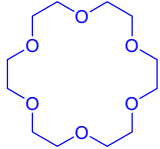

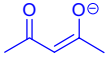

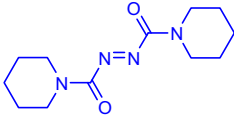
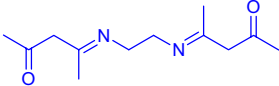
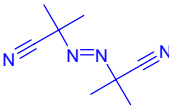
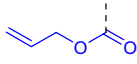

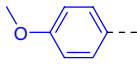
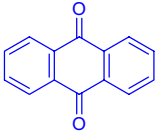
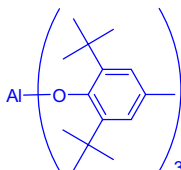
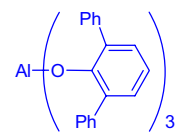
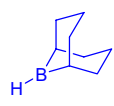
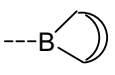
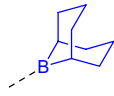
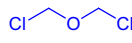
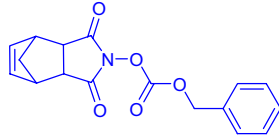
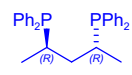
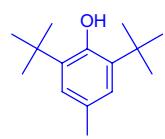
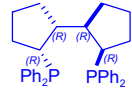
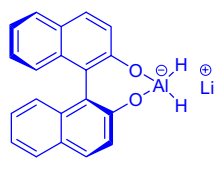
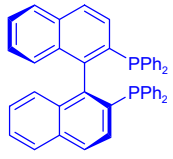
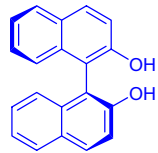
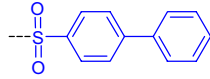
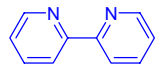
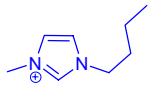
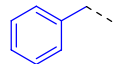
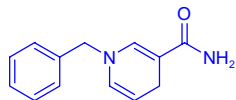
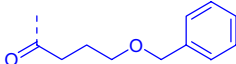
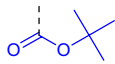
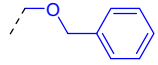
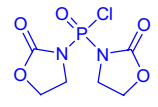
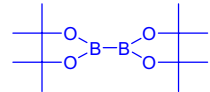
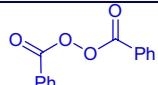
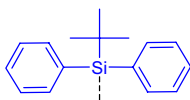

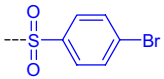
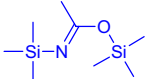
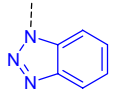
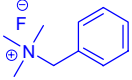
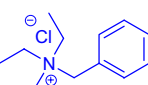
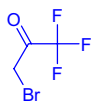
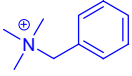

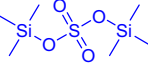
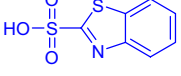
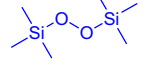
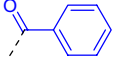




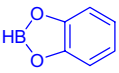
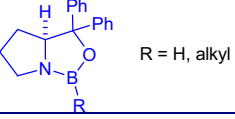
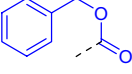
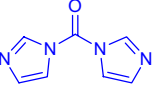
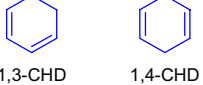
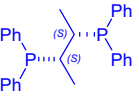

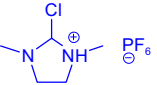
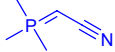



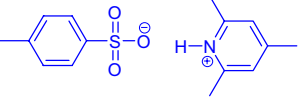
## V. LIST OF ABBREVIATIONS

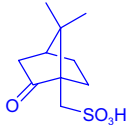
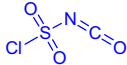
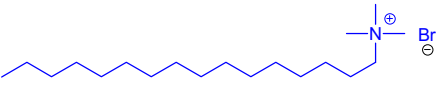
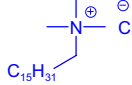
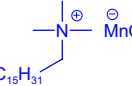

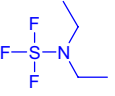
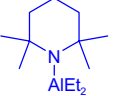
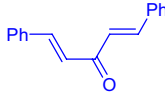
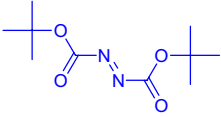

Abbreviation	Chemical Name	Chemical Structure
18-Cr-6	18-crown-6	
Ac	acetyl	
acac	acetylacetonyl	
AA	asymmetric aminohydroxylation	NA
AD	asymmetric dihydroxylation	NA
ad	adamantyl	
ADDP	1,1'-(azodicarbonyl)dipiperidine	
ADMET	acyclic diene metathesis polymerization	NA
acaen	<i>N,N'</i> -bis(1-methyl-3-oxobutylidene)ethylenediamine	
AIBN	2,2'-azo bisobutyronitrile	
Alloc	allyloxycarbonyl	
Am	amyl ( <i>n</i> -pentyl)	
An	<i>p</i> -anisyl	
ANRORC	anionic ring-opening ring-closing	NA
aq	aqueous	NA
AQN	anthraquinone	
Ar	aryl (substituted aromatic ring)	NA

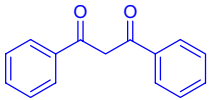
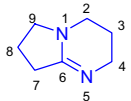
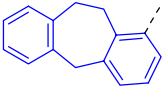
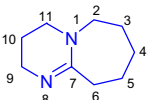
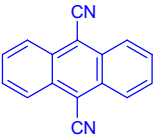
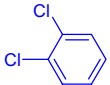
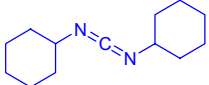

