

List of notations, nomenclatures, symbols

PRE	Petroleum refinery effluent	G	Root mean square velocity gradient
OPS	Oily petroleum sludge	A	pH of independent variables
COD	Chemical oxygen demand	B	Dosage of independent variables
TDS	Total dissolved solids	DF	Degree of freedom
AOP	Advance oxidation processes	R ²	Determination coefficient
BOD	Biochemical oxygen demand	R ² _{adj}	Adjusted determination of coefficient
TGA	Thermogravimetric analysis	AP	Adequate precision
DTA	Differential thermal analysis	SD	Standard deviation
FTIR	Fourier Transform Infrared Spectroscopy	CV	Coefficient of variance
SEM	Scanning Electron Microscopy	HHV	High heating values
SEM	Scanning Electron Microscopy	A	Pre-exponential factor
EDX	Energy Dispersive X-Ray Analysis	E	Activation energy
XRD	X-ray diffraction	R	Universal gas constant (kJ/mol. K)
GCMS	Gas chromatography-mass spectrometry	T	Absolute temperature (K)
XPS	X-ray photoelectron spectroscopy	S1	Original sludge
ICP-OES	Inductively coupled plasma optical emission spectrometry	S2	Sludge obtained after soxhlet extraction method
AR	Analytical reagent	V: V	Volume: Volume
CuSO ₄	Copper sulphate	R _t	Reaction time
CuO	Copper oxide	Kg	Kilogram
ZnO	Zinc oxide	M	Meter
Al ₂ SO ₄	Aluminium sulphate	Dm	Decimeter
FeSO ₄	Ferrous sulphate	RPM	Revolution per minute
CeO ₂	Cerium oxide	K	Kelvin
MnO ₂	Manganese oxide	°C	Degree Celsius
FeO	Ferrous oxide	%	Percentage
MgSO ₄	Magnesium sulfate	ND	Not detected,
CaCl ₂	Calcium chloride	ADL	Above the detection limit
AlCl ₃	Aluminium chloride	eV	Electron-volt
NaOH	Sodium hydroxide	SS	Suspended solids
H ₂ SO ₄	Sulphuric acid	TSS	Total suspended solids
HCl	Hydrochloride acid	RM	Rapid mixing
PA	Polyamide	SM	Slow mixing
C-PAM	Cationic polyacrylamide	EPS	Extracellular polymer substance
A-PAM	Anionic polyacrylamide	ST	Settling time
TOC	Total organic carbon	CCD	Central composite design
RSM	Response surface methodology	ANOVA	Analysis of variance
ETP	Effluent treatment plant	TBCC	Tribasic copper chloride
Ni	Nickel	As	Arsenic
Cu	Copper	Fe	Iron
V	Vanadium	Mg	Magnesium
Pb	Lead	Hg	Mercury
Zn	Zinc	Cr	Chromium
Mn	Manganese	Ca	Calcium

Na	Sodium
Co	Cobalt
H	Hydrogen
O	Oxygen
K	Potassium

P	Phosphorus
C	Carbon
N	Nitrogen
S	Sulphur
Al	Aluminium