

## Supporting Information

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## Computational details

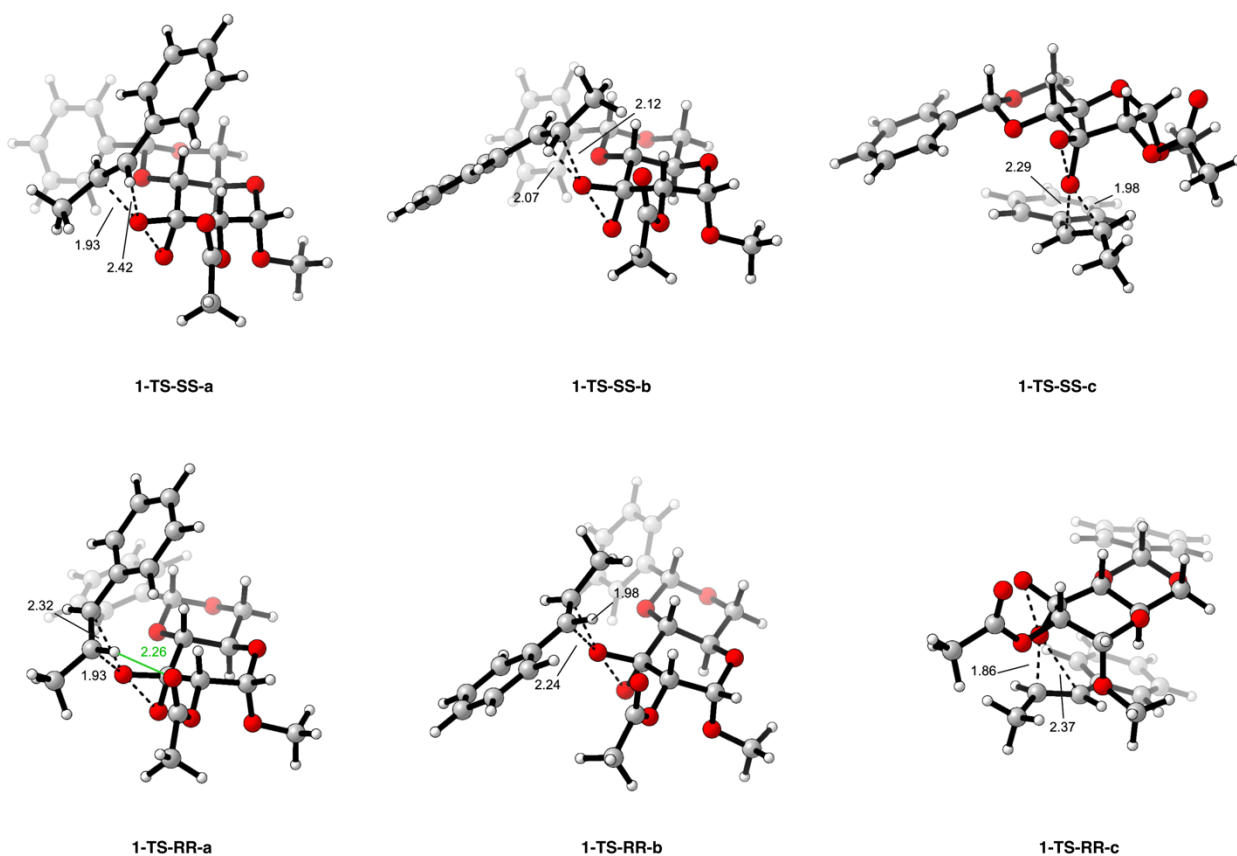
All the calculations were performed by using the Gaussian 16 program package,<sup>1</sup> within B3LYP as a hybrid functional for DFT calculation.<sup>2,3</sup> The catalyst structures utilized in the study were manually prepared and conformationally sampled. Further confirmation of the most stable conformations was validated by using the open-source *CREST* tool, which is associated with the *xTB* software. The solvents involved in the reaction were specified during this process.<sup>4-6</sup> The basis set for the DFT optimization step was selected identical to all the atoms as 6-31g(d), as previously validated by our group and by Singleton and co-workers on similar systems.<sup>7-11</sup> Frequency calculations were performed for each species in order to confirm the minimum or transition state effective nature of the optimized structures. Single points calculations were then performed by using the M06-2X functional and by applying a triple zeta basis set to all the atoms: def2TZVP.<sup>12-13</sup> The role of the solvent was simulated using the SMD solvation model, with a specified list of seven parameters to resemble the ternary mixture of water (H<sub>2</sub>O), 1,2-dimethoxyethane (DME), and acetonitrile (MeCN).<sup>14</sup> Indeed, in order to account for the 4:6:2 ratio between H<sub>2</sub>O:DME: MeCN, a linear combination of the properties of the three solvents was employed.<sup>15,16</sup> These include the static dielectric constant of the solvent at 25 °C (*Eps*); dynamic (optical) dielectric constant (*EpsInf*); hydrogen bond acidity (*HBondAcidity*) and basicity (*HBondBasicity*), which are Abraham's A and B values respectively; the surface tension of the solvent at interface (*SurfaceTensionAtInterface*); carbon aromaticity – the fraction of aromatic carbons (*CarbonAromaticity*) and electronegative halogenicity – the fraction of halogens (*ElectronegativeHalogenicity*). Table S1 lists all the parameters for the three isolated solvents and the one arose from the linear combination.