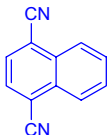
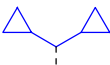
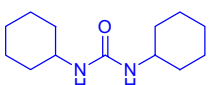
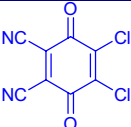
Abbreviation	Chemical Name	Chemical Structure
ATD	aluminum tris(2,6-di- <i>tert</i> -butyl-4-methylphenoxide)	
atm	1 atmosphere = 10 <sup>5</sup> Pa (pressure)	NA
ATPH	aluminum tris(2,6-diphenylphenoxide)	
BBN (9-BBN)	9-borabicyclo[3.3.1]nonane (9-BBN)	
	9-borabicyclo[3.3.1]nonyl	
BCME	<i>bis</i> (chloromethyl)ether	
BCN	<i>N</i> -benzyloxycarbonyloxy-5-norbornene-2,3-dicarboximide	
BDPP	(2 <i>R</i> , 4 <i>R</i> ) or (2 <i>S</i> , 4 <i>S</i> ) <i>bis</i> (diphenylphosphino)pentane	
BER	borohydride exchange resin	NA
BHT	2,6-di- <i>t</i> -butyl- <i>p</i> -cresol (butylated hydroxytoluene)	
BICP	2( <i>R</i> )-2'( <i>R</i> )- <i>bis</i> (diphenylphosphino)-1( <i>R</i> ),1'( <i>R</i> )-dicyclopentane	
BINAL-H	2,2'-dihydroxy-1,1'-binaphthyl lithium aluminum hydride	
BINAP	2,2'- <i>bis</i> (diphenylphosphino)-1,1'-binaphthyl	

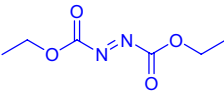

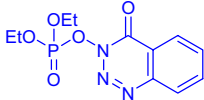
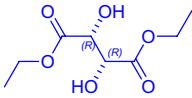

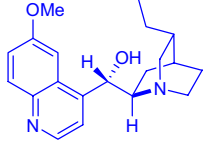
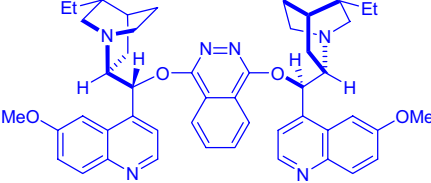
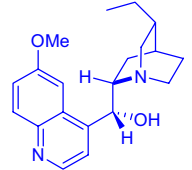
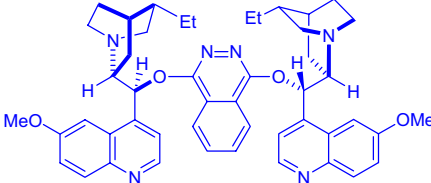
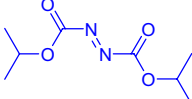
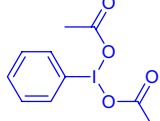
Abbreviation	Chemical Name	Chemical Structure
BINOL	1,1'-bi-2,2'-naphthol	
Bip	biphenyl-4-sulfonyl	
bipy	2,2'-bipyridyl	
BLA	Brønsted acid assisted chiral Lewis acid	NA
bmin	1-butyl-3-methylimidazolium cation	
BMS	Borane-dimethyl sulfide complex	$H_3B \cdot SMe_2$
Bn	benzyl	
BNAH	1-benzyl-1,4-dihydronicotinamide	
BOB	4-benzyloxybutyryl	
Boc	<i>t</i> -butoxycarbonyl	
BOM	benzyloxymethyl	
BOP-Cl	<i>bis</i> (2-oxo-3-oxazolidinyl)phosphinic chloride	
bp	boiling point	NA
BPD	<i>bis</i> (pinacolato)diboron	
BPO	benzoyl peroxide	
BPS (TBDPS)	<i>t</i> -butyldiphenylsilyl	

Abbreviation	Chemical Name	Chemical Structure
BQ	benzoquinone	
Bs	brosyl = (4-bromobenzenesulfonyl)	
BSA	<i>N,O</i> -bis(trimethylsilyl)acetamide	
BSA	Bovine serum albumin	NA
Bt	1- or 2-benzotriazolyl	
BTAF	benzyltrimethylammonium fluoride	
BTEA	benzyltriethylammonium	
BTEAC	benzyltriethylammonium chloride	
BTFP	3-bromo-1,1,1-trifluoro-propan-2-one	
BTMA	benzyltrimethylammonium	
BTMSA	<i>bis</i> (trimethylsilyl) acetylene	
BTS	<i>bis</i> (trimethylsilyl) sulfate	
BTSA	benzothiazole 2-sulfonic acid	
BTSP	<i>bis</i> (trimethylsilyl) peroxide	
Bz	benzoyl	
Bu ( <sup>n</sup> Bu)	<i>n</i> -butyl	
c	cyclo	NA

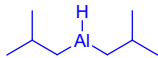
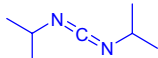
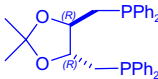
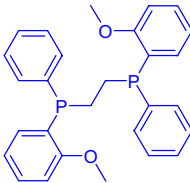
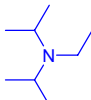
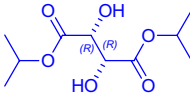
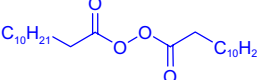

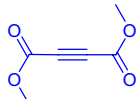
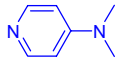
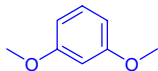

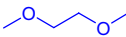
Abbreviation	Chemical Name	Chemical Structure
ca	circa (approximately)	NA
CA	chloroacetyl	
CAN	cerium(IV) ammonium nitrate (ceric ammonium nitrate)	$Ce(NH_4)_2(NO_3)_6$
cat.	catalytic	NA
CB	catecholborane	
CBS	Corey-Bakshi-Shibata reagent	 R = H, alkyl
Cbz (Z)	benzyloxycarbonyl	
cc. or conc.	concentrated	NA
CCE	constant current electrolysis	NA
CDI	carbonyl diimidazole	
CHD	1,3 or 1,4-cyclohexadiene	 1,3-CHD      1,4-CHD
CHIRAPHOS	2,3-bis(diphenylphosphino)butane	
Chx (Cy)	cyclohexyl	
CIP	2-chloro-1,3-dimethylimidazolidinium hexafluorophosphate	
CM (XMET)	cross metathesis	NA
CMMP	cyanomethylenetriethyl phosphorane	
COD	1,5-cyclooctadiene	
COT	1,3,5-cyclooctatriene	
Cp	cyclopentadienyl	
CPTS	collidinium- <i>p</i> -toluenesulfonate	



