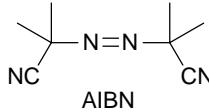
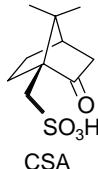
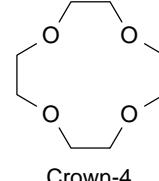
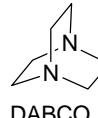
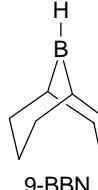
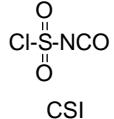
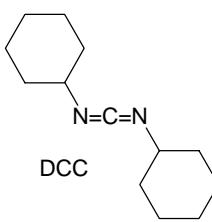
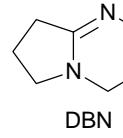
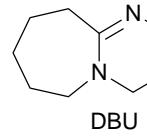
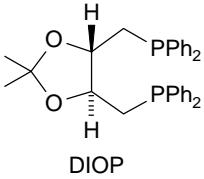
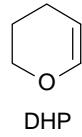
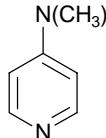
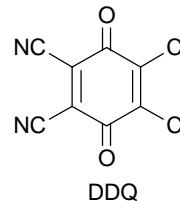


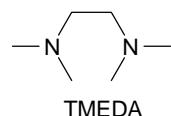
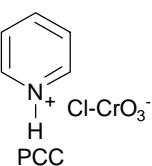
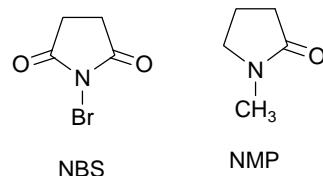
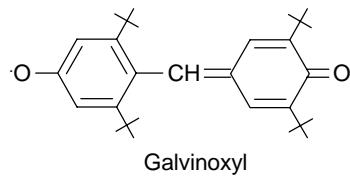
## ORGANIC CHEMISTRY ACRONYMS

Not included: peptide protecting groups, inorganic and organometallic ligands, biochemical abbreviations.

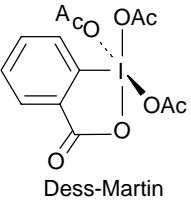
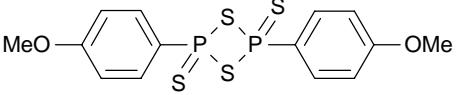
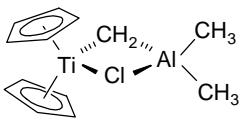
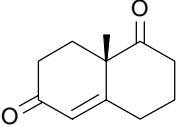
|            |  |   |
|------------|--|---|
| Ac         | Acetyl ( $\text{CH}_3\text{C=O}$ )                                     |   |
| acac       | Acetylacetone (ligand)   |   |
| AIBN       | Azobis(isobutyronitrile)--radical initiator                            |    |
| 9-BBN-H    | 9-Borabicyclo[3.3.1]nonane   |   |
| bda        | Benzylidene Acetone  |   |
| BHT        | Butylated hydroxy toluene (2,6-di-t-butyl-4-methylphenol)              |   |
| BINALH     | Lithium 2,2'-dihydroxy-1,1'-binaphthylethoxyaluminum hydride           |    |
| BINAP      | 2,2'-Bis(diphenylphosphino)-1,1'-binaphthyl                            |   |
| bipy (bpy) | 2,2'-bipyridyl   |   |
| BMS        | Borane Dimethyl Sulfide  |    |
| Boc        | t-Butyloxycarbonyl ( $\text{COtC}_4\text{H}_9$ )                       |   |
| BOM        | Benzoxymethyl (PhCH <sub>2</sub> OCH <sub>2</sub> -alcohol protection) |   |
| Bs         | Brosylate ( $\text{BrC}_6\text{H}_4\text{SO}_2^-$ )                    |   |
| BSA        | O,N-Bistrimethylsilyl Acetamide  |    |
| Bz         | Benzoyl (caution: sometimes used for benzyl)                           |   |
| Bn         | Benzyl   |   |
| BTAF       | Benzyltrimethylammonium Fluoride                                       |    |
| CAN        | Ceric Ammonium Nitrate   |   |
| Cbz        | Carbobenzyloxy ( $\text{BnOC=O}$ )                                     |   |
| cod        | Cyclooctadiene   |   |
| COT        | Cyclooctatetraene  |   |
| Cp         | Cyclopentadienyl   |   |
| Cp*        | Pentamethylcyclopentadienyl  |   |
| CSA        | Camphorsulfonic Acid   |   |
| CSI        | Chlorosulfonyl Isocyanate  |   |
| CTAB       | Cetyltrimethylammonium bromide   |   |
| DA         | Diels-Alder Reaction   |   |
| DABCO      | 1,4-Diazabicyclo[2.2.2]octane  |  |
| DAST       | (Diethylamino)sulfur trifluoride $\text{Et}_2\text{NSF}_3$             |  |
| DBN        | 1,5-Diazabicyclo[4.3.0]non-5-ene                                       |   |
| DBU        | 1,8-Diazabicyclo[5.4.0]undec-7-ene                                     |   |
| DCA        | 1,9-Dicyanoanthracene  |   |
| DCC        | Dicyclohexyl Carbodiimide  |  |
| DDQ        | 2,3-Dichloro-5,6-dicyano-1,4-benzoquinone                              |   |
| DDT        | 1,1-Bis(p-chlorophenyl)-2,2,2-trichloroethane                          |   |
| de         | Diastereomeric excess  |   |
| DEADCAT    | Diethyl Azodicarboxylate   |  |
| DET        | Diethyl Tartrate   |   |
| DIBAL      | (DIBAH) Diisobutylaluminum Hydride                                     |  |
| Diglyme    | Diethylene glycol dimethyl ether                                       |   |
| Dimsyl     | Methylsulfinylmethide ( $\text{MeS(O)CH}_2^-$ )                        |   |
| DIOP       |  |   |
| diphos     | (dppe) 1,2-Bis(diphenylphosphino)ethane                                |  |
| DHP        | Dihydropyran (O-protection)  |   |
| DMAc       | N,N-Dimethylacetamide (solvent)  |   |
| DMAD       | Dimethyl Acetylenedicarboxylate  |   |
| DMAP       | 4-Dimethylaminopyridine (base catalyst)                                |   |
| DME        | 1,2-Dimethoxyethane (glyme, solvent)                                   |   |
| DMF        | Dimethylformamide (solvent)  |   |
| DMPU       | N,N'-dimethyl-N,N'-propylene urea                                      |   |
| DMSO       | Dimethyl Sulfoxide (solvent)   |   |

