

## List of Abbreviations

### *Ions*

[BARF] <sup>-</sup>	tetrakis[(3,5-trifluoromethyl)phenyl]borate
[beti] <sup>-</sup>	<i>bis</i> (heptafluoroethylsulfonyl)imide
[C <sub>n</sub> C <sub>m</sub> C <sub>x</sub> C <sub>y</sub> N] <sup>+</sup>	tetraalkylammonium
[C <sub>n</sub> C <sub>m</sub> C <sub>x</sub> C <sub>y</sub> P] <sup>+</sup>	tetraalkylphosphonium
[C <sub>n</sub> C <sub>m</sub> C <sub>x</sub> im] <sup>+</sup>	1,2,3-trialkylimidazolium
[C <sub>n</sub> C <sub>m</sub> C <sub>x</sub> S] <sup>+</sup>	trialkylsulfonium
[C <sub>n</sub> C <sub>m</sub> im] <sup>+</sup>	1,3-dialkylimidazolium
[C <sub>n</sub> C <sub>m</sub> pyr] <sup>+</sup>	1,4-dialkylpyridinium
[C <sub>n</sub> C <sub>m</sub> pyrr] <sup>+</sup>	1,1-dialkylpyrrolidinium
[FAP] <sup>-</sup>	<i>tris</i> (pentafluoroethyl) trifluorophosphate
[NTf <sub>2</sub> ] <sup>-</sup>	<i>bis</i> (trifluoromethylsulfonyl)imide
[OTf] <sup>-</sup>	trifluoromethanesulfonate (triflate)
[OTs] <sup>-</sup>	<i>p</i> -toluenesulfonate (tosylate)

### *Ligands*

acac	acetylacetonate
BINAP	2,2'- <i>bis</i> (diphenylphosphino)-1,1'-binaphthyl
BINOL	2,2'-dihydroxy-1,1'-binaphthyl
BOX	<i>bis</i> (oxazoline)
bpy	4,4'-bipyridyl
cod	1,5-cyclooctadiene
cot	1,3,5-cyclooctatriene
DPENDS	sulfonated (1 <i>R</i> ,2 <i>R</i> )-1,2-diphenyl-1,2-ethylenediamine
dppm	1,1- <i>bis</i> (diphenylphosphino)methane)

Hatu	aminidithioarea
phen	1,10-phenanthroline
TEMPO	2,2,6,6-tetramethylpiperidine-1-oxyl
tmen	2,3-dimethylbutane-2,3-diamine
TMPD	<i>N,N,N',N'</i> -tetramethyl- <i>p</i> -phenylenediamine
tolBINAP	2,2'- <i>bis</i> (di- <i>p</i> -tolylphosphino)-1,1'-binaphthyl
TPPMS	diphenylphosphinobenzene- <i>m</i> -sulfonate
TPPTS	<i>tris</i> (3-sulfophenyl)phosphine

### *Molecules*

12'CA	12'-apo- $\beta$ -carotenoic-12'acid
C153	Coumarin 153
DABCO	1,4-diazabicyclo[2.2.2]octane
DMHs	dimethylhexanes
MK	Michler's ketone
NHC	<i>N</i> -heterocyclic carbene
NMO	<i>N</i> -methylmorpholine <i>N</i> -oxide
PRODAN	6-propionyl-2-( <i>N,N</i> -dimethylamino)naphthalene
pTSA	<i>p</i> -toluenesulfonic acid
TCNE	tetracyanoethene
TMPs	trimethylpentanes
TPAP	tetra- <i>N</i> -propylammonium perruthenate

### *Parameters*

$\alpha$	Kamlet-Taft hydrogen bond acidity scale
$\beta$	Kamlet-Taft hydrogen bond basicity scale
$\pi^*$	Kamlet-Taft dipolarity/polarizability scale

$\delta_H$	Hildebrand solubility parameter
$\delta$	Solubility parameter $\nu$ CED
$E_T(30)$	Reichardt polarity scale
$E_T^N$	Reichardt polarity scale (normalized)
$K_{OW}$	1-octanol/water partition coefficient

*Terms*

AN	Gutmann acceptor number
CED	Cohesive Energy Density
DN	Gutmann donor number
EPA	Electron Pair Acceptor
EPD	Electron Pair Donor
EWG	Electron Withdrawing Group
LSER	Linear Solvation Energy Relationship
QSPR	Quantitative Structure-Property Relationship
SILP	Supported Ionic Liquid Phase
TOF	TurnOver Frequency
VOC	Volatile Organic Compound