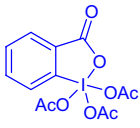
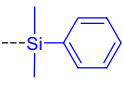

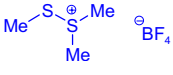


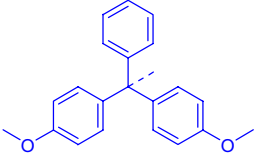

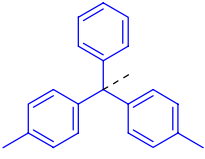
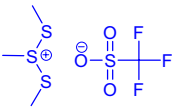
Abbreviation	Chemical Name	Chemical Structure
CRA	complex reducing agent	NA
Cr-PILC	chromium-pillared clay catalyst	NA
CSA	camphorsulfonic acid	
CSI	chlorosulfonyl isocyanate	
CTAB	cetyl trimethylammonium bromide	
CTACl	cetyl trimethylammonium chloride	
CTAP	cetyl trimethylammonium permanganate	
$\Delta$	heat	NA
d	days (length of reaction time)	NA
DABCO	1,4-diazabicyclo[2.2.2]octane	
DAST	diethylaminosulfur trifluoride	
DATMP	diethylaluminum 2,2,6,6-tetramethylpiperidide	
DBA (dba)	dibenzylideneacetone	
DBAD	di-tert-butylazodicarboxylate	
DBI	dibromoisocyanuric acid	

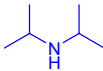
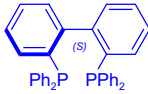
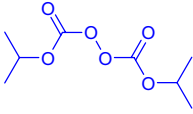
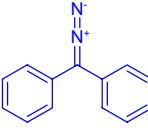
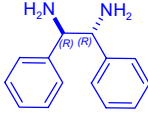
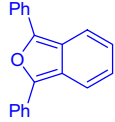



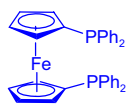


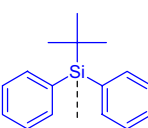
Abbreviation	Chemical Name	Chemical Structure
DBM	dibenzoylmethane	
DBN	1,5-diazabicyclo[4.3.0]non-5-ene	
DBS	dibenzosuberyl	
DBU	1,8-diazabicyclo[5.4.0]undec-7-ene	
DCA	9,10-dicyanoanthracene	
DCB	1,2-dichlorobenzene	
DCC	dicyclohexylcarbodiimide	
DCE	1,1-dichloroethane	
DCM	dichloromethane	CH <sub>2</sub> Cl <sub>2</sub>
DCN	1,4-dicyanonaphthalene	
Dcpm	dicyclopropylmethyl	
DCU	<i>N,N'</i> -dicyclohexylurea	
DDQ	2,3-dichloro-5,6-dicyano-1,4-benzoquinone	
de	diastereomeric excess	NA

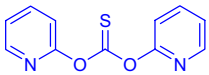
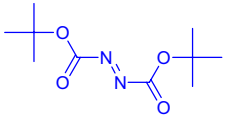
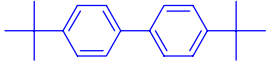
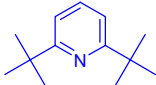
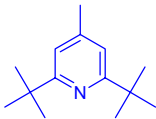
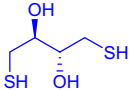
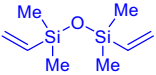
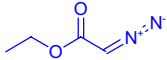
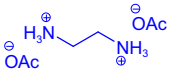
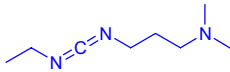
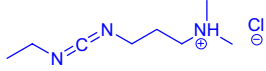
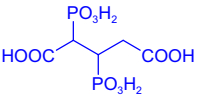
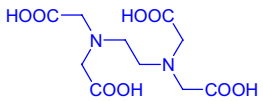
Abbreviation	Chemical Name	Chemical Structure
DEAD	diethyl azodicarboxylate	
DEIPS	diethylisopropylsilyl	
DEPBT	3-(diethoxyphosphoryloxy)-1,2,3-benzotriazin-4(3H)-one	
DET	diethyl tartrate	
DHP	3,4-dihydro-2H-pyran	
DHQ	dihydroquinine	
(DHQ) <sub>2</sub> PHAL	<i>bis</i> (dihydroquinino)phthalazine	
DHQD	dihydroquinidine	
(DHQD) <sub>2</sub> PHAL	<i>bis</i> (dihydroquinidino)phthalazine	
DIAD	diisopropyl azodicarboxylate	
DIB (BAIB or PIDA)	(diacetoxyiodo)benzene	

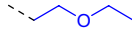



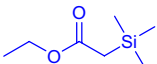
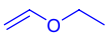
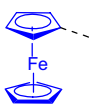
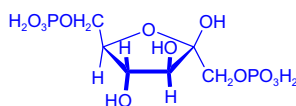
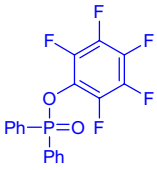
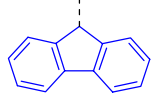
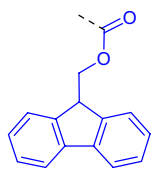
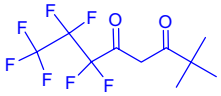
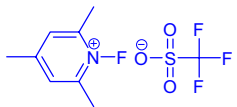