|                     |   |
|---------------------|---|
| DMSO <sub>2</sub>   | Dimethyl Sulfone  |
| DMTSF               | Dimethyl(methylthio)sulfonium tetrafluoroborate   |
| DNP                 | Dinitrophenylhydrazine  |
| DNPBA               | 2,4-Dinitroperbenzoic acid  |
| dppb                | 1,4-Bis(diphenylphosphino)butane  |
| dppe                | (diphos) 1,2-Bis(diphenylphosphino)ethane   |
| dppp                | 1,3-Bis(diphenylphosphino)propane   |
| E                   | Entgegen (opposite, trans)  |
| E                   | Methoxycarbonyl CO <sub>2</sub> CH <sub>3</sub>   |
| EDTA                | Ethylenediaminetetraacetic acid   |
| ee                  | Enantiomeric Excess   |
| EE                  | 1-Ethoxyethoxy (alcohol protection)   |
| en                  | Ethylene Diamine  |
| FC                  | Friedel-Crafts Reaction   |
| Fmoc                | 9-Fluorenylmethoxycarbonyl  |
| Fp                  | Cyclopentadienyldicarbonylferrate   |
| Glyme               | 1,2-Dimethoxyethane   |
| Galvinoxyl          | Radical trap  |
| HBT                 | Hydroxybenzotriazole  |
| HMDS                | Hexamethyldisilazide  |
| HMPA,HMPT           | Hexamethylphosphorictriamide (solvent, cosolvent)   |
| HSAB                | Hard-Acid-Soft-Base   |
| HVZ                 | Hell-Vollhardt-Zelinsky Reaction ( $\alpha$ -bromination of carboxylic acids)   |
| Ipc <sub>2</sub> BH | Bisisopinocampheylborane  |
| KDA                 | Potassium Diisopropylamide  |
| LAH                 | Lithium Aluminum Hydride (LiAlH <sub>4</sub> )  |
| LDA                 | Lithium Diisopropylamide  |
| LFER                | Linear Free Energy Relationship   |
| LHMDS               | Lithium Hexamethyldisilazide (LiN(SiMe <sub>3</sub> ) <sub>2</sub> )  |
| LICA                | Lithium N-isopropylcyclohexylamide  |
| LICKOR              | Lithium-potassium alkoxide reagents   |
| LiTMP               | Lithium Tetramethylpiperide   |
| LTA                 | Lead Tetraacetate (Pb(OAc) <sub>4</sub> )   |
| MA                  | Maleic Anhydride  |
| MCPBA               | meta-Chloroperoxybenzoic Acid   |
| MEM                 | $\beta$ -Methoxyethoxymethyl (CH <sub>3</sub> OCH <sub>2</sub> CH <sub>2</sub> O-CH <sub>2</sub> -, alcohol protection) |
| Mes                 | Mesityl (2,4,6-trimethylphenyl)   |
| MOM                 | Methoxymethyl (CH <sub>3</sub> OCH <sub>2</sub> -, alcohol protection).   |
| MoOPH               | MoO <sub>5</sub> ·Py·HMPA (oxidizing agent)   |
| Ms                  | Methanesulfonyl (Mesyl, CH <sub>3</sub> SO <sub>2</sub> )   |
| MTPA                | $\alpha$ -Methoxy- $\alpha$ -trifluoromethylphenylacetic acid (Mosher)  |
| MTM                 | Methylthiomethyl CH <sub>3</sub> -S-CH <sub>2</sub> - (alcohol protection)  |
| MVK                 | Methyl Vinyl Ketone (3-Butene-2-one)  |
| NBA                 | N-Bromoacetamide  |
| NBS, NCS            | N-Bromo, N-Chlorosuccinimide  |
| Nf                  | Nonaflate (C <sub>4</sub> F <sub>9</sub> SO <sub>2</sub> )  |
| NIS                 | N-Iodosuccinimide   |
| NMO                 | N-Methylmorpholine-N-oxide  |
| NMP                 | N-Methylpyrrolidone; solvent  |
| Ns                  | p-Nitrobenzenesulfonyl  |
| PBB, PCB            | Polybrominated, Polychlorinated Biphenyls   |
| PCC                 | Pyridinium chlorochromate   |
| PDC                 | Pyridinium dichromate   |
| PG                  | Prostaglandins  |
| phen                | 1,10-Phenanthroline   |
| PhthN               | Phthalimido   |