<i>Parameter</i>	<i>H<sub>2</sub>O</i>	<i>DME</i>	<i>MeCN</i>	<i>H<sub>2</sub>O:DME:MeCN</i> <i>(4:6:2)</i>
<b>Eps</b>	78.355	7.55	35.688	35.84
<b>EpsInf</b>	1.777849	1.896129	1.806874	1.841827
<b>HBondAcidity</b>	0.0	0.0	0.07	0.01
<b>HBondBasicity</b>	0.0	0.68	0.32	0.39
<b>SurfaceTensionAtInterface</b>	0.0	35.42167	41.25	24.59
<b>CarbonAromaticity</b>	0.0	0.0	0.0	0.0
<b>ElectronegativeHalogenicity</b>	0.0	0.0	0.0	0.0

**Table S1.** List of seven parameters to simulate the mixture 4:6:2 of H<sub>2</sub>O:DME:MeCN.

These parameters were then specified in Gaussian 16 by using the keyword “SCRF = (SMD, solvent=generic, read)”. All data reported below, are referred to this level of theory and the discussions are based on the values of Gibbs relative energies in kcal/mol. Boltzmann population analysis was performed at the reaction specified temperature.

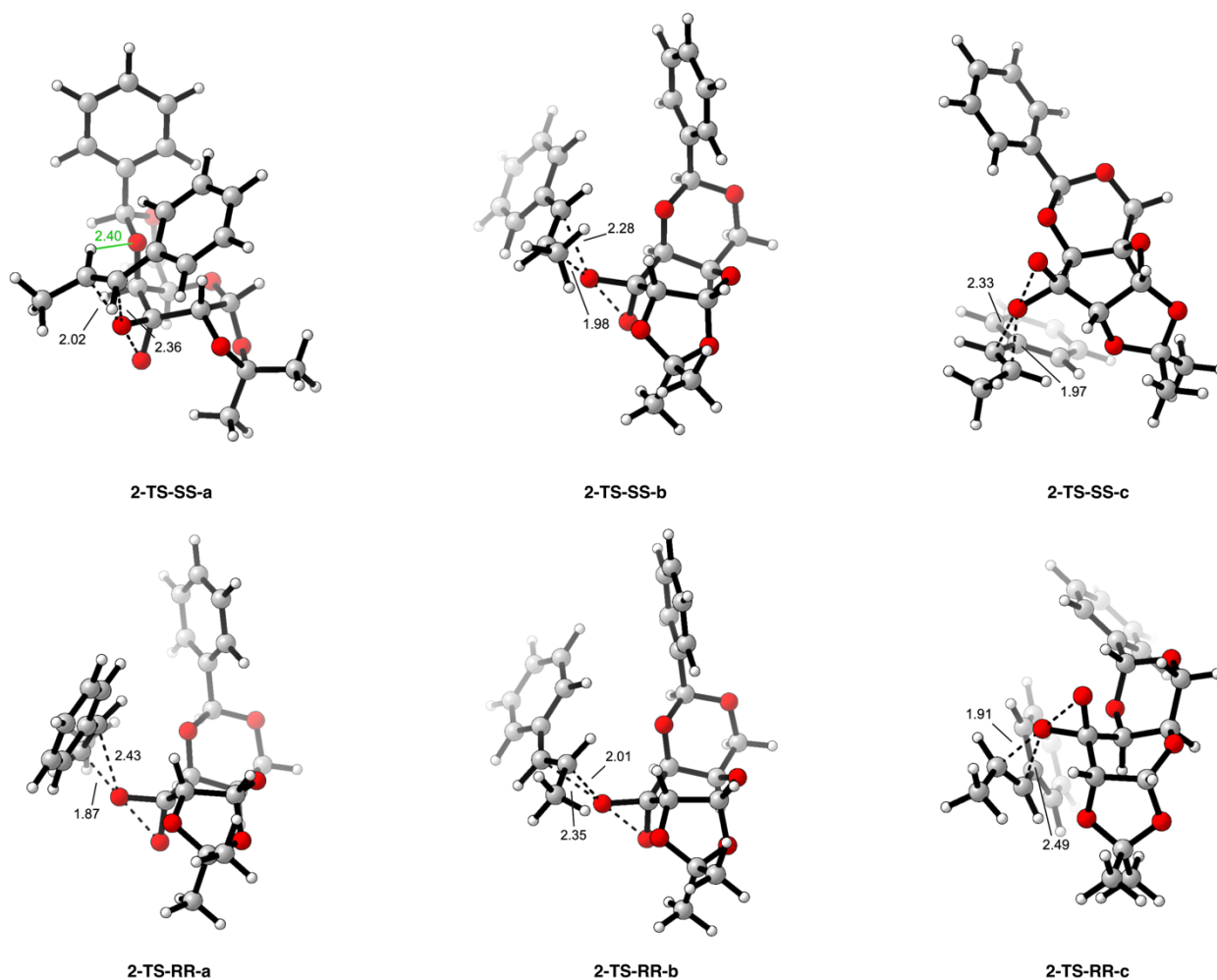