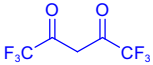
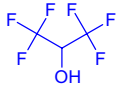
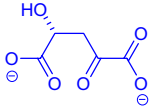
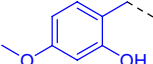
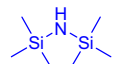
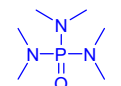
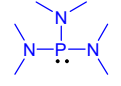
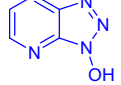
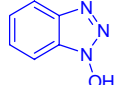
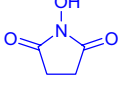
Abbreviation	Chemical Name	Chemical Structure
<b>DIBAL (DIBAH) DIBAL-H</b>	diisobutylaluminum hydride	
<b>DIC</b>	diisopropyl carbodiimide	
<b>diop</b>	4,5-bis-[(diphenylphosphanyl)methyl]-2,2-dimethyl-[1,3]dioxolane	
<b>DIPAMP</b>	1,2-bis(o-anisylphenylphosphino)ethane	
<b>DIPEA (Hünig's base)</b>	diisopropylethylamine	
<b>DIPT</b>	diisopropyl tartrate	
<b>DLP</b>	dilauroyl peroxide	
<b>DMA (DMAC)</b>	<i>N,N</i> -dimethylacetamide	
<b>DMAD</b>	dimethyl acetylene dicarboxylate	
<b>DMAP</b>	<i>N,N</i> -4-dimethylaminopyridine	
<b>DMB</b>	<i>m</i> -dimethoxybenzene	
<b>DMDO</b>	dimethyl dioxirane	
<b>DME</b>	1,2-dimethoxyethane	

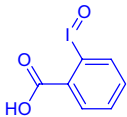
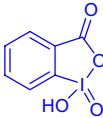
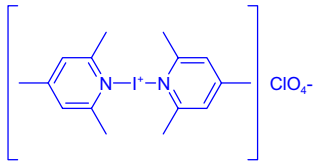



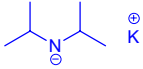
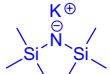
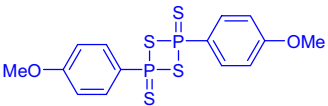
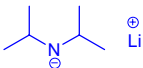
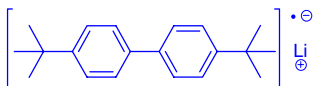
Abbreviation	Chemical Name	Chemical Structure
DMF	<i>N,N</i> -dimethylformamide	
DMI	1,3-dimethylimidazolidin-2-one	
DMP	Dess-Martin periodinane	
DMPS	dimethylphenylsilyl	
DMPU	1,3-dimethyl-3,4,5,6-tetrahydro-2(1 <i>H</i> )-pyrimidone ( <i>N,N</i> -dimethyl propylene urea)	
DMTf	dimethyl(methylthio)sulfonium tetrafluoroborate	
DMS	dimethylsulfide	
DMSO	dimethylsulfoxide	
DMT	4,4'-dimethoxytrityl	
DMTMM	4-(4,6-dimethoxy[1,3,5]triazin-2-yl)-4-methylmorpholinium chloride	
DMTr	4,4'-dimethyltrityl	
DMTST	(dimethylthio)methylsulfonium trifluoromethanesulfonate	
DNA	deoxyribonucleic acid	NA

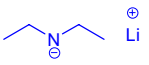
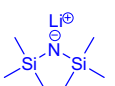
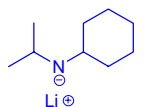
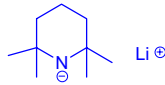
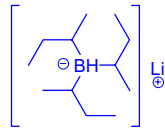
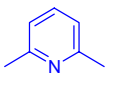
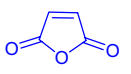
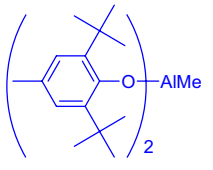
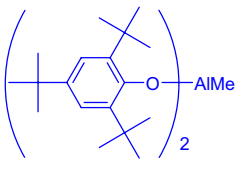
Abbreviation	Chemical Name	Chemical Structure
DPA (DIPA)	diisopropylamine	
DPBP	2,2'-bis(diphenylphosphino)biphenyl	
DPDC	diisopropyl peroxydicarbonate	
DPDM	diphenyl diazomethane	
DPEDA	1,2-diamino-1,2-diphenylethane	
DPIBF	diphenylisobenzofuran	
DPPA	diphenylphosphoryl azide (diphenylphosphorazidate)	
Dppb (ddpb)	1,4-bis(diphenylphosphino)butane	
dppe	1,2-bis(diphenylphosphino)ethane	
dppf	1,1'-bis(diphenylphosphino)ferrocene	
dppm	bis(diphenylphosphino)methane	
dppp	1,3-bis(diphenylphosphino)propane	
DPS (also TBDPS or BPS)	<i>t</i> -butyldiphenylsilyl	

Abbreviation	Chemical Name	Chemical Structure
DPTC	O,O'-di(2'-pyridyl)thiocarbonate	
dr	diastereomeric ratio	NA
DTBAD (DBAD)	di-tert-butyl azodicarboxylate	
DTBB	4,4'-di-tert-butylbiphenyl	
DTBP	2,6-di-tert-butylpyridine	
DTBMP	2,6-di-tert-butyl-4-methylpyridine	
DTE	1,4-dithioerythritol	
DVS	1,3-divinyl-1,1,3,3-tetramethyldisiloxane	
E <sup>+</sup>	electrophile (denotes any electrophile in general)	NA
E2	bimolecular elimination	NA
ED	effective dosage	NA
EDA	ethyl diazoacetate	
EDDA	ethylenediamine diacetate	
EDC (EDAC)	1-ethyl-3-(3-dimethylaminopropyl)carbodiimide (ethyl dimethylaminopropyl carbodiimide)	
EDCI	1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride	
EDCP	2,3-bis-phosphonopentanedioic acid (ethylene dicarboxylic 2,3-diphosphonic acid)	
EDG	electron-donating group	NA
EDTA	ethylenediamine tetraacetic acid	

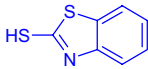
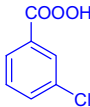
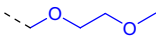
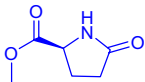
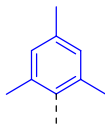
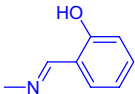
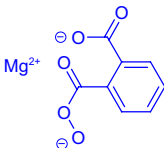


