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ABBREVIATIONS AND SYMBOLS

s = singlet

d = doublet

t = triplet

q = quartet

m = multiplet

brs = broad singlet

brd = broad doublet

brt = broad triplet

dd = doublet of doublet

dt = doublet of triplet

mt = multiplet of triplet

mult. = multiplicity

 δ = chemical shift relative to TMS

J = coupling constant

m/z = a value of mass divided by charge

°C = degree celcius

 R_f = retention factor

g = gram

mg = milligram

kg = kilogram

mL = milliliter

cm⁻¹ = reciprocal centimeter (wavenumber)

nm = nanometer

ppm = part per million

ABBREVIATIONS AND SYMBOLS (continued)

 $\lambda_{\text{\tiny max}}$ = maximum wavelength

V = absorption frequencies

 \mathcal{E} = molar extinction coefficient

Hz = hertz

MHz = megahertz

 $[\alpha]_D$ = specific rotation

c = concentration

H-n = position of protons

C-n = position of carbon

TLC = thin-layer chromatography

UV = Ultraviolet

IR = Infrared

NMR = Nuclear Magnetic Resonance

HRMS = High Resolution Mass Spectroscopy

MS = Mass Spectroscopy

1D NMR = One Dimentional Nuclear Magnetic Resonance

2D NMR = Two Dimentional Nuclear Magnetic Resonance

HMQC = Heteronuclear Multiple Quantum Coherence

HMBC = Heteronuclear Multiple Bond Correlation

DEPT = Distortionless Enhancement by Polarization transfer

NOE = Nuclear Overhauser Effect

TMS = tetramethylsilane

MeOH = methanol

CHCl₃ = chloroform

ABBREVIATIONS AND SYMBOLS (continued)

EtOH = ethanol

EtOAc = ethyl acetate

 CH_2Cl_2 = dichloromethane

 $NaHCO_3$ = sodium hydrogen carbonate

NaOH = sodium hydroxide

HCl = hydrochloric acid

CDCl₃ = deuterochloroform

 CD_3OD = tetradeuteromethanol

 H_2O = water