Stereoelectronic and conformational effects in carbohydrate derived oxocarbenium, iminium and ammonium ions

PROEFSCHRIFT

ter verkrijging van
de graad van Doctor aan de Universiteit Leiden,
op gezag van Rector Magnificus prof. mr. C. J. J. M. Stolker,
volgens besluit van het College voor promoties
te verdedigen op woensdag 14 januari 2015
klokke 16:15 uur

door

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Geboren te Haarlemmermeer in 1987

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ISBN/EAN: 978-94-6108-878-9

Geprint door: Gildeprint

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List of Abbreviations

Ac	acetyl
AMP	5-(adamantane-1-yl-methoxy)pentyl
aq.	aqueous
Ar	aromatic
B3LYP	Becke 3-Parameter, Lee, Yang and Parr
Bn	benzyl
Bu	butyl
C	chair
cal	calorie
calc.	calculated
cat.	catalytic
COSY	correlation spectroscopy
C_q	quaternary carbon atom
Cy	cyclohexane
δ	chemical shift (ppm)
d	doublet
DCM	dichloromethane
DFT	density function theory
DiBAL-H	di-isobutylaluminiumhydride
DiPEA	*N*,*N*-diisopropylethylamine
DMAP	4-dimethylaminopyridine
DMF	dimethylformamide
DMJ	deoxymannojirimycin
DMSO	dimethyl sulfoxide
DTBMP	2,6-di-*tert*-butyl-4-methylpyridine
eq.	molar equivalents
E	energy
E	envelope
Et	ethyl
FES	Free Energy Surface
g	*gauche*
H	half-chair
HR-MS	high-resolution mass spectroscopy
HMBC	Heteronuclear multiple-bond correlation spectroscopy
HSQC	Heteronuclear Single Quantum Coherence
Hz	Herz
IR	infrared
J	coupling constant

m	multiplet	sat.	saturated
M	molar	t	triplet
Me	methyl	*t*	*trans*
Ms	methanesulfonyl	*T*	twist
NIS	*N*-iodosuccinimide	τ_m	amplitude
NMR	Nuclear Magnet Resonance	TBAI	tetrabutylammonium iodide
NOESY	Nuclear Overhauser effect	*t*Bu	*tert*-butyl
	spectroscopy	TES	triethylsilane
Nu	nucleophile	Tf	triflyl
nPP	5-neopentoxypentyl	TFA	trifluoromethanesulfonic acid
obs.	observed	THF	tetrahydrofuran
P	pseudorotational phase angle	TLC	thin layer chromatography
PBP	5-(*p*-phenylbenzyloxy)pentyl	TMS	trimethylsilane
PCM	polarizable continuum model	Tol	tolyl
PE	petroleum ether (40-60)	Tr	trityl
PES	Potential Energy Surface	Triflate	trifluoromethanesulfonyl
Ph	phenyl	TS	transition state
ppm	parts per million	TTBP	2,4,6-tri-*tert*-butylpyrimidine
q	quartet	UV	ultraviolet
R_f	retention factor	ZPE	zero-point energy
s	singlet		
S	skew-boat		