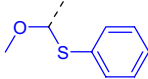
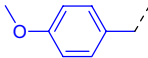
Abbreviation	Chemical Name	Chemical Structure
ee	enantiomeric excess	NA
EE	ethoxyethyl	
$E_i$	intramolecular <i>syn</i> elimination	NA
en	ethylenediamine	
EOM	ethoxymethyl	
ESR	electron spin resonance (spectroscopy)	NA
Et	ethyl	
ETSA	ethyl trimethylsilylacetate	
EVE	ethyl vinyl ether	
EWG	electron-withdrawing group	NA
Fc	ferrocenyl	
FDP	fructose-1,6-diphosphate	
FDPP	pentafluorophenyl diphenylphosphinate	
Fl	fluorenyl	
FMO	frontier molecular orbital (theory)	NA
Fmoc	9-fluorenylmethoxycarbonyl	
fod	6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedione	
fp	flash point	NA
FSM	Mesoporous silica	NA
FTT	1-fluoro-2,4,6-trimethylpyridinium triflate	

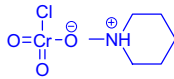

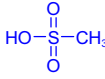
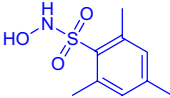
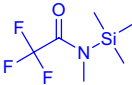
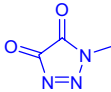



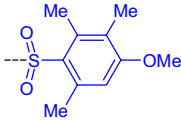

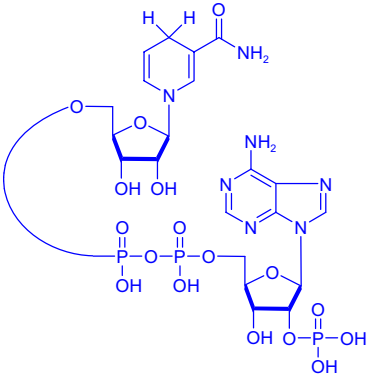
Abbreviation	Chemical Name	Chemical Structure
FVP	flash vacuum pyrolysis	NA
GEBC	gel entrapped base catalyst	NA
h	hours (length of reaction time)	NA
hv	irradiation with light	NA
HATU	O-(7-azabenzotriazol-1-yl)-N,N,N',N'-tetramethyluronium hexafluorophosphate	
Het	heterocycle	NA
hfacac	hexafluoroacetylacetone	
HFIP	1,1,1,3,3,3-hexafluoro-2-propanol (hexafluoroisopropanol)	
HGK	4-hydroxy-2-ketoglutarate	
Hgmm	millimeter of mercury (760 Hgmm = 1 atm = 760 Torr)	NA
HLE	horse liver esterase	NA
Hmb	2-hydroxy-4-methoxybenzyl	
HMDS	1,1,1,3,3,3-hexamethyldisilazane	
HMPA	hexamethylphosphoric acid triamide (hexamethylphosphoramide)	
HMPT	hexamethylphosphorous triamide	
HOAt	1-hydroxy-7-azabenzotriazole	
HOBt (HOBT)	1-hydroxybenzotriazole	
HOMO	highest occupied molecular orbital	NA
HOSu	N-hydroxysuccinimide	
HPLC	high-pressure liquid chromatography	NA
HWE	Horner-Wadsworth-Emmons	NA
i	iso	NA

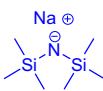
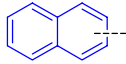


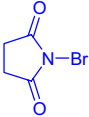
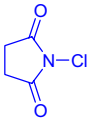
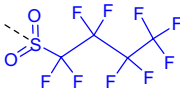
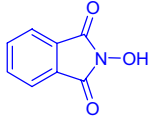
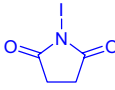



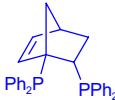
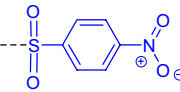
Abbreviation	Chemical Name	Chemical Structure
IBA	2-iodosobenzoic acid	
IBX	<i>o</i> -iodoxybenzoic acid	
IDCP	<i>bis</i> (2,4,6-collidine)iodonium perchlorate	
Imid (Im)	imidazole	
INOC	intramolecular nitrile oxide cycloaddition	NA
IPA	isopropyl alcohol	
ipc	isopinocampheyl	
IR	infrared spectroscopy	NA
K-10	a type of Montmorillonite clay	NA
KDA	potassium diisopropylamide	
KHMDS	potassium <i>bis</i> (trimethylsilyl)amide	
KSF	a type of Montmorillonite clay	NA
L	ligand	NA
L.R.	Lawesson's reagent (2,4- <i>bis</i> -(4-methoxyphenyl)-[1,3,2,4]dithiadiphosphetane 2,4-dithion)	
LA	Lewis acid	NA
LAB	lithium amidotrihydroborate	LiH <sub>2</sub> NBH <sub>3</sub>
LAH	lithium aluminum hydride	LiAlH <sub>4</sub>
LD <sub>50</sub>	dose that is lethal to 50% of the test subjects (cells, animals, humans etc.)	NA
LDA	lithium diisopropylamide	
LDBB	lithium 4,4'- <i>t</i> -butylbiphenylide	

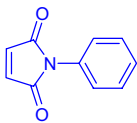
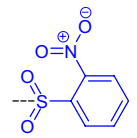


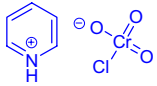
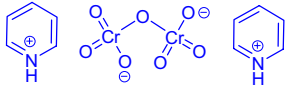
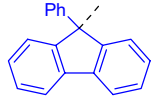
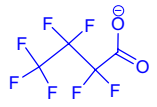

