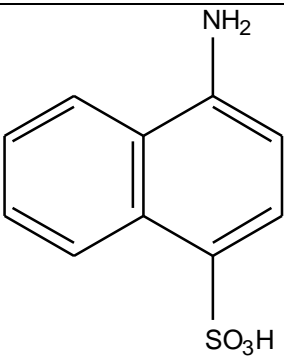
Ladenburg benzene (1869) (prismane)	650-42-0	
Laurent's acid (1850) (5-amino-1-naphthalenesulfonic acid)	84-89-9	
Lauth's violet (1876) (thionine or 3,7-diaminophenothiazin-5-ium chloride)	581-64-6	
Lawesson's reagent (1968), (2,4-bis(4-methoxyphenyl)-1,3-dithia-2,4-diphosphetane-2,4-disulfide)	19172-47-5 90412-95-6	
Lazier catalyst (1943) (copper chromite)	12018-10-9	2 CuO Cr ₂ O ₃
Lewis structures (1916), Lewis acid		electron acceptor
Lewisite (1925) (2-chloroethenylarsonous dichloride)	541-25-3	ClCH=CHAsCl ₂

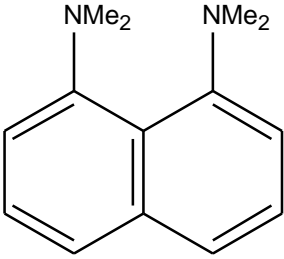
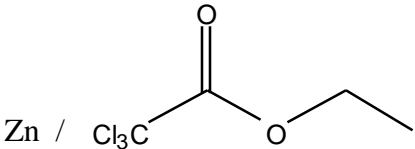
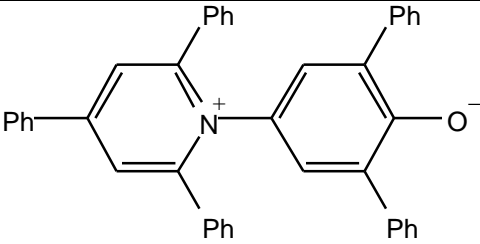
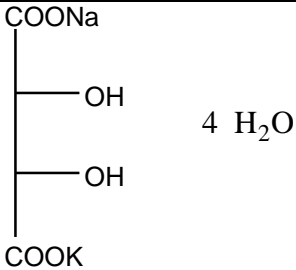
Lindlar's catalyst (palladium/calcium carbonate/lead oxide) (1952)	7440-05-3 471-34-1 1317-36-8	Pd / CaCO ₃ / PbO
Mannich bases (1917) (R ₁ = R ₂ = R ₃ = CH ₃ ; 4-dimethylaminobutan-2-one)	2543-57-9	
Martius yellow (1867) (2,4-dinitro-1-naphthol)	605-69-6	
McMurry's reagent (1974) (titanium (III)chloride-lithium aluminum hydride)	7705-07-9 16853-85-3	TiCl ₃ / LiAlH ₄
Meerwein ester (1913) (2,6-dihydroxybicyclo[3.3.1]nona-2,6-diene-1,3,5,7-tetracarboxylic acid, tetramethyl ester)	6966-22-9 99308-99-3	
Meerwein salt (1937) (trimethyloxonium tetrafluoroborate)	420-37-1	