## Complete energy and population analysis for substrate **9** – Catalyst **1**



	$\Delta\Delta G$ (kcal mol <sup>-1</sup> )	Boltzmann population	Comp	Exp
1-TS-SS-a	2.2	1.8	2.2	32.0
1-TS-SS-b	3.1	0.3		
1-TS-SS-c	3.5	0.1		
1-TS-RR-a	0.0	94.5	97.8	68.0
1-TS-RR-b	1.8	3.3		
1-TS-RR-c	4.9	0.0		

**Figure S1.** Most stable transition states for substrate **9** using catalyst **1** and displaying both the attack on the two enantiotopic faces of the olefinic substrate. In the table, relative Gibbs free energy values and Boltzmann population percentage (at 0 °C) are reported. In the images, the dashed bonds represent the ones broken or formed during the TS, while in green are highlighted the H-bonds. [SMD(Mix)-M06-2X/def2tzvp//B3LYP/6-31g(d)]

## Complete energy and population analysis of substrate **9** – Catalyst **2**



	$\Delta\Delta G$ (kcal mol <sup>-1</sup> )	Boltzmann population	Comp	Exp
2-TS-SS-a	0.0	48.1		
2-TS-SS-b	0.2	34.5	89.5	84.0
2-TS-SS-c	1.1	6.9		
2-TS-RR-a	0.9	9.2		
2-TS-RR-b	2.1	1.1	10.5	16.0
2-TS-RR-c	2.9	0.2		