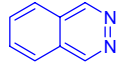
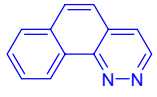
Abbreviation	Chemical Name	Chemical Structure
LDE	lithium diethylamide	
LDPE	lithium perchlorate-diethyl etherate	$\text{LiClO}_4 \cdot \text{Et}_2\text{O}$
LHMDS (LiHMDS)	lithium <i>bis</i> (trimethylsilyl)amide	
LICA	lithium isopropylcyclohexylamide	
LICKOR (super base) liq.	butyllithium-potassium <i>tert</i> -butoxide	$\text{BuLi} \cdot \text{KOt-Bu}$
LiTMP (LTMP)	lithium 2,2,6,6-tetramethylpiperidide	
LPT	lithium pyrrolidetrihydroborate (lithium pyrrolidide-borane)	$\text{Li}(\text{CH}_2)_4\text{NBH}_3$
L-selectride	lithium tri- <i>sec</i> -butylborohydride	
LTA	lead tetraacetate	$\text{Pb}(\text{OAc})_4$
LUMO	lowest unoccupied molecular orbital	NA
lut	2,6-lutidine	
<i>m</i>	meta	NA
MA	maleic anhydride	
MAD	methyl aluminum <i>bis</i> (2,6-di- <i>t</i> -butyl-4-methylphenoxide)	
MAT	methyl aluminum <i>bis</i> (2,4,6-tri- <i>t</i> -butylphenoxide)	

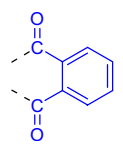
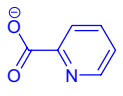
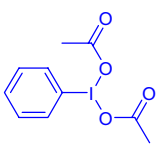
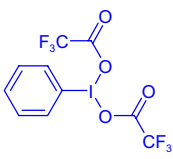

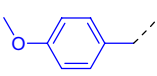
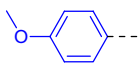
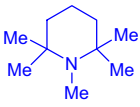
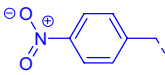
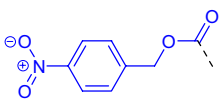
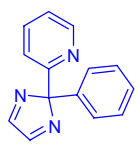
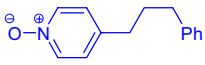


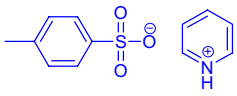

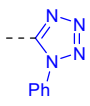
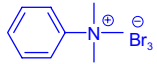
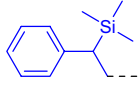
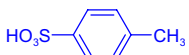

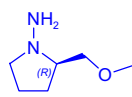
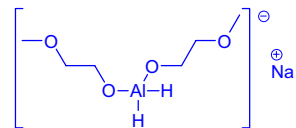
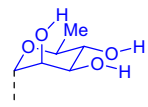
Abbreviation	Chemical Name	Chemical Structure
MBT	2-mercaptobenzothiazole	
<i>m</i> -CPBA	<i>meta</i> chloroperbenzoic acid	
Me	methyl	--CH <sub>3</sub>
MEM	(2-methoxyethoxy)methyl	
MEPY	methyl 2-pyrrolidone-5(S)-carboxylate	
Mes	mesityl	
mesal	<i>N</i> -methylnsalicylaldimine	
MIC	methyl isocyanate	O=C=N <sup>-</sup>
MMPP (MMPT)	magnesium monoperoxyphthalate	
MOM	methoxymethyl	
MoOPH	oxodiperoxomolybdenum(pyridine)- (hexamethylphosphoric triamide)	NA
mp	melting point	NA
MPa	megapascal = 10 <sup>6</sup> Pa = 10 atm (pressure)	
MPD (NMP)	<i>N</i> -methyl-2-pyrrolidinone	
MPM	methoxy(phenylthio)methyl	
MPM (PMB)	<i>p</i> -methoxybenzyl	

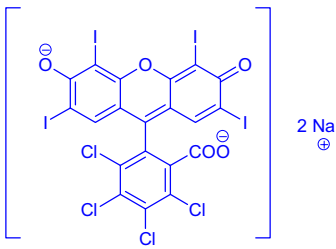
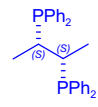
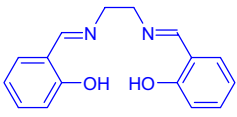
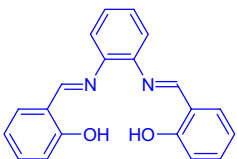
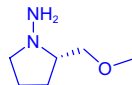
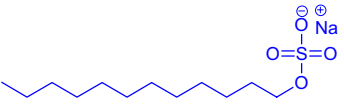
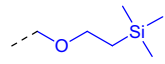
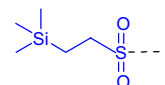

Abbreviation	Chemical Name	Chemical Structure
MPPC	<i>N</i> -methyl piperidinium chlorochromate	
Ms	mesyl (methanesulfonyl)	
MS	mass spectrometry	NA
MS	molecular sieves	NA
MSA	methanesulfonic acid	
MSH	<i>o</i> -mesitylenesulfonyl hydroxylamine	
MSTFA	<i>N</i> -methyl- <i>N</i> -(trimethylsilyl) trifluoroacetamide	
MTAD	<i>N</i> -methyltriazolinedione	
MTEE (MTBE)	methyl <i>t</i> -butyl ether	
MTM	methylthiomethyl	
MTO	methyltrioxorhenium	
Mtr	(4-methoxy-2,3,6-trimethylphenyl)sulfonyl	
MVK	methyl vinyl ketone	
mw	microwave	NA
<i>n</i>	normal (e.g. unbranched alkyl chain)	NA
NADPH	nicotinamide adenine dinucleotide phosphate	

Abbreviation	Chemical Name	Chemical Structure
NaHMDS	sodium <i>bis</i> (trimethylsilyl)amide	
Naph (Np)	naphthyl	
NBA	<i>N</i> -bromoacetamide	
NBD (nbd)	norbornadiene	
NBS	<i>N</i> -bromosuccinimide	
NCS	<i>N</i> -chlorosuccinimide	
N <sub>f</sub>	nonafluorobutanesulfonyl	
NHPI	<i>N</i> -hydroxyphthalimide	
NIS	<i>N</i> -iodosuccinimide	
NMM	<i>N</i> -methylmorpholine	
NMO	<i>N</i> -methylmorpholine oxide	
NMP	<i>N</i> -methyl-2-pyrrolidinone	
NMR	nuclear magnetic resonance	NA
NORPHOS	<i>bis</i> (diphenylphosphino)bicyclo[2.2.1]-hept-5-ene	
Nos	4-nitrobenzenesulfonyl	