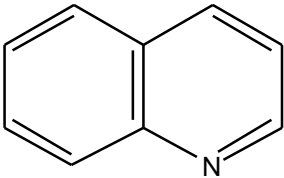
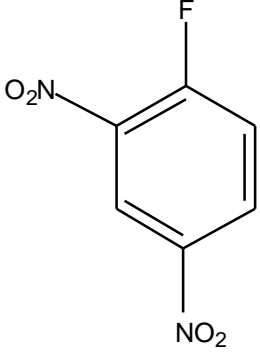
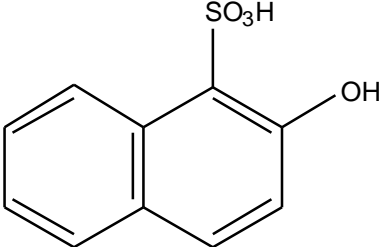
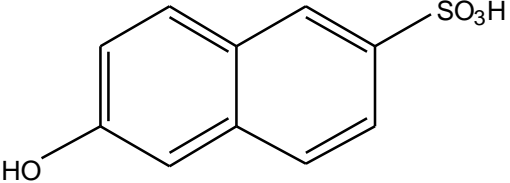
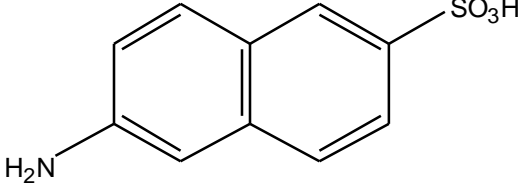
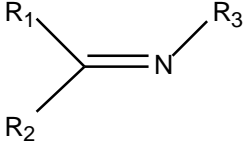
Meisenheimer complex or adduct (1900)		
Meldrum's acid (1908) (2,2-dimethyl-1,3-dioxane-4,6-dione)	2033-24-1	
Michler's ketone (1879) (4,4'-bis(N,N-dimethylamino)benzophenone)	90-94-8	
Michler's hydride (1872) (4,4'-bis(N,N-dimethylamino)diphenyl methane)	101-77-9	
Midland's reagent (1979) (3-pinanyl-9-BBN or 9-(2,6,6-trimethylbicyclo[3.1.1]hept-3-yl)- 9-borabicyclo[3.3.1]nonane)	64106-79-2 73624-47-2 76695-88-0 100347-98-6	
Mitsunobu reagent (1969) (triphenylphosphine-diethyl azodicarboxylate)	1972-28-7 4143-60-6 4143-61-7 603-35-0 58079-51-9	$\text{EtOOC} - \text{N} = \text{N} - \text{COOEt}$ Ph_3P

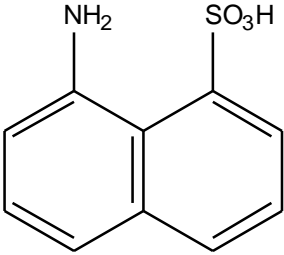
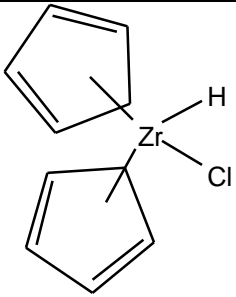
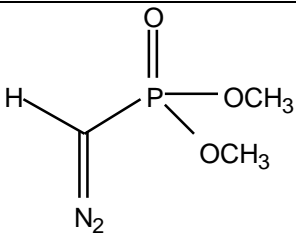
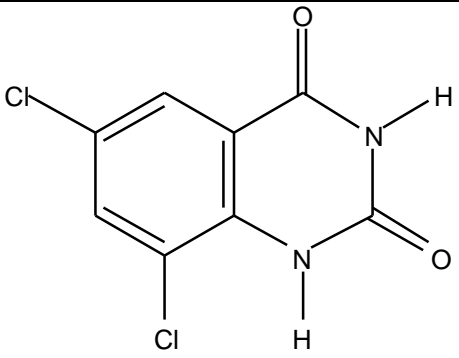
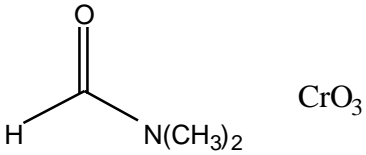
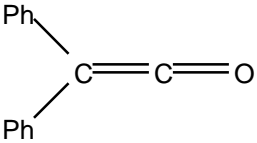
Mohr's salt (ferrous ammonium sulphate)	7782-63-0 7783-20-2	$\text{FeSO}_4 (\text{NH}_4)_2\text{SO}_4 \cdot 6 \text{H}_2\text{O}$
Moore's ketene (1975) (<i>t</i> -butylcyanoketene)	29342-22-1	
Mosher's acid (1967)	17257-71-5 20445-31-2 56135-03-6 81655-41-6	
Mosher esters (1967) (R = CH ₃)	20445-37-8 26164-19-2 77611-72-4 111688-22-3	
Mosher amides (1967) (R = H)	105678-40-8 120576-70-7 128051-92-3	
Mosher's acid chloride (1967)	20445-33-4 39637-99-5 40793-68-8 64312-89-6	
Mukaiyama's reagent (1975) (2-chloro-1-methylpyridinium iodide)	14338-32-0	

