

### Supporting information

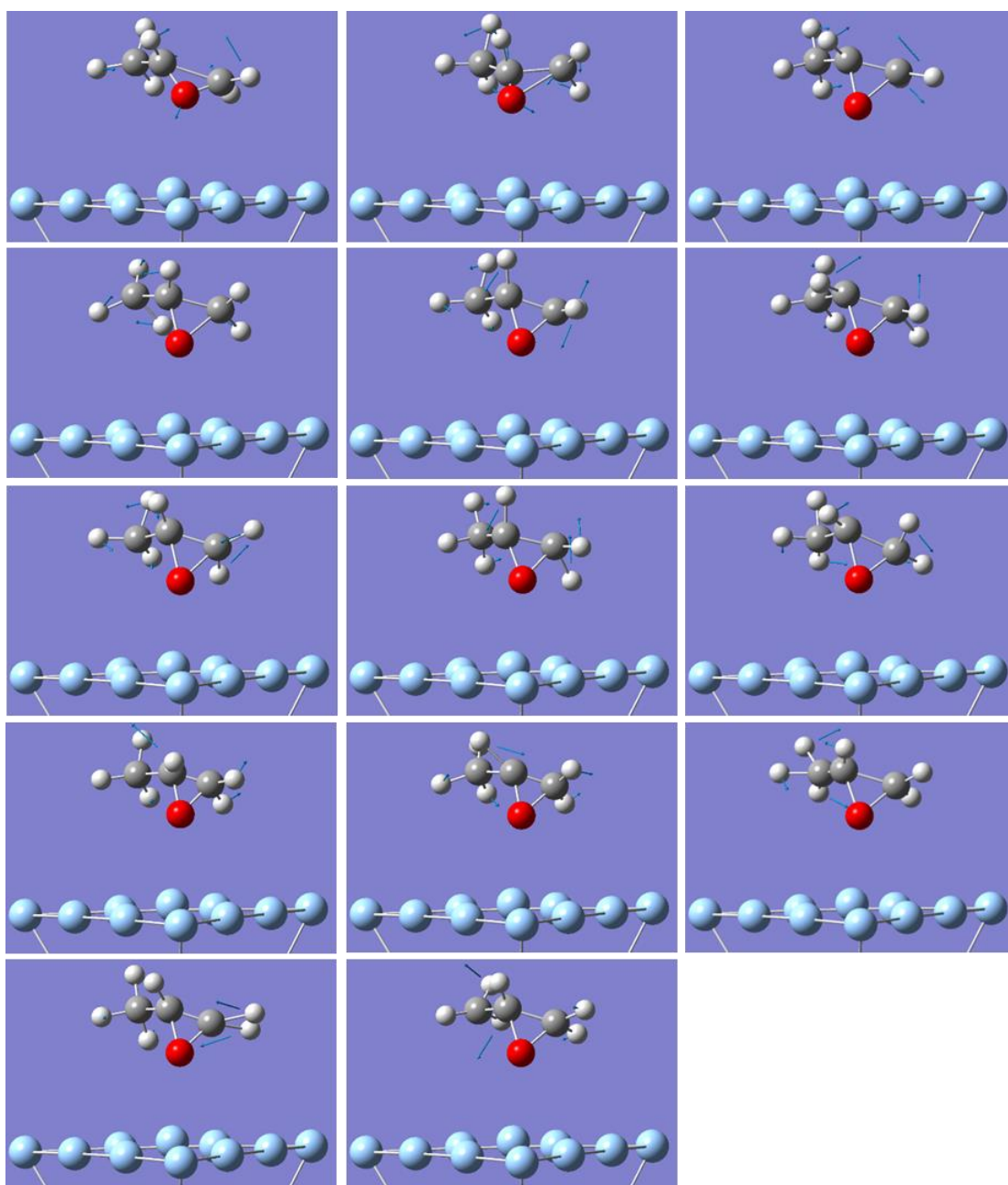


Figure S1. Vibration modes of Methyloxirane adsorbed on Ag<sub>20</sub>.

### Geometry of Methyloxirane adsorbed on Ag<sub>20</sub> cluster

Ag	1.83427200	1.48197700	4.49579500
Ag	1.84443100	-0.60526300	2.61924000
Ag	1.59791500	2.22975300	1.79643300
Ag	-0.61912300	0.90687400	3.23860600

Ag	-0.84719200	1.64209000	0.45616800
Ag	1.85482900	0.11879300	-0.18280700
Ag	-0.61268000	-1.22476400	1.29964600
Ag	1.79849600	-2.63575700	0.69855300
Ag	1.33666300	2.87380200	-0.91471600
Ag	-2.98220100	0.31235300	1.87654100
Ag	-0.88805800	-0.52898100	-1.59996200
Ag	-0.71052500	-3.26998200	-0.72575300
Ag	1.51886600	-1.95874600	-2.16836900
Ag	-3.02876800	-1.82348700	-0.15225400
Ag	1.29682300	0.71917500	-2.95703700
Ag	-3.26313100	0.99194300	-0.97776400
Ag	-1.17024500	2.23721800	-2.34294000
Ag	1.69208600	-4.62294700	-1.28218100
Ag	-5.32034200	-0.30487400	0.44639600
Ag	1.01296000	3.42793800	-3.65145100
O	4.43774500	0.66752200	-0.44716400
C	5.78915100	0.03526200	-0.26953900
C	5.34443300	1.09421000	0.65971600
H	4.99081200	0.81586800	1.64832400
H	5.72213900	2.10635700	0.55942000
H	6.47217300	0.32627700	-1.06455500
C	5.80765200	-1.41119800	0.12232400
H	5.06815700	-1.61149400	0.90403600
H	6.79974900	-1.68870200	0.49961100
H	5.57912400	-2.05236500	-0.73526700