

Abbreviations

Abbreviation	Unabbreviated names
acacH	acetylacetone
acenH ₂	<i>N,N'</i> -ethylenebis(acetylacetoneimine)
	pentan-2,4-dione
	4,9-dimethyl-5,8-diazadodeca-4,8-diene-2,11-dione
alaH	alanine
ampy	2-(aminomethyl)pyridine
AOM	angular overlap model
atm	atmosphere
BINAP	2,2'-bis(diphenylphosphino)-1,1'-binaphthyl
bpy	2,2'-bipyridine
Bu	butyl
^t Bu	<i>tert</i> -butyl
	2-methyl-2-propyl
Bz	benzyl
CASSCF	complete active-space self-consistent field
catH ₂	catechol
CD	circular dichroism
cht	cycloheptatriene
CI	configuration interaction
cod	cycloocta-1,5-diene
coe	cyclooctene
COSY	correlated spectroscopy
Cp	η^5 -cyclopentadienyl
Cp*	η^5 -pentamethylcyclopentadienyl
CT	charge transfer
CV	cyclovoltammogram
CVD	chemical vapor deposition
Cy (cy)	cyclohexyl
cyclam	1,4,8,11-tetraazacyclotetradecane
cysH	cysteine
dba	dibenzylideneacetone
	1,5-diphenylpenta-1,4-diene-3-one
DBU	1,8-diazabicyclo[5.4.0]undec-7-ene
dcpe	1,2-bis(dicyclohexylphosphino)ethane
de	diastereomeric excess
depe	1,2-bis(diethylphosphino)ethane

dien	diethylenetriamine	bis(2-aminoethyl)amine;
	1,4,7-triazaheptane	
<i>R,R</i> -diop	(–)-2,3- <i>O</i> -isopropylidene-2,3-dihydroxy-1,4-bis(diphenylphosphino)butane	
dme	1,2-dimethoxyethane	
dmf	<i>N,N</i> -dimethylformamide	<i>N,N</i> -dimethylmethanamide
dmgH ₂	dimethyl glyoxime	
dmpe	1,2-bis(dimethylphosphino)ethane	
dmpm	1,2-bis(dimethylphosphino)methane	
dmso	dimethylsulfoxide	
DNA	deoxyribose nucleic acid	
DNMR	dynamic nuclear magnetic resonance	
dpmp	bis((diphenylphosphino)methyl)phenylphosphine	
dppb	1,4-bis(diphenylphosphino)butane	
dppe	1,2-bis(diphenylphosphino)ethane	
dppf	1,1'-bis(diphenylphosphino)ferrocene	
dppm	1,1-bis(diphenylphosphino)methane	
dppp	1,3-bis(diphenylphosphino)propane	
dtc	dithiocarbamate	
EBI	ethylenebisindenyl	
EBTHI	ethylenebis(tetrahydroindenyl)	
edtaH ₄	ethylenediaminetetraacetic acid	<i>N,N,N',N'</i> -tetrakis(acetato)-1,2-diaminoethane
EHMO	extended Hückel molecular orbital	
en	ethylenediamine	1,2-diaminoethane
ENDOR	electron-nuclear double resonance	
EPR	electron paramagnetic resonance	
ESR	electron spin resonance	
Et	ethyl	
EXAFS	extended X-ray absorption fine structure	
FAB	fast atom bombardment	
Fc	ferrocene	
fcc	face-centred cubic	
flu	fluorenyl	
FT	Fourier transform	
glyH	glycine	
HBpz ₃	hydridotris(pyrazolyl)borate	
HBpz* ₃	hydridotris(3,5-dimethylpyrazolyl)borate	
hisH	histidine	

