

## ABBREVIATIONS

AcOH	:	Acetic acid
AlCl <sub>3</sub>	:	Aluminium chloride
Bn	:	Benzyl
n-Bu	:	n-Butyl
CDCl <sub>3</sub>	:	Chloroform deuterated
Cu(OTf) <sub>2</sub>	:	Copper(II) triflate
DABCO	:	1, 4- Diazabicyclo[2.2.2]octane
DMF	:	<i>N, N</i> , Dimethylformamide
DMSO	:	Dimethylsulfoxide
EDTA	:	Ethylenediamine tetraacetic acid
EtOH	:	Ethanol
Et	:	Ethyl
EtOAc	:	Ethylacetate
h	:	Hour (s)
HClO <sub>4</sub>	:	Perchloric acid
I <sub>2</sub>	:	Iodine
InCl <sub>3</sub>	:	Indium trichloride
KBr	:	Potassium bromide
K <sub>2</sub> CO <sub>3</sub>	:	Potassium carbonate
Me	:	Methyl
MeOH	:	Methanol
MeCN	:	Acetonitrile
MgClO <sub>4</sub>	:	Magnesium perchlorate
Min	:	Minute(s)
MW	:	Microwave
Mp	:	Melting Point
MCR	:	Multicomponent reactions
NaHCO <sub>3</sub>	:	Sodiumhydrogen carbonate

NaOH	:	Sodium hydroxide
NH <sub>4</sub> Cl	:	Ammonium chloride
NH <sub>4</sub> OAc	:	Ammonium acetate
NMR	:	Nuclear magnetic resonance
<i>P</i> -TSA	:	<i>p</i> - Toluene sulfonic acid
Ph	:	Phenyl
Ph Me	:	Toluene
SEM	:	Surface electron microscope
SiO <sub>2</sub>	:	Silica
TEM	:	Transmission electron microscope
TLC	:	Thin- layer chromatography
TiCl <sub>3</sub>	:	Titanium trichloride
TMS	:	Tetramethyl silane
THF	:	Tetrahydrofuran
TiO <sub>2</sub> Nps	:	Titanium oxide nano particles
XRD	:	X-ray diffraction
RT	:	Room temperature
RX	:	Alkyl halide
TBAB	:	Tetra butylammonium bromide
Yb(OTf) <sub>3</sub>	:	Ytterbium triflate
ZrO <sub>2</sub>	:	Zirconia Nano particles
NPs		