Structure-reactivity relationships in glycosylation chemistry

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Contents

Abbreviations

A.	Acinetobacter
Ac	acetyl
ACN	acetonitrile
AIBN	2,2'-azobis(2-methyl-propionitrile)
APT	attached proton test
aq.	aqueous
Arom	aromatic
B	boat
B3LYP	Becke, 3-parameter, Lee-Yang-Parr
BAIB	(diacetoxyiodo)benzene
Bn	benzyl
bs	broad singlet
Bu	butyl
Bz	benzoyl
C	chair
cal	calorie
calcd	calculated
cat.	Catalytic
CCSDT	coupled cluster single-double-triple
CEL	conformational energy landscape
CIP	contact ion pair
COSY	correlation spectroscopy
C_q	quaternary carbon atom
CSA	camphor-10-sulfonic acid
δ	chemical shift
d	doublet
DBTO	dibutyltin oxide
DCE	1,2-dichloroethane
DCM	dichloromethane
dd	double doublet
ddd	doublet of double doublets
dddd	double doublet of double doublets
DDQ	2,3-Dichloro-5,6-dicyano-1,4-benzoquinone
ddt	doublet of double triplets
DFE	difluoroethanol
DFT	density function theory
DIAD	diisopropyl azocarboxylate
DIPEA	diisopropylethylamine
DLNPO	domain-based local pair natural orbital
DMAP	4-dimethylaminopyridine
DMBA	1,3-Dimethylbarbituric acid
DMF	*N,N*-dimethylformamide
DMP	Dess-Martin periodinane
DMSO	dimethylsulfoxide
dq	double quartet
dt	double triplet
dtd	doublet of triple doublets
DTBS	di-tert-butylsilylidene
E	energy
E	envelope
EDC(I)	1-Ethyl-3-(3-dimethylaminopropyl) carbodiimide
eq.	molar equivalent
Et	ethyl
E-X	electrophilic activator system
gg	gauche-gauche
gt	gauche-trans
GATED	proton decoupling applied only during relaxation
GlcNAc3NAcA	2,3-di-*N*-acetyl-D-glucuronic acid
h	hour(s)
H	half-chair
HFIP	hexafluoro-iso-propanol
HMBC	heteronuclear multiple-bond correlation spectroscopy
HMDS	hexamethyldisilazane
HRMS	high-resolution mass spectroscopy

HSQC	heteronuclear single quantum coherence
IR	infrared
IRIS	infrared ion spectroscopy
J	coupling constant
LAH	lithium aluminium hydride
Lev	Levulinoyl
LG	leaving group
M	molar
m	multiplet
m.s.	molecular sieves
m/z	mass over charge ratio
min	minute(s)
Me	methyl
MFE	monofluoroethanol
M.S.	molecular sieves
Ms	methanesulfonyl
Nap	2-methylnaphthyl
NIS	N-iodosuccinimide
NMR	nuclear magnetic resonance
NOESY	nuclear Overhauser effect spectroscopy
Nu	nucleophile
p	para
PG	protection group
PCM	polarizable continuum model
Ph	phenyl
PMB	4-methoxybenzyl
ppm	parts per million
PTFAI	2,2,2-Trifluoro-*N*-phenylacetimidoyl
PTSA	para-toluenesulfonic acid
q	quartet
qd	quartet of doublets
QuiNAc4NAc	2,4-di-*N*-acetyl-D-quinovose
R^2 or r^2	coefficient of determination
Rf	retention factor
RRV	relative reactivity value
rt	room temperature
rxn	reaction
s	singlet
S	skew boat
sat.	saturated
S_N1	uni-molecular nucleophilic substitution
S_N2	bi-molecular nucleophilic substitution
SSIP	solvent-separated ion pair
SAR	structure-activity-relationships
t	triplet
t	*tert*
T	twist
tg	trans-gauge
TBA	tetrabutylammonium
TBS	*tert*-butyldimethylsilyl
TBDMS	*tert*-butyldimethylsilyl
TBDPS	tert-butyldiphenylsilyl
TCA	trichloroacetyl
TES	triethylsilyl
TEMPO	2,2,6,6-tetramethylpiperidine 1-oxyl
TFA	trifluoroacetic acid
TFAA	trifluoroacetic anhydride
TFE	trifluoroethanol
Tf	trifluoromethanesulfonyl
THF	tetrahydrofuran
TIPS	tri-isopropylsilyl
TLC	thin layer chromatography
TMS	trimethylsilyl
TOCSY	total correlation spectroscopy
Ts	4-methylbenzene-1-sulfonyl
TS	transition state
td	triple doublet
tt	triple triplet
TTBP	2,4,6-tri-tert-butylpyrimidine
UV	ultraviolet
VT	variable temperature