**Figure S2.** Most stable transition states for substrate **9** using catalyst **2** and displaying both the attach on the two enantiotopic faces of the olefinic substrate. In the table, relative Gibbs free energy values and Boltzmann population percentage (at 0 °C) are reported. In the images, the dashed bonds represent the ones broken or formed during the TS, while in green are highlighted the H-bonds. [SMD(Mix)-M06-2X/def2tzvp//B3LYP/6-31g(d)]

## Cartesian coordinates

<b>1-TS-SS-a</b>				C	4.01042100	-0.46918000	1.30751300
B3LYP/6-31g(d),				O	4.07673600	0.68707300	0.94200400
el. energy = -1571.138258 a.u.				C	4.89073400	-1.09469500	2.36196900
im. frequency -371.33				H	4.28152900	-1.33230200	3.24078800
C	2.11595100	-0.96207000	-0.07474600	H	5.31583900	-2.03463400	1.99799800
C	0.76814700	-0.82852700	0.68854300	H	5.68418800	-0.39957200	2.63898400
C	-0.32230800	-0.54482100	-0.35192600	H	2.27995900	2.41124200	1.78546100
O	0.81876000	0.06074000	1.80019700	H	-0.72672000	1.81937700	1.47701600
C	1.32655300	2.36990300	1.26560900	C	1.33506800	2.80499200	-0.11986200
C	0.23642900	1.89553700	1.97413800	C	2.57281400	2.98783900	-0.77566300
H	2.38858500	-0.00023900	-0.51626100	C	0.15167900	3.10724400	-0.83203400
C	-0.32692100	-1.69687800	-1.36323700	C	2.62235400	3.44085500	-2.09082500
C	2.02558000	-2.00207600	-1.21293300	H	3.48603100	2.74029800	-0.24504600
H	2.90256100	-1.91802900	-1.87094900	C	0.20761000	3.56087600	-2.14538100
H	-0.48399300	-2.63973900	-0.82757900	H	-0.81252700	3.01275200	-0.34169100
O	0.92014700	-1.71038400	-2.06316700	C	1.44232000	3.72818800	-2.78131500
O	1.95082900	-3.27736400	-0.65485300	H	3.58407600	3.56941500	-2.57974700
O	3.14183400	-1.38296200	0.82842800	H	-0.71233900	3.79648400	-2.67348400
O	-1.59677100	-0.40487000	0.25795900	H	1.48231000	4.08621600	-3.80637600
C	-1.46451800	-1.47355700	-2.35190500	C	0.19001400	1.88301700	3.47460200
H	-1.60325100	-2.32896200	-3.01789100	H	1.19473700	1.83088100	3.90424300
H	-1.25746900	-0.57990000	-2.96363800	H	-0.29457400	2.79913500	3.83786600
O	-2.67824700	-1.31844400	-1.61809100	H	-0.38891200	1.02568200	3.82735500
C	-2.62044500	-0.23358000	-0.70570300	C	-3.94933900	-0.14053000	0.00366400
H	-2.41278100	0.68788600	-1.28341700	C	-4.98736700	0.60129400	-0.56667600
H	-0.07087600	0.37873500	-0.89933900	C	-4.16495200	-0.82200500	1.20589500
O	0.53122700	-1.76736800	1.60843700	C	-6.23401800	0.66487300	0.05673300
C	2.12089400	-4.32682300	-1.59799400	H	-4.82084400	1.12790400	-1.50387800
H	1.33184500	-4.32089900	-2.35969700	C	-5.41054000	-0.75563300	1.83026500
H	3.09772200	-4.25197100	-2.09964400	H	-3.35023800	-1.38732200	1.64573400
H	2.07693400	-5.26074000	-1.03395900	C	-6.44674600	-0.01418100	1.25783200

