Reactions of 1,2-Bis(trimethylsilyloxy)cycloalkenes with the Diethyl Acetals of Aldehydes

Fuye Gao and D. Jean Burnell*

Department of Chemistry, Dalhousie University, Halifax NS, Canada B3H 4J3

jean.burnell@dal.ca
NMR spectra of 2-methyl-1,3-cyclohexanedione (6a)

$^1$H NMR (500 MHz) in TFA

$^{13}$C NMR (125 MHz) in TFA
NMR spectra of 2-nonylcyclopentane-1,3-dione (6b)

$^1$H NMR (500 MHz) in TFA

$^{13}$C NMR (125 MHz) in TFA
NMR spectra of 2-(2,6-dimethylheptyl)cyclopentane-1,3-dione (6c)

$^1$H NMR (500 MHz) in TFA

$^{13}$C NMR (125 MHz) in TFA
NMR spectra of 2-cyclohexylcyclopentane-1,3-dione (6d)

$^1$H NMR (500 MHz) in TFA

$^1$C NMR (125 MHz) in TFA
NMR spectra of 2-phenylcyclopentane-1,3-dione (6e)

$^1$H NMR (500 MHz) in TFA

$^{13}$C NMR (125 MHz) in TFA
NMR spectra of 2-(3-phenyl-2-propenyl)cyclopentane-1,3-dione (6f)

$^1$H NMR (500 MHz) in TFA

$^{13}$C NMR (125 MHz) in TFA
NMR spectra of (cis)-8-methylbicyclo[4.3.0]nonane-7,9-dione (8a)

\[ ^1H \text{NMR (250 MHz) in TFA} \]

\[ ^{13}C \text{NMR (62.5 MHz) in TFA} \]
NMR spectra of \((\text{cis})-8\text{-nonylbicyclo[4.3.0]nonane-7,9-dione (8b)\)}

\[ \text{CH}_3(\text{CH}_2)_8 \]

\[ \text{HO} \]

\[ \text{8b} \]

\(^1\text{H NMR (250 MHz) in TFA}\)

\(^{13}\text{C NMR (62.5 MHz) in CDCl}_3\)
NMR spectra of (cis)-8-(2,6-dimethylheptyl)bicyclo[4.3.0]nonane-7,9-dione (8c)

$^1$H NMR (250 MHz) in CDCl$_3$

$^{13}$C NMR (62.5 MHz) in CDCl$_3$
NMR spectra of (cis)-8-cyclohexylbicyclo[4.3.0]nonane-7,9-dione (8d)

\[ \text{H NMR (250 MHz) in TFA} \]

\[ \text{C NMR (62.5 MHz) in TFA} \]
NMR spectra of (cis)-8-phenylbicyclo[4.3.0]nonane-7,9-dione (8e)

$^1$H NMR (250 MHz) in TFA

$^{13}$C NMR (62.5 MHz) in TFA
NMR spectra of (cis)-8-phenylbicyclo[4.3.0]nonane-7,9-dione (8f)

$^1$H NMR (250 MHz) in TFA

$^{13}$C NMR (62.5 MHz) in TFA
NMR spectra of 2-ethyl-3,4,6,7-tetrahydro-2H-cyclopenta[b]pyran-5-one (11)

$^1$H NMR (500 MHz) in CDCl$_3$

$^{13}$C NMR (125 MHz) in CDCl$_3$
3,4,4-Trimethylcyclopentane-1,2-dione (15a)

\[ ^1H \text{ NMR (500 MHz) in CDCl}_3 \]

\[ ^13C \text{ NMR (125 MHz) in CDCl}_3 \]
4,4-Dimethyl-3-nonylcyclopentane-1,2-dione (15b)

$^{1}H$ NMR (500 MHz) in CDCl$_3$

$^{13}$C NMR (125 MHz) in CDCl$_3$
3-(2,6-Dimethylheptyl)-4,4-dimethylcyclopentane-1,2-dione (15c)

$^1$H NMR (500 MHz) in CDCl$_3$

$^{13}$C NMR (125 MHz) in CDCl$_3$
3-Cyclohexyl-4,4-dimethylcyclopentane-1,2-dione (15d)

$^{1}H$ NMR (500 MHz) in CDCl$_3$

$^{13}C$ NMR (125 MHz) in CDCl$_3$
3-Cyclohexyl-4,4-dimethylcyclopentane-1,2-dione (15e)

$^1$H NMR (500 MHz) in CDCl$_3$

$^{13}$C NMR (125 MHz) in CDCl$_3$
3-Ethylcyclopentane-1,2-dione (18a)

$^1$H NMR (500 MHz) in CDCl$_3$

$^{13}$C NMR (125 MHz) in CDCl$_3$
3-Decylcyclopentane-1,2-dione (18b)

$^1$H NMR (500 MHz) in CDCl$_3$

$^{13}$C NMR (125 MHz) in CDCl$_3$
3-(3,7-Dimethyloctyl)cyclopentane-1,2-dione (18c)

$^1$H NMR (500 MHz) in CDCl$_3$

$^{13}$C NMR (125 MHz) in CDCl$_3$
3-(Cyclohexylmethyl)cyclopentane-1,2-dione (18d)

$\text{1H NMR (500 MHz) in CDCl}_3$

$\text{13C NMR (125 MHz) in CDCl}_3$
3-(Phenylmethyl)cyclopentane-1,2-dione (18e)

$^1$H NMR (500 MHz) in CDCl$_3$

$^{13}$C NMR (125 MHz) in CDCl$_3$
2-(2-Naphthyl)cyclohexane-1,3-dione (23)

$^1$H NMR (500 MHz) in CDCl$_3$

$^{13}$C NMR (125 MHz) in CDCl$_3$
ORTEP of 3-(phenylmethyl)cyclopentane-1,2-dione (18e)