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Structure-reactivity relationships in glycosylation chemistry

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Structure-reactivity relationships in glycosylation chemistry

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Abbreviations

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

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