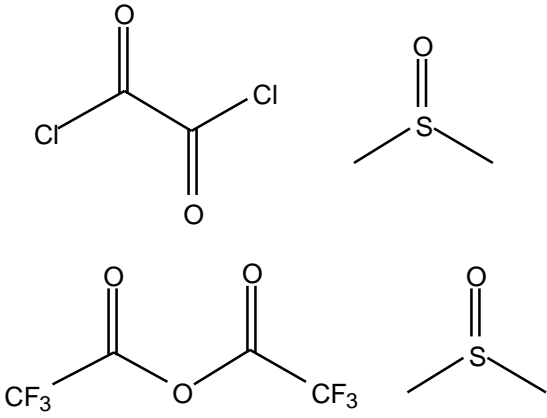
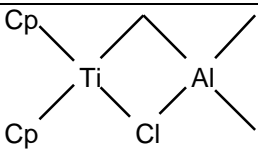
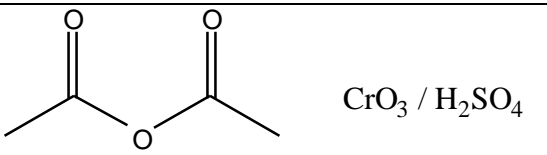
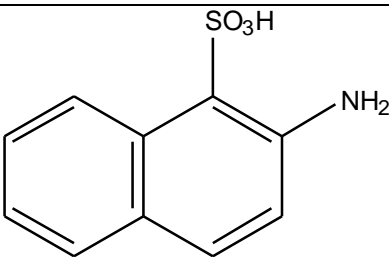
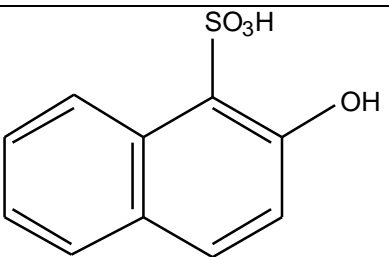
Nazarov's reagent (1953) (methyl 5-methoxy-3-oxopent-4-enoate)	37734-05-7	
Nevile and Winther's acid (1880) (4-hydroxy-1-naphthalenesulfonic acid)	84-87-1	
Nishimura catalyst (1960) (rhodium oxide-platinum oxide)	12137-27-8 12137-21-2	RhO ₂ / Pt ₂ O
Noyori's BINAL-H reagent (lithium (1,1'-binaphthalene-2,2'-diolato)(ethanolato) hydrido aluminate)		
Noyori reagent (1979) (lithium aluminum hydride-2,2'-dihydroxy-1,1'-binaphthyl)		
Olah's reagent (1973) (pyridinium poly(hydrogenfluoride))		(HF) _x C ₅ H ₅ N

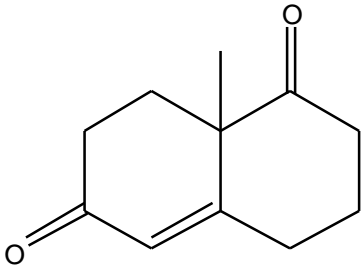
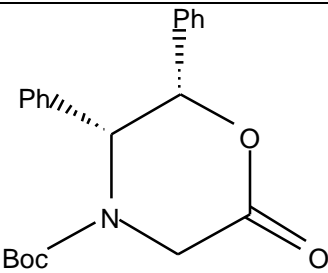

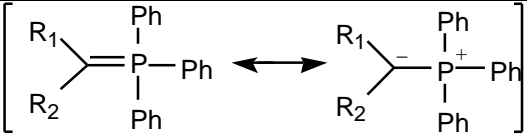
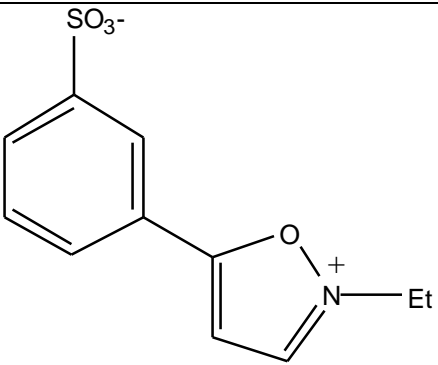
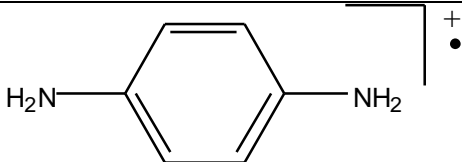
Oppolzer's auxiliary (1990) (2,10-camphorsultam)	94594-90-8 108448-77-7	
Payne's reagent (1961) (peroxybenzimidic acid)		
Pearlman's catalyst (1973)	12135-22-7	Pd(OH) ₂ / H ₂
Peyrone's salt (1844) (cis-platin, cis-dichlorodiammineplatinum)	15663-27-1	
Pfitzner-Moffatt reagent (1963) (dimethylsulfoxide-dicyclohexylcarbodiimide)	538-75-0 67-68-5	
Piloty's acid (1896) (benzenesulfohydroxamic acid)	599-71-3	
Piria's acid (1851) (4-amino-1-naphthalenesulfonic acid)	84-86-6	