|                     |  |  |
|---------------------|--|--|
| PMDTA               | N,N,N',N"-pentamethyldiethylenetriamine  |  |
| PMB                 | p-Methoxybenzyl  |  |
| PNB                 | para-Nitrobenzoate   |  |
| PPA                 | Polyphosphoric Acid  |  |
| PPTS                | Pyridinium <i>p</i> -Toluenesulfonate  |  |
| PTAD                | N-Phenyl-1,2,4-triazolinedione   |  |
| PTC                 | Phase Transfer Catalyst  |  |
| Pv                  | Pivaloyl   |  |
| Py                  | Pyridine; Solvent, base, catalyst  |  |
| RT                  | Room Temperature   |  |
| SEM                 | 2-Trimethylsilylethoxymethoxy (alcohol protection)   |  |
| SES                 | Trimethylsilylethylsulfonyl (amine protection $\text{SO}_2\text{CH}_2\text{CH}_2\text{SiMe}_3$ ) |  |
| Sia <sub>2</sub> BH | Disiamylborane ( $\text{Me}_2\text{CHMeCH}_2\text{BH}$ )   |  |
| TASF                | Tris(dimethylamino)sulfonium difluorotrimethylsilicate   |  |
| TBAF                | Tetra- <i>n</i> -butylammonium fluoride  |  |
| TBDMS               | t-Butyldimethylsilyl (alcohol protection)  |  |
| TBDPS               | t-Butyldiphenylsilyl (alcohol protection)  |  |
| TBHP                | t-Butylhydroperoxide   |  |
| TBS                 | t-Butyldimethylsilyl (also TBDMS)  |  |
| TCE                 | 2,2,2-Trichloroethyl (alcohol, acid protection)  |  |
| TCNE                | Tetracyanoethylene   |  |
| TCNQ                | 7,7,8,8-Tetracyanoquinodimethane   |  |
| TEA                 | Triethylamine  |  |
| TES                 | Triethylsilyl  |  |
| Tf                  | Triflate ( $\text{CF}_3\text{SO}_2^-$ )  |  |
| TFA                 | Trifluoroacetic(yl)  |  |
| Theanyl             | $\text{Me}_2\text{CHMe}_2\text{C}-$  |  |
| THF                 | Tetrahydrofuran; solvent   |  |
| THP                 | Tetrahydropyran (alcohol protecting group)   |  |
| TIPS                | Triisopropylsilyl (alcohol protection)   |  |
| TMEDA               | N,N,N',N"-Tetramethylethylenediamine   |  |
| TMS                 | Tetramethylsilane, also Trimethylsilyl   |  |
| TMSI                | Trimethylsilyl Iodide  |  |
| Tol                 | p-Tolyl  |  |
| TOSMIC              | p-Toluenesulfonylmethylisocyanide  |  |
| TPAP                | Tetra- <i>n</i> -propylammonium Perruthenate   |  |
| TPP                 | meso-Tetraphenylporphyrin  |  |
| TRIS                | Tris(hydroxymethyl)aminomethane (buffer)   |  |
| Trityl              | Triphenylmethyl  |  |
| Troc                | Trichloroethyloxycarbonyl ( $\text{CCl}_3\text{CH}_2\text{OC(O)-}$ )                             |  |
| Ts                  | Tosyl (p-CH <sub>3</sub> C <sub>6</sub> H <sub>4</sub> SO <sub>2</sub> )                         |  |
| TTN                 | Thallium Trinitrate  |  |
| WK                  | Wolff-Kishner Reduction  |  |
| Z                   | Zusammen (together, cis)   |  |



