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LIST OF ABBREVIATIONS

$5HT_{3A}R$	serotonin type 3A receptor
A	alanine
AAA	Asymmetric Allylic Alkylation
Å	Ångstrom
$[\alpha]_D$	specific rotation at wavelength of sodium D line
Ac	acetyl
ACAT	acyl-CoA:cholesterol acyltransferase
ACh	acetylcholine
AD	Alzheimer's Disease
APCI	atmospheric pressure chemical ionization
app	apparent
aq	aqueous
AIBN	2,2'-azobisisobutyronitrile
Ar	aryl
atm	atmosphere
BBN	borabicyclononane
BCRP	Breast Cancer Resistance Protein
BINAP	2,2′-bis(diphenylphosphino)-1,1′-binaphthyl
BINOL	1,1'-bi(2-naphthol)
Bn	benzyl
Boc	*tert*-butyloxycarbonyl
BOX	bisoxazoline
br	broad
BTF	benzotrifluoride

Bu	butyl
n-Bu	butyl
t-Bu	*tert*-Butyl
Bz	benzoyl
c	concentration for specific rotation measurements
°C	degrees Celsius
calc'd	calculated
Cbz	carbobenzyloxy
CCDC	Cambridge Crystallographic Data Centre
cm^{-1}	wavenumber(s)
cod	1,5-cyclooctadiene
d	doublet
D	deuterium
dba	dibenzylideneacetone
DBU	1,8-diazabicyclo[5.4.0]undec-7-ene
DCE	dichloroethane
DCM	dichloromethane
DEAD	diethyl azodicarboxylate
DFT	density functional theory
DIC	diisopropyl carbodiimide
DM-BINAP	1,1′-binaphthalene-2,2′-diyl)bis[bis(3,5-dimethylphenyl)phosphine]
DMA	*N*,*N*-dimethylacetamide
DMAP	4-dimethylaminopyridine
DMDO	dimethyldioxirane
DME	dimethoxyethane
DMF	*N*,*N*-dimethylformamide

DMSO	dimethyl sulfoxide
DNA	(deoxy)ribonucleic acid
dppf	1,1'-bis(diphenylphosphino)ferrocene
dppp	1,3-bis(diphenylphosphino)propane
dr	diastereomeric ratio
E	electrophile
EC_{50}	median effective concentration (50%)
ee	enantiomeric excess
EI	electron impact
e.g.	for example (Latin exempli gratia)
equiv	equivalent
ESI	electrospray ionization
Et	ethyl
ETP	epidithiodiketopiperazine
FAB	fast atom bombardment
FDA	food and drug administration
FID	flame ionization detector
FT	fourier transform
g	gram(s)
GABA	γ–aminobutyric acid
$GABA_AR$	γ–aminobutyric acid type A receptor
gCOSY	gradient-selected correlation spectroscopy
gHMBC	gradient-selected heteronuclear multiple bond correlation
GlyR	glycine receptor
$GluR_{2A}$	glutamate receptor subunit 2A
h	hour(s)

HMDS	1,1,1,3,3,3-hexamethyldisilazane
HPLC	high-performance liquid chromatography
HRMS	high-resolution mass spectroscopy
HSQC	heteronuclear single quantum coherence
$h\nu$	light
Hz	hertz
IC_{50}	median inhibition concentration (50%)
IPA	isopropanol
IR	infrared (spectroscopy)
J	coupling constant
λ	wavelength
L	liter; leucine
LA	Lewis acid
LAH	lithium aluminum hydride
LBA	Lewis acid-assisted Brønsted acid
LC-MS	liquid chromatography-mass spectrometry
LDA	lithium diisopropylamide
LGIC	ligand-gated ion channel
LHMDS	lithium bis(trimethylsilyl)amide
m	multiplet; milli
m	meta
m/*z*	mass to charge ratio
M	metal; molar; molecular ion
Me	methyl
Mes	mesityl
$mGlu_5$	metabotropic glutamate receptor
MHz	megahertz

μ	micro
μwaves	microwave irradiation
min	minute(s)
MM	multimode
mol	mole(s)
MOM	methoxymethyl
mp	melting point
mRNA	messenger ribonucleic acid
Ms	methanesulfonyl (mesyl)
MS	molecular sieves
n	nano
N	normal
NAM	negative allosteric modulator
NBS	*N*-bromosuccinimide
NCS	*N*-chlorosuccinimide
nd	not determined
NMR	nuclear magnetic resonance
NOE	nuclear Overhauser effect
NOESY	nuclear Overhauser enhancement spectroscopy
NPSP	*N*-(phenylseleno)phthalimide
nr	no reaction
Nu	nucleophile
o	ortho
OLED	organic light-emitting diode
p	para
PAM	positive allosteric modulator
Ph	phenyl

pH	hydrogen ion concentration in aqueous solution
PhH	benzene
Phth	phthaloyl
PhMe	toluene
PMB	*p*-methoxybenzyl
PMP	*p*-methoxyphenyl
ppm	parts per million
PPTS	pyridinium *p*-toluenesulfonate
Pr	propyl
i-Pr	isopropyl
q	quartet
ref	reference
R	generic for any atom or functional group
Red-Al	sodium bis(2-methoxyethoxy)aluminum dihydride
R_f	retention factor
rt	room temperature
s	singlet
S	serine
sat.	saturated
SFC	supercritical fluid chromatography
SiPr	*N*,*N* '-bis(2,6-diisopropylphenyl)dihydroimidazol-2-ylidene
t	triplet
T	tyrosine
TADMAP	3-(2,2,2-triphenyl-1-acetoxyethyl)-4-(dimethylamino)pyridine
TBS	*tert*-butyldimethylsilyl

TES	triethylsilyl
Tf	trifluoromethanesulfonyl (trifyl)
TFA	trifluoroacetic acid; trifluoroacetyl
TfOH	triflic acid
THF	tetrahydrofuran
TIPS	triisopropylsilyl
TLC	thin-layer chromatography
TMS	trimethylsilyl
TOF	time-of-flight
t_R	retention time
Ts	*p*-toluenesulfonyl (tosyl)
p-TSA	*p*-toluenesulfonic acid
UV	ultraviolet
v/*v*	volume to volume
w/*v*	weight to volume
X	anionic ligand or halide