Abbreviation	Chemical Name	Chemical Structure
NPM	<i>N</i> -phenylmaleimide	
NR	no reaction	NA
Ns	2-nitrobenzenesulfonyl	
NSAID	non steroidal anti-inflammatory drug	NA
Nuc	nucleophile (general)	NA
<i>o</i>	ortho	NA
Oxone	potassium peroxydisulfate	KHSO <sub>5</sub>
<i>p</i>	para	NA
PAP	2,8,9-trialkyl-2,5,8,9-tetraaza-1-phospha-bicyclo[3.3.3]undecane	
PBP	pyridinium bromide perbromide	
PCC	pyridinium chlorochromate	
PDC	pyridinium dichromate	
PEG	polyethylene glycol	NA
Pf	9-phenylfluorenyl	
pfb	perfluorobutyrate	
Ph	phenyl	
PHAL	phthalazine	
phen	9,10-phenanthroline	

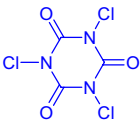
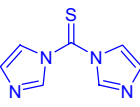
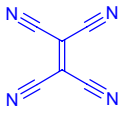
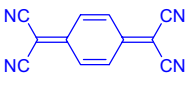
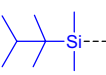

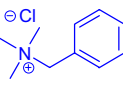
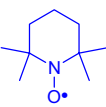
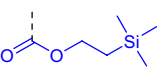
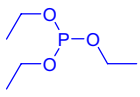

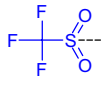
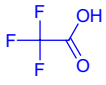

Abbreviation	Chemical Name	Chemical Structure
Phth	phthaloyl	
pic	2-pyridinecarboxylate	
PIDA (BAIB or DIB)	phenyliodonium diacetate	
PIFA	phenyliodonium bis(trifluoroacetate)	
Piv	pivaloyl	
PLE	pig liver esterase	NA
PMB (MPM)	<i>p</i> -methoxybenzyl	
PMP	4-methoxyphenyl	
PMP	1,2,2,6,6-pentamethylpiperidine	
PNB	<i>p</i> -nitrobenzyl	
PNZ	<i>p</i> -nitrobenzyloxycarbonyl	
PPA	polyphosphoric acid	NA
PPI	2-phenyl-2-(2-pyridyl)-2 <i>H</i> -imidazole	
PPL	pig pancreatic lipase	NA
PPO	4-(3-phenylpropyl)pyridine- <i>N</i> -oxide	
PPSE	polyphosphoric acid trimethylsilyl ester	NA

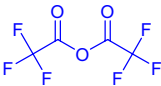
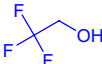
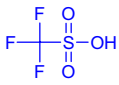
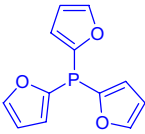




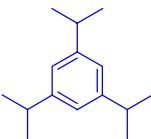
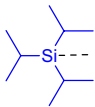

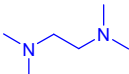
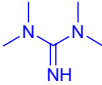
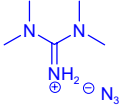
Abbreviation	Chemical Name	Chemical Structure
PPTS	pyridinium <i>p</i> -toluenesulfonate	
Pr	propyl	
psi	pounds per square inch	NA
PT	1-phenyl-1 <i>H</i> -tetrazol-yl	
P.T.	proton transfer	NA
PTAB	phenyltrimethylammonium perbromide	
PTC	Phase transfer catalyst	NA
PTMSE	(2-phenyl-2-trimethylsilyl)ethyl	
PTSA (or TsOH)	<i>p</i> -toluenesulfonic acid	
PVP	poly(4-vinylpyridine)	NA
Py (pyr)	pyridine	
r.t.	room temperature	NA
rac	racemic	NA
RAMP	( <i>R</i> )-1-amino-2-(methoxymethyl)pyrrolidine	
RaNi	Raney nickel	NA
RB	Rose Bengal	See Rose bengal
RCAM	ring-closing alkyne metathesis	NA
RCM	ring-closing metathesis	NA
Rds (or RDS)	rate-determining step	NA
Red-Al	sodium <i>bis</i> (2-methoxyethoxy) aluminum hydride	
Rham	rhamnosyl	
R <sub>f</sub>	perfluoroalkyl group	C <sub>n</sub> F <sub>2n+1</sub>
R <sub>f</sub>	retention factor in chromatography	NA
ROM	ring-opening metathesis	NA
ROMP	ring-opening metathesis polymerization	NA

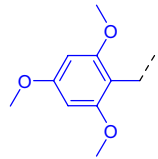
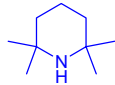

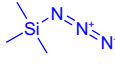
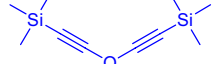