## Name Reagents and Trade Names

|                            |  |  |
|----------------------------|--|--|
| Brederick Reagent          | Dimethoxydimethylaminomethane (amide acetal)   | <br><b>Dess-Martin</b>        |
| Burgess Reagent            | $\text{Me}_2\text{CN}^+\text{SO}_2\text{N}^+(\text{Et})_3$ (alcohol dehydration)   |  |
| Caro's Acid                | Sulfomonoperacid $\text{HOSO}_2\text{OOH}$   |  |
| Colman's Reagent           | Disodium Iron Tetracarbonyl  |  |
| Corey-Kim Reagent          | Dimethyl sulfide-chlorine  |  |
| Danishefsky's Diene        | 1-Methoxy-3-trimethylsiloxybuta-1,3-diene  |  |
| Dess-Martin Periodinane    |  |  |
| Diazald                    | N-Methyl-N-nitroso-p-toluenesulfonamide (diazomethane)   |  |
| Eschenmoser's Salt         | $\text{Me}_2\text{N}^+=\text{CH}_2 \text{I}^-$ (Mannich reagent)   |  |
| Freons (Fluorohalocarbons) | 11 ( $\text{CFCl}_3$ ), 12 ( $\text{CF}_2\text{Cl}_2$ ), 13 ( $\text{CF}_3\text{Cl}$ ), 13B1 ( $\text{CF}_3\text{Br}$ ), 14 ( $\text{CF}_4$ ), 21 ( $\text{CHFCl}_2$ ), 22 ( $\text{CHF}_2\text{Cl}$ ), 23 ( $\text{CHF}_3$ ), 114 ( $\text{CF}_2\text{ClCF}_2\text{Cl}$ ), 116 ( $\text{CF}_3\text{CF}_3$ ) |  |
| Fremy's Salt               | $(\text{KO}_3\text{S})_2\text{NO}$   |  |
| Gilman Reagents            | Lithium Diorganocuprates   |  |
| Hünig's Base               | Diisopropylethylamine (base catalyst)  |  |
| Jones Reagent              | Chromic acid in acetone  |  |
| Lawesson Reagent           | Pd on $\text{CaCO}_3/\text{PbO}$   | <br><b>Lawesson</b>           |
| Lindlar Catalyst           | Methyl cyanoformate ( $\text{NCC}(=\text{O})\text{OMe}$ )  |  |
| Mander's Reagent           | Triethyloxonium Fluoroborate ( $\text{Me}_3\text{O}^+\text{BF}_4^-$ , methylating reagent)   |  |
| Meerwein's Salt            | $\alpha$ -Methoxy- $\alpha$ -trifluoromethylphenylacetates   |  |
| Mosher Esters              | Potassium monopersulfate ( $\text{KHSO}_5$ )   |  |
| Oxone                      | Sodium bis(2-methoxyethoxy)aluminum Hydride  |  |
| Red-Al                     | tri-sec-butylborohydride ( $\text{L} = \text{Li, K}$ = potassium)  |  |
| Selectride                 | $\text{CH}_2\text{I}_2\text{-Zn}(\text{Cu})$   |  |
| Simmons-Smith Reagent      | Petroleum ether solvents (alkane fractions)  |  |
| Skellysolve                | Sodium Triethylborohydride   |  |
| Super Hydride              | $\text{Cp}_2\text{Ti}(\text{CH}_2)(\text{Cl})\text{AlMe}_2$  |  |
| Tebbe's Reagent            | $\text{Me}_2\text{N}^+=\text{CCl}_2 \text{Cl}^-$   | <br><b>Tebbe</b>             |
| Viehe's Salt               | $\text{Me}_2\text{N}^+=\text{CHCl} \text{Cl}^-$  |  |
| Vilsmeier Reagent          |  |  |
| Wieland-Miescher Ketone    | $(\text{Ph}_3\text{P})_3\text{RhCl}$   | <br><b>Wieland-Miescher</b> |
| Wilkinson's Catalyst       | $\text{Ph}_3\text{P}=\text{CR}_2$  |  |
| Wittig Reagent             |  |  |