H	-7.03578400	1.24481100	-0.39271600	C	-4.25516900	1.39605400	-0.04155700
H	-5.57263100	-1.28429300	2.76593600	O	-4.17647100	1.70891300	1.12941200
H	-7.41597600	0.03606500	1.74724800	C	-5.04163600	2.15009700	-1.08609600
<b>1-TS-SS-b</b>				H	-4.34758600	2.58346600	-1.81419500
B3LYP/6-31g(d),				H	-5.70096300	1.46911600	-1.63245800
el. energy = -1571.132295 a.u.				H	-5.62229000	2.94075300	-0.60955100
im. frequency -381.43				H	-1.45759400	3.18877200	1.32693500
C	-2.75248200	-0.46006800	0.18266800	C	-1.49515800	1.62322100	2.87437100
C	-1.28762100	-0.16387700	-0.26104000	H	-0.95222800	0.70403600	3.11800000
C	-0.37536600	-1.16408200	0.47171900	H	-1.44550500	2.27901700	3.75675000
O	-0.89517400	1.22760400	-0.10139500	H	-2.55125300	1.40469900	2.69936700
C	-0.89850100	2.33841600	1.70517300	H	0.91409600	1.25108800	1.63774700
C	0.38891700	2.12010200	1.25036800	C	1.17308000	2.98434400	0.37417000
H	-2.88508900	-0.22747300	1.24123700	C	2.35923400	2.47423700	-0.18536400
C	-0.83515200	-2.58112000	0.11418300	C	0.80264300	4.31018200	0.08342500
C	-3.12007000	-1.94780000	-0.01693700	C	3.14642500	3.26320200	-1.01845400
H	-4.06099000	-2.17408700	0.50546700	H	2.63887300	1.44422000	0.01537900
H	-0.81130300	-2.69299200	-0.97561700	C	1.59312500	5.09787600	-0.74767200
O	-2.15719200	-2.78513100	0.61844300	H	-0.09790300	4.73087700	0.52070400
O	-3.24106600	-2.20925400	-1.37989600	C	2.76652400	4.57739800	-1.30135900
O	-3.65757100	0.32331600	-0.59833400	H	4.05410100	2.85063700	-1.44976600
O	0.98880100	-0.97841200	0.12352300	H	1.29765200	6.12138700	-0.96138500
C	0.11395300	-3.58612000	0.75442200	H	3.38251400	5.19579100	-1.94870700
H	-0.08491300	-4.60797200	0.42181100	C	3.24141200	-1.72287500	0.26403300
H	0.01537500	-3.54771700	1.85201400	C	4.30447600	-1.89619100	1.15366000
O	1.44653500	-3.27149000	0.35277000	C	3.50110900	-1.36788900	-1.06525400
C	1.82316300	-1.95644900	0.72224300	C	5.62047700	-1.71757700	0.72339800
H	1.74076300	-1.86860300	1.82290100	H	4.10339200	-2.17441400	2.18582300
H	-0.49780900	-1.04092300	1.56288000	C	4.81586600	-1.18633900	-1.49354900
O	-1.11879800	0.01253500	-1.55623700	H	2.66838500	-1.22503100	-1.74608200
C	-3.83268900	-3.46801900	-1.67192100	C	5.87730700	-1.36213800	-0.60149300
H	-3.22685900	-4.30002900	-1.29282700	H	6.44181400	-1.85344600	1.42190100
H	-4.84225100	-3.53956700	-1.23939900	H	5.01286300	-0.91002400	-2.52606200
H	-3.90202700	-3.53295800	-2.75968000	H	6.90100700	-1.22079300	-0.93832100

**1-TS-SS-c**

B3LYP/6-31g(d),

el. energy = -1571.135374 a.u.