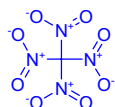
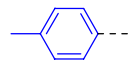
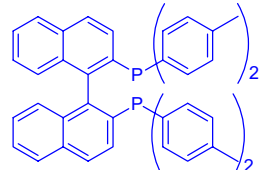
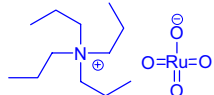
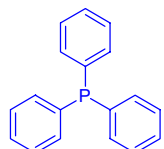
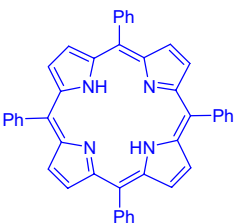
Abbreviation	Chemical Name	Chemical Structure
Rose Bengal (RB)	2,4,5,7-tetraiodo-3',4',5',6'-tetrachlorofluorescein disodium salt (a photosensitizer)	
s	seconds (length of reaction time)	NA
S,S,-chiraphos	(S,S)-2,3-bis(diphenylphosphino)butane	
Salen	<i>N,N'</i> -ethylenebis(salicylideneiminato) bis(salicylidene)ethylenediamine	
salophen	<i>o</i> -phenylenebis(salicylideneiminato)	
SAMP	(S)-1-amino-2-(methoxymethyl)pyrrolidine	
SC CO <sub>2</sub>	supercritical carbon-dioxide	NA
SDS	sodium dodecylsulfate	
sec	secondary	NA
SEM	2-(trimethylsilyl)ethoxymethyl	
SES	2-[(trimethylsilyl)ethyl]sulfonyl	
SET	single electron transfer	NA
Sia	1,2-dimethylpropyl (secondary isoamyl)	
SPB	sodium perborate	$\text{Na}^+ \text{BO}_3^-$

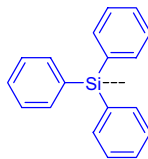
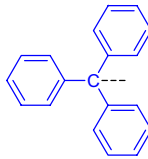
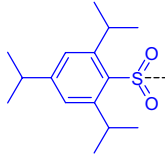
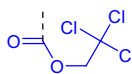
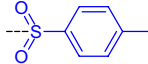

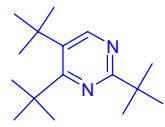

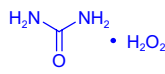
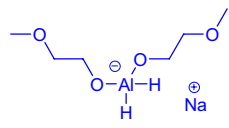
Abbreviation	Chemical Name	Chemical Structure
TADDOL	2,2-dimethyl- $\alpha,\alpha,\alpha^1, \alpha^1$ -tetraaryl-1,3-dioxolane-4,5-dimethanol	
TASF	tris(diethylamino)sulfonium difluorotrimethylsilicate	
TBAB	tetra- <i>n</i> -butylammonium bromide	
TBAF	tetra- <i>n</i> -butylammonium fluoride	$\text{Bu}_4\text{N}^+ \text{F}^-$
TBAI	tetra- <i>n</i> -butylammonium iodide	$\text{Bu}_4\text{N}^+ \text{I}^-$
TBCO	tetrabromocyclohexadienone	
TBDMS (TBS)	<i>t</i> -butyldimethylsilyl	
TBDPS (BPS)	<i>t</i> -butyldiphenylsilyl	
TBH	<i>tert</i> -butyl hypochlorite	
TBHP	<i>tert</i> -butyl hydroperoxide	
TBP	tributylphosphine	
TBT	1- <i>tert</i> -butyl-1 <i>H</i> -tetrazol-5-yl	
TBTH	tributyltin hydride	
TBTSP	<i>t</i> -butyl trimethylsilyl peroxide	



Abbreviation	Chemical Name	Chemical Structure
TCCA	trichloroisocyanuric acid	
TCDI	thiocarbonyl diimidazole	
TCNE	tetracyanoethylene	
TCNQ	7,7,8,8-tetracyano-para-quinodimethane	
TDS	dimethyl thexylsilyl	
TEA	triethylamine	
TEBACl	benzyl trimethylammonium chloride	
TEMPO	2,2,6,6-tetramethyl-1-piperidinyloxy free radical	
Teoc	2-(trimethylsilyl)ethoxycarbonyl	
TEP	triethylphosphite	
TES	triethylsilyl	
Tf	trifluoromethanesulfonyl	
TFA	trifluoroacetic acid	
Tfa	trifluoroacetamide	

Abbreviation	Chemical Name	Chemical Structure
TFAA	trifluoroacetic anhydride	
TFE	2,2,2-trifluoroethanol	
TFMSA	trifluoromethanesulfonic acid (triflic acid)	
TFP	tris(2-furyl)phosphine	
Th	2-thienyl	
thexyl	1,1,2-trimethylpropyl	
THF	tetrahydrofuran	
THP	2-tetrahydropyranyl	
TIPB	1,3,5-triisopropylbenzene	
TIPS	triisopropylsilyl	
TMAO (TMANO)	trimethylamine <i>N</i> -oxide	
TMEDA	<i>N,N,N',N'</i> -tetramethylethylenediamine	
TMG	1,1,3,3-tetramethylguanidine	
TMGA	tetramethylguanidinium azide	

Abbreviation	Chemical Name	Chemical Structure
Tmob	2,4,6-trimethoxybenzyl	
TMP	2,2,6,6-tetramethylpiperidine	
TMS	trimethylsilyl	
TMSA	trimethylsilyl azide	
TMSEE	(trimethylsilyl)ethynyl ether	
TMU	tetramethylurea	
TNM	tetranitromethane	
Tol	<i>p</i> -tolyl	
tolbinap	2,2'-bis(di- <i>p</i> -tolylphosphino)-1,1'-binaphthyl	
TPAP	tetra- <i>n</i> -propylammonium perruthenate	
TPP	triphenylphosphine	
TPP	5,10,15,20-tetraphenylporphyrin	

Abbreviation	Chemical Name	Chemical Structure
TPS	triphenylsilyl	
Tr	trityl (triphenylmethyl)	
Trisyl	2,4,6-triisopropylbenzenesulfonyl	
Troc	2,2,2-trichloroethoxycarbonyl	
TS	transition state (or transition structure)	NA
Ts (Tos)	<i>p</i> -toluenesulfonyl	
TSE (TMSE)	2-(trimethylsilyl)ethyl	
TTBP	2,4,5-tri- <i>tert</i> -butylpyrimidine	
TTMSS	tris(trimethylsilyl)silane	
TTN	thallium(III)-trinitrate	Tl(NO <sub>3</sub> ) <sub>3</sub>
UHP	urea-hydrogen peroxide complex	
Vitride (Red-Al)	sodium <i>bis</i> (2-methoxyethoxy)aluminum hydride	
wk	weeks (length of reaction time)	NA
Z (Cbz)	benzyloxycarbonyl	