## **ABBREVIATIONS**

2FI Two factor interactions

ANN Artificial neural network

AFM Atomic force microscope

ANOVA Analysis of variance

BBD Box-Behnken design

BET Brunauer–Emmett–Teller

CCD Central composite design

df Degrees of freedom

D–R Dubinin–Radushkevich

FTIR Fourier transform infrared

OM Optical microscope

rpm Revolutions per minute

RSM Response surface methodology

SEM Scanning electron microscopy

TEM Transmission electron microscope

XRD X-ray powder diffraction

XPS X-ray photoelectron spectroscopy

TGA Thermogravimetric Analysis
DTA Differential thermal analysis

CIHFO Ce (IV)-incorporated hydrous Fe (III) oxide

GO-CIHFO Graphene Oxide tweaked Ce(IV)-incorporated hydrous

Fe(III) oxide

βC-CIHFO β-cyclodextrin modified Ce (IV)-incorporated hydrous

Fe (III) oxide

mg Miligram

°C Degree Celsius

pH Negative logarithm of the hydrogen ion concentration

min Minute
mL Milli litre

TDS Total Dissolved solids

WHO World Health Organisation

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