ABBREVIATIONS

TMA	Tetravalent Metal Acid
ZrP	Zirconium phosphate (amorphous)
SnP	Tin phosphate (amorphous)
TiP	Titanium phosphate (amorphous)
ZrW	Zirconium tungstate (amorphous)
SnW	Tin tungstate (amorphous)
TiW	Titanium tungstate (amorphous)
ZrPcry	Zirconium phosphate (crystalline)
SnPcry	Tin phosphate (crystalline)
TiPcry	Titanium phosphate (crystalline)
Ru(III)ZrP	Ru(III) exchanged ZrP
Ru(III)TiP	Ru(III) exchanged TiP
Ru(III)SnP	Ru(III) exchanged SnP
Ru(III)ZrW	Ru(III) exchanged ZrW
Ru(III)TiW	Ru(III) exchanged TiW
Ru(III)SnW	Ru(III) exchanged SnW
RuZrP	Ru(0) exchanged ZrP
RuTiP	Ru(0) exchanged TiP
RuSnP	Ru(0) exchanged SnP
RuZrW	Ru(0) exchanged ZrW
RuSnW	Ru(0) exchanged SnW
RuTiW	Ru(0) exchanged TiW
ICP-AES	Inductively Coupled Plasma - Atomic Emission Spectrometry
AAS	Atomic absorption spectroscopy
TGA	Thermogravimetric analysis
DSC	Differential Scanning Calorimetry
XRD	X-ray Diffraction
SEM	Scanning Electron Microscopy
FTIR	Fourier Transform Infra Red Spectroscopy
ESR	Electron Spin Resonance Spectroscopy
TPD	Temperature Programmed Desorption

TPR	Temperature Programmed Reduction
TPO	Temperature Programmed Oxidation
V_{ads}	volume of gas adsorbed at equilibrium pressure
V_m	volume corresponding to monolayer coverage
C	isothermal constant
H_a	Enthalpy of adsorption in the first layer
H_1	Enthalpy of formation of second and subsequent layers
BET	Brunauer, Emmett and Teller
TOR	Turn Over Rate
TON	Turn Over Number
R_P	Reaction Probability
EA	ethyl Acetate
PA	propyl acetate
BA	butyl acetate
BzA	benzyl acetate
DOP	dioctylphthalate
DBP	dibutylphthalate
DEM	diethyl malonate
R	resorcinol
P	pyrogallol
Ph	phloroglucinol
MA	methyl acetoacetate
4M7HC	4-methyl 7-hydroxycoumarin
4M5,7HC	4-methyl 5,7-dihydroxycoumarin
4M7,8HC	4-methyl 7,8-dihydroxycoumarin
4MA	4-methoxy acetophenone
3,4DMA	3,4-dimethoxy acetophenone
PBT	p-benzyl toluene
^{o}C	Degree Celsius
K	Kelvin
SAC	Solid Acid Catalysis
HHC	Heterogenised Homogeneous Catalysis