im. frequency -369.78

C	-2.53664200	-1.04329100	-0.65219800
C	-1.21221100	-1.42147100	0.06928500
C	-0.04680700	-1.16983800	-0.90207800
O	-1.02518200	-0.93906400	1.41556800
C	-1.57070600	0.76280000	2.26102300
C	-0.20839600	1.00184800	2.31978000
H	-2.73633300	-1.87764700	-1.33196500
C	-0.15182700	0.17113400	-1.63094200
C	-2.52362800	0.21376200	-1.54886300
H	-3.36575800	0.16215300	-2.24922800
H	-0.10639100	0.98985700	-0.90840900
O	-1.37227900	0.22670300	-2.37508700
O	-2.63675600	1.36929200	-0.75622100
O	-3.58953500	-0.98679200	0.31645000
O	1.20871900	-1.25205400	-0.24749000
C	1.02768200	0.28394800	-2.59502600
H	1.08581100	1.27416100	-3.05345700
H	0.92551500	-0.47023300	-3.39245900
O	2.24062800	0.09375700	-1.86923400
C	2.26591800	-1.14481100	-1.18096200
H	2.14531500	-1.95357500	-1.92857100
H	-0.11949300	-1.96809700	-1.66284100
C	-2.91122700	2.54322400	-1.51398500
H	-2.08277200	2.79019800	-2.18742700
H	-3.82858800	2.41972500	-2.10716400
H	-3.05488900	3.35540800	-0.79770400
C	-4.82387100	-1.36513600	-0.09954600
O	-5.08819900	-1.66584400	-1.24300400
C	-5.79771600	-1.36104100	1.05360900
H	-5.49782000	-2.11335000	1.79097900
H	-5.79067200	-0.38783600	1.55446300

H	-6.79900600	-1.58555600	0.68474300
O	-1.23825500	-2.61982700	0.64961200
H	-2.15423400	1.25687900	1.48905500
H	0.35683400	0.43912400	3.06014200
C	0.55759400	1.93296900	1.50857600
C	1.94551700	1.73891700	1.36034000
C	-0.03356800	3.05799600	0.89532200
C	2.71035400	2.61768700	0.60015300
H	2.40949700	0.86785300	1.81311900
C	0.73650500	3.94276000	0.14748300
H	-1.09430700	3.24366100	1.02957200
C	2.10959500	3.72328300	-0.00671000
H	3.77265000	2.43282600	0.47291000
H	0.27017900	4.81187600	-0.30890300
H	2.70806000	4.41500900	-0.59331500
C	-2.33841300	0.14298400	3.38968300
H	-3.13720200	-0.49028800	2.99716900
H	-1.68978500	-0.46447300	4.02760500
H	-2.79246300	0.92954100	4.00918000
C	3.58300200	-1.28047500	-0.44948100
C	3.65824800	-2.04721500	0.71930300
C	4.74199100	-0.68589600	-0.96082500
C	4.88130500	-2.20985800	1.37199800
H	2.75589500	-2.50317100	1.11270300
C	5.96301100	-0.85128600	-0.30539000
H	4.67926900	-0.09009200	-1.86518000
C	6.03614000	-1.61340400	0.86223400
H	4.93055200	-2.80434600	2.28058200
H	6.85801200	-0.38393200	-0.70812700
H	6.98787700	-1.74258600	1.37109700

**1-TS-RR-a**

B3LYP/6-31g(d),

el. energy = -1571.138364 a.u.