hmpa	hexamethylphosphoramide
hmpt	hexamethylphosphorous triamide
HOMO	highest occupied molecular orbital
HPLC	high performance liquid chromatography
imH (ImH)	imidazole
ind	indenyl
IR	infrared
LC	ligand centred
leuH	leucine
LL	ligand-to-ligand
LMCT	ligand-to-metal charge transfer
LUMO	lowest unoccupied molecular orbital
MAO	methylalumoxane
MAS-NMR	magic angle spinning-nuclear magnetic resonance
MCD	magnetic circular dichroism
Me	methyl
3,5-Me ₂ pzH	3,5-dimethylpyrazole
4,4'-Me ₂ bpy	4,4'-dimethyl-2,2'-bipyridine
3,4,5-Me ₃ pzH	3,4,5-trimethylpyrazole
Mes	mesityl
MLCT	metal-to-ligand charge transfer
MO	molecular orbital
morph	morpholine
mqH	8-methylquinoline
MS	mass spectrometry
MS-X α	multiple scattering X α
nhd	norbornadiene
NBS	N-bromosuccinimide
NMR	nuclear magnetic resonance
NOE	nuclear Overhauser effect
NOESY	nuclear Overhauser effect spectroscopy
Np	neopentyl
NQR	nuclear quadrupole resonance
nta	nitrilotriacetic acid
Oe	Oersted
OEPH ₂	2,3,7,8,12,13,17,18-octaethylporphyrin
oxH ₂	oxalic acid
pcH ₂	phthalocyanine
	ethanedioic acid

PE	photoelectron	
Ph	phenyl	
phen	1,10-phenanthroline	
pip	piperidine	
PPN	bis(triphenylphosphine)iminium(1+)	
ppyH	2-phenylpyridine	
ⁿ Pr	<i>n</i> -propyl	
ⁱ Pr	<i>iso</i> -propyl	2-propyl
proH	proline	
py	pyridine	
pyrr	pyrrolidine	
pzH	pyrazole	
pz*H	3,5-dimethylpyrazole	
RNA	ribose nucleic acid	
RR	resonance Raman	
SacacH	thioacetylacetone	4-oxopentane-2-thione
SacSacH	dithioacetylacetate	pentane-2,4-dithione
salenH ₂	<i>N,N'</i> -ethylenebis(salicylideneimine)	
salphenH ₂	<i>N,N'</i> -1,2-phenylenebis(salicylideneimine)	
salpnH ₂	<i>N,N'</i> -1,2-propylenebis(salicylideneimine)	
SCE	saturated calomel electrode	
SCF	self-consistent field	
sep	sepulchrate	
ser:1	serine	
SERRS	surface enhanced resonance Raman spectroscopy	
SOD	superoxide dismutase	
SSCE	saturated sodium calomel electrode	
tacn	1,4,7-triazacyclononane	
tartH ₂	tartaric acid	
tcne	tetracyanoethene	
tcnq	7,7,8,8-tetracyanoquinodimethane	
terpy or tpy	2,2':6',2''-terpyridine	
tfacenH ₂	<i>N,N'</i> -bis(trifluoroacetylacetoneimine)	1,1,1,12,12,12-hexafluoro-4,9-dimethyl-5,8-diazadodeca-4,8-diene-2,11-dione
TfOH	triflic acid	
TGA	thermogravimetric analysis	
thf	tetrahydrofuran	
tht	tetrahydrothiophene	

tlc	thin layer chromatography
tmeda	tetramethylethylenediamine <i>N,N,N',N'</i> -tetramethyl-1,2-diaminoethane
TMPH ₂	5,10,15,20-tetramesitylporphyrin
TMpyPH ₂	5,10,15,20-tetrakis(1-methylpyridinium-4-yl)porphyrin
TPCH ₂	tetraphenylchlorin
TPFPPH ₂	5,10,15,20-tetrakis(pentafluorophenyl)porphyrin
TPivPPH ₂	5,10,15,20-tetrakis($\alpha,\alpha,\alpha,\alpha$ - <i>o</i> -pivalamidophenyl)porphyrin
TPPH ₂	5,10,15,20-tetraphenylporphyrin
TPPSiH ₂	5,10,15,20-tetrakis(4-sulfonatophenyl)porphyrin
TPyPH ₂	5,10,15,20-tetrakis(4-pyridyl)porphyrin
tren	<i>N,N,N</i> -tris(2-aminoethyl)amine
trien	1,4,7,10-tetraazadecane
triphos	1,1,1- <i>tris</i> (diphenylphosphinomethyl)ethane
tu	thiourea
UV	ultraviolet
UV-VIS	ultraviolet-visible
V	volt
valH	valine
vpy	4-vinylpyridine
XPS	X-ray photoelectron spectroscopy