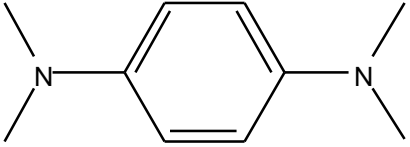
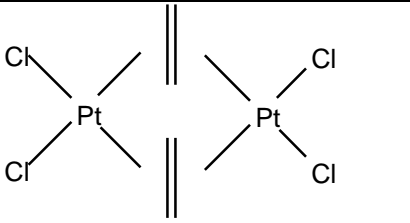
proton sponge (1941) (1,8-bis(dimethylamino)naphthalene)	20734-58-1	
Raney nickel (1927)	7440-02-0 7429-90-5 1333-74-0	Ni(Al) H ₂
Ratcliffe's reagent (1976) (chromium(VI)oxide-dipyridine complex)	20492-50-6	CrO ₃ / 2 Pyr
Reformatskii reagent (1887) (zinc - ethyl trichloroacetate)	515-84-4	Zn / 
Reichardt's dye (1983) (2,6-diphenyl-4-(2,4,6-triphenylpyridinium) phenoxide, or 2,4,6-triphenyl-N-(3,5-diphenyl-4-oxidophenyl)pyridinium betaine, or 2,6-diphenyl-4-(2,4,6-triphenylpyridinium-1-yl)phenolate)	10081-39-7	
Reinecke salt (1863) (ammonium tetrathiocyanatodiamine chromate (III))	13573-16-5	NH ₄ ⁺ [Cr(NH ₂) ₂ (SCN) ₄] ⁻
Ringer's solution (1880 - 1882) (aqueous solution of sodium chloride, potassium chloride, and calcium chloride)	7647-14-5 7447-40-7 10043-52-4 7713-18-5	NaCl, KCl, CaCl ₂ , H ₂ O
Rochelle salt (1672) (sodium potassium tartrate tetrahydrate)	147-79-5 304-59-6 15490-42-3 6381-59-5	

<p>Rosenmund catalyst (1921) (palladium, barium sulfate, quinoline, sulfur)</p>	<p>7440-05-3 7727-43-7 7704-34-9</p> <p>91-22-5</p>	<p>Pd, BaSO₄, S</p> 
<p>Sanger's reagent (1945) (2,4-dinitrofluorobenzene)</p>	<p>70-34-8</p>	
<p>Sarett reagent (1953) (chromium trioxide/pyridine)</p>		<p>CrO₃ / Pyr</p>
<p>Schaeffer's acids 2-hydroxy-1-naphthalenesulfonic acid</p> <p>6-hydroxy-2-naphthalenesulfonic acid</p> <p>6-amino-2-naphthalenesulfonic acid (amino Schaeffer's acid)</p>	<p>567-47-5</p> <p>93-01-6</p> <p>93-00-5</p>	  
<p>Schiff base, Schiff's reagent (1864) (R₁ = R₂ = R₃ = CH₃)</p>	<p>6407-34-7 19885-74-6</p>	

<p>Schöllkopf's acid (8-amino-1-naphthalenesulfonic acid)</p>	<p>82-75-7</p>	
<p>Schwartz's reagent (1974) (chlorobis(cyclopentadienyl) hydrido zirconium)</p>		
<p>Seyferth-Gilbert reagent (1971) (dimethyl diazomethylphosphonate)</p>	<p>25411-73-8 27491-70-9 28447-24-7</p>	
<p>Sheibley's reagent (1938) (6,8-dichlorobenzoyleneurea, or 6,8-dichloro-1H-quinazoline-2,4-dione, or 6,8-dichloro-2,4(1H, 3H)- quinazolinedione)</p>	<p>610-24-2</p>	
<p>Simmons-Smith reagent (1958) (zinc - diiodomethane)</p>	<p>7440-66-6 75-11-6</p>	<p>$\text{Zn} / \text{CH}_2\text{I}_2 = (\text{ICH}_2\text{ZnI})$</p>
<p>Snatzke's reagent (1961) (chromium(VI)oxide-dimethylformamide)</p>	<p>68-12-2 1333-82-0</p>	
<p>Staudinger's ketene (1905) (diphenylketene)</p>	<p>525-06-4</p>	