im. frequency -377.68

C	-2.29179400	-0.71955500	0.09631600	H	0.67639800	3.30170000	4.28747500
C	-1.00916100	-0.60250400	-0.77027200	C	-1.84870800	2.56095100	-2.98685500
C	0.18118200	-0.68213500	0.19994700	H	-2.32143300	3.53995000	-3.14356500
O	-0.96208400	0.52655700	-1.66859000	H	-0.91292900	2.53222800	-3.55242600
C	-1.61087900	2.33820300	-1.52199400	H	-2.51606000	1.79255600	-3.38650700
C	-0.40646900	2.64890700	-0.91324200	C	-2.65572000	-4.31586100	0.85752000
H	0.45271000	2.79270100	-1.56518800	H	-1.81827200	-4.57697600	1.51554400
H	-2.50036500	2.23418700	-0.90871500	H	-3.57183000	-4.24119800	1.46326200
H	-2.36464900	0.13929200	0.76737900	H	-2.78491100	-5.09531600	0.10393800
C	0.10744900	-2.00884400	0.96414700	C	-4.36391500	0.22154400	-0.64497000
C	-2.26731100	-1.99252300	0.97418600	O	-4.25256400	1.20155400	0.06889500
H	-3.08128600	-1.94880400	1.71311700	C	-5.53063200	-0.04698700	-1.56414100
H	0.11408700	-2.83386700	0.24330800	H	-5.17553900	-0.14110900	-2.59544200
O	-1.08307300	-2.03488100	1.75850600	H	-6.00450600	-0.99752500	-1.29908000
O	-2.41252400	-3.10735100	0.15000200	H	-6.25327500	0.76595100	-1.48721500
O	-3.46195500	-0.77468400	-0.72898200	C	3.80102000	-0.55488800	-0.34661700
O	1.41708300	-0.59133000	-0.48668500	C	5.00498700	-0.90135900	0.27766700
C	1.32251500	-2.11271400	1.88137200	C	3.82142800	-0.04064100	-1.64661100
H	1.39651800	-3.09699100	2.35089400	C	6.21690400	-0.73402800	-0.39136400
H	1.25350600	-1.34782600	2.67249700	H	4.98538000	-1.31519000	1.28111300
O	2.50395300	-1.93445800	1.10366300	C	5.03653400	0.12503500	-2.31427300
C	2.50041200	-0.69517600	0.41255700	H	2.88407400	0.21013600	-2.13054000
H	2.39940300	0.10988700	1.16745200	C	6.23602600	-0.21830500	-1.68935500
H	0.10404500	0.13450300	0.93636600	H	7.14660600	-1.01052000	0.09930300
O	-0.95466000	-1.34190100	-1.87006400	H	5.04350700	0.51795800	-3.32776900
C	-0.15586000	2.80670000	0.50611700	H	7.18073700	-0.08905800	-2.21125300
C	1.17077400	3.02795700	0.93491800				
C	-1.17857800	2.77118800	1.48192500	<b>1-TS-RR-b</b>			
C	1.46883500	3.20516100	2.28274500	B3LYP/6-31g(d),			
H	1.96708000	3.05315700	0.19537800	el. energy = -1571.135007 a.u.			
C	-0.87385000	2.94442600	2.82787000	im. frequency -390.65			
H	-2.21054300	2.60687400	1.18667600	C	1.12283900	1.79107200	0.29898700
C	0.44691100	3.16306800	3.23464000	C	0.20225200	0.67097800	-0.25670700
H	2.49643000	3.37575700	2.59120400	C	-1.14931100	0.81089000	0.46884800
H	-1.67090400	2.91377400	3.56544100	O	0.81596700	-0.65203800	-0.23420500



C	2.16646900	-1.66615700	1.23998200
C	0.83976800	-2.05223100	1.16298000
H	1.31489100	1.61596800	1.36040800
C	-1.69165400	2.21550700	0.17195200
C	0.47267300	3.18687600	0.16713900
H	1.04060300	3.92062900	0.75767000
H	-1.75112300	2.34765000	-0.91396700
O	-0.82289900	3.18817100	0.75703500
O	0.45202200	3.54923500	-1.17847700
O	2.36760800	1.81076500	-0.40313000
O	-2.06908400	-0.17900600	0.03945500
C	-3.08224000	2.34654200	0.77952900
H	-3.56855600	3.28129700	0.48932800
H	-3.01588700	2.31080100	1.87976800
O	-3.89382300	1.28408000	0.28367900
C	-3.35724500	0.01021200	0.59934200
H	-3.27925900	-0.06432100	1.70150300
H	-1.00286700	0.73715100	1.55943200
O	0.15693000	0.50938300	-1.56695700
C	0.11490300	4.91203900	-1.40032300
H	-0.89679500	5.14341800	-1.04579600
H	0.82826300	5.58216100	-0.89676700
H	0.16956200	5.07325900	-2.47886500
C	3.49642800	1.53372200	0.28195500
O	3.53844700	1.27647100	1.46991900
C	4.69053800	1.57170000	-0.63920300
H	4.61834200	2.41311600	-1.33297700
H	5.60615400	1.63456000	-0.04944100
H	4.70847600	0.65080600	-1.23239200
H	0.56533300	-2.83830800	0.46670100
C	-0.15876600	-1.79249100	2.24845800
H	0.13034600	-0.94845500	2.88267600
H	-1.14850600	-1.61338600	1.82166500
H	-0.23281600	-2.68248600	2.88912000
C	3.26132900	-2.16538600	0.42501600