## Spectroscopy and Separation Acronyms

|            |   |
|------------|---|
| ASIS       | Aromatic solvent induced shifts (NMR)                     |
| $\delta$   | Chemical shift (NMR)                                      |
| CD         | Circular Dichroism  |
| CI         | Chemical Ionization (mass spec)                           |
| CIDNP      | Chemically Induced Dynamic Nuclear Polarization           |
| CMR        | Carbon-13 Magnetic Resonance                              |
| COSY       | Correlation Spectroscopy (NMR)                            |
| DEPT       | Distortionless Enhancement by Polarization Transfer (NMR) |
| DNMR       | Dynamic NMR   |
| EI         | Electron Impact (MS)                                      |
| ENDOR      | Electron Nuclear Double Resonance                         |
| ESR (=EPR) | Electron (Paramagnetic) Spin Resonance                    |
| EXAFS      | Extended X-Ray Absorption Fine Spectrum                   |
| EXSY       | Exchange spectroscopy (NMR saturation transfer)           |
| FAB        | Fast Atom Bombardment (MS)                                |
| FID        | Flame Ionization Detecter (VPC)                           |
| FID        | Free Induction Decay (NMR)                                |
| FT         | Fourier Transform   |

|                |  |
|----------------|--|
| GLC            | Gas-liquid Chromatography (VPC)                            |
| HETCOR         | Heteronuclear correlation (NMR)                            |
| HMQC           | Proton detected Heteronuclear Multiquantum Coherence (NMR) |
| HOESY          | Heteronuclear Overhauser Spectroscopy (NMR)                |
| HPLC           | High Performance Liquid Chromatography                     |
| ICR            | Ion Cyclotron Resonance                                    |
| INDOR          | Internuclear Double Resonance                              |
| INEPT          | Insensitive Nuclei Enhanced by Polarization Transfer (NMR) |
| IR             | Infrared   |
| <i>J</i>       | Coupling Constant (NMR)                                    |
| LC             | Liquid Chromatography                                      |
| LIS            | Lanthanide Induced shifts (NMR)                            |
| MCD            | Magnetic Circular Dichroism                                |
| MS             | Mass spectrum  |
| NMR            | Nuclear Magnetic Resonance                                 |
| NOE(SY)        | Nuclear Overhauser Effect (Spectroscopy)                   |
| OD             | Optical Density  |
| ORD            | Optical Rotatory Dispersion                                |
| ORTEP          | Oak Ridge Thermal Ellipse Program                          |
| PES            | Photoelectron Spectroscopy                                 |
| R <sub>f</sub> | Retention Factor (chromatography)                          |
| ROESY          | Rotating frame Nuclear Overhauser Spectroscopy (NMR)       |
| TLC            | Thin Layer Chromatography                                  |
| UV             | Ultraviolet spectroscopy                                   |
| VPC            | Vapor Phase Chromatography (GLC)                           |
| XPS            | (ESCA) X-Ray Photoelectron Spectroscopy                    |