<p>Swern reagent (1978) (dimethylsulfoxide-oxalylchloride; dimethylsulfoxide-trifluoroacetic anhydride)</p>	<p>79-37-8 67-68-5</p> <p>407-25-0 67-68-5</p>	 <p>The image shows three chemical structures. On the top left is oxalyl chloride, a central carbon-carbon bond with two double-bonded oxygens and two single-bonded chlorines. On the top right is dimethyl sulfoxide, a central sulfur atom double-bonded to an oxygen and single-bonded to two methyl groups. On the bottom left is trifluoroacetic anhydride, two acetyl groups connected by an oxygen atom, with each acetyl group having a trifluoromethyl group (CF3) attached to the carbonyl carbon. On the bottom right is another dimethyl sulfoxide molecule.</p>
<p>Tebbe reagent (1978) (?-chlorobis(cyclopentadienyl) (dimethylaluminum)?-methylene titanium)</p>		 <p>The image shows the chemical structure of the Tebbe reagent, which is a zirconium-allyl complex. It features a central zirconium (Zr) atom coordinated to two cyclopentadienyl (Cp) rings and an allyl group. The allyl group is coordinated to an aluminum (Al) atom, which is also coordinated to a chlorine (Cl) atom and two methyl groups.</p>
<p>Thiele reagent (1900) (chromium(VI)oxide-acetic anhydride)</p>	<p>108-24-7 1333-82-0 7664-93-9</p>	 <p>The image shows two chemical structures. On the left is acetic anhydride, two acetyl groups connected by an oxygen atom. On the right is the text "CrO3 / H2SO4", representing chromium(VI) oxide and sulfuric acid.</p>
<p>Tobias' acid (2-amino-1-naphthalenesulfonic acid)</p>	<p>81-16-3</p>	 <p>The image shows the chemical structure of Tobias' acid, which is 2-amino-1-naphthalenesulfonic acid. It consists of a naphthalene ring system with a sulfonic acid group (SO3H) at position 1 and an amino group (NH2) at position 2.</p>
<p>Oxy-Tobias' acid (2-hydroxy-1-naphthalenesulfonic acid or Stebin's acid)</p>	<p>567-47-5</p>	 <p>The image shows the chemical structure of Oxy-Tobias' acid, which is 2-hydroxy-1-naphthalenesulfonic acid. It consists of a naphthalene ring system with a sulfonic acid group (SO3H) at position 1 and a hydroxyl group (OH) at position 2.</p>
<p>Tollens reagent (1882) (aqueous solution of silver nitrate, sodium hydroxide, ammonium hydroxide)</p>	<p>7761-88-8 1310-73-2 1336-21-6 7713-18-5</p>	<p>AgNO₃, NaOH, NH₄OH, H₂O</p>

<p>Wieland-Miescher ketone (1950) (8a,S)-8a-methyl-3,3,8,8a-tetrahydro-2H,7H-naphthalene-1,6-dione)</p>	<p>20000-72-1 20007-99-2 33878-99-8 100348-93-4</p>	
<p>Wilkinson's catalyst (1965) (chlorotris(triphenylphosphine) rhodium (I))</p>	<p>14694-95-2</p>	<p>(Ph₃P)₃RhCl</p>
<p>Williams glycinate (1986) ((5S,6R)-4-(tert-butyloxycarbonyl)-5,6-diphenyl-2,3,5,6-tetrahydro-4H-1,4-oxazin-2-one)</p>	<p>112741-49-8 112741-50-1</p>	
<p>Willstatter imines (1907) ([1,4]-benzoquinon-[4-(4-aminoanilino)-phenylimine]-phenylimine)</p>	<p>108673-54-7</p>	
<p>Wittig reagent (1954) (triphenylphosphonium methylides)</p>		
<p>Woodward's reagent (1961) (N-ethyl-5-phenylisoxazolium-3'-sulfonate)</p>	<p>4156-16-5</p>	
<p>Wurster's dye, Wurster's blue (1879) (1,4-bis(N,N'-dimethyl)benzene radical cation)</p>		

<p>Wurster's reagent (1879) (N,N,N',N'-tetramethyl-1,4-benzenediamine or 1,4-bis(dimethylamino)benzene)</p>	100-22-1	
<p>Zeise's dimer (1827)</p>		
<p>Zeise's salt (1827) (potassium trichloro(ethylene)platinate(II) monohydrate)</p>	12012-50-9	K [PtCl ₃ (C ₂ H ₄)]
<p>Ziegler-Natta catalyst, Ziegler-Natta polymerization (1955-1956) (titanium tetrachloride, triethyl aluminum)</p>	7550-45-0 97-93-8	TiCl ₄ , Et ₃ Al