C	4.58153100	-1.84623000	0.80456900
C	3.06662900	-2.97478900	-0.71407500
C	5.66874200	-2.34167700	0.08913700
H	4.74142500	-1.19701000	1.66041100
C	4.15451600	-3.45710100	-1.43198200
H	2.06073100	-3.19786000	-1.05377000
C	5.45940600	-3.15028100	-1.03014000
H	6.67923400	-2.09249600	0.40133200
H	3.98765500	-4.07091700	-2.31272800
H	6.30633500	-3.53390200	-1.59250100
H	2.43858200	-0.93997400	2.00279500
C	-4.28558100	-1.04524800	0.04965900
C	-5.36889700	-1.48099500	0.81751700
C	-4.09551200	-1.56141400	-1.23630500
C	-6.25914900	-2.42664000	0.30764500
H	-5.51821700	-1.07682000	1.81633400
C	-4.98436600	-2.50890500	-1.74416800
H	-3.24550700	-1.22429800	-1.81998600
C	-6.06706000	-2.94239200	-0.97537000
H	-7.09846700	-2.76151500	0.91143000
H	-4.83133700	-2.90973200	-2.74276100
H	-6.75739100	-3.68142600	-1.37384700

**1-TS-RR-c**

B3LYP/6-31g(d),

el. energy = -1571.129827 a.u.

im. frequency -375.74

C	2.79803700	-0.93976000	0.06269000
C	1.45184000	-0.83012700	-0.70757300
C	0.35616700	-1.35959400	0.24036000
O	1.12423400	0.41548000	-1.38357600
C	1.30464700	2.25987900	-1.24832900
C	0.46118900	2.32917400	-0.14474200
H	0.94194600	2.34842400	0.83063300
H	0.84884200	2.39219400	-2.22550100

H	3.01004500	-2.01302800	0.08403200	C	4.84088100	-1.09176000	-1.15175200
C	0.45225900	-0.79345700	1.65976100	O	4.97509200	-2.26132400	-0.87688600
C	2.80777300	-0.50060300	1.53795100	C	5.73696300	-0.30006800	-2.07156600
H	3.70583800	-0.90117700	2.02759700	H	6.63428800	-0.87868400	-2.29378300
H	0.29050800	0.28858300	1.62997100	H	5.19830400	-0.09285400	-3.00301300
O	1.72585700	-1.09676400	2.23574300	H	6.00377900	0.66060200	-1.62147500
O	2.80168800	0.90132800	1.64627700	O	1.47582100	-1.37925800	-1.91469200
O	3.84459200	-0.29869300	-0.66544200	C	-3.28390800	-1.54234800	-0.06110800
O	-0.94632500	-1.12764900	-0.26787600	C	-3.42120000	-1.55533500	-1.45416400
C	-0.64462700	-1.43403700	2.50930200	C	-4.41824700	-1.39733900	0.74295100
H	-0.71156500	-0.97798800	3.50054400	C	-4.68247500	-1.42044500	-2.03481800
H	-0.43652800	-2.50959200	2.63000400	H	-2.53588400	-1.65964600	-2.07284400
O	-1.90205700	-1.22749500	1.87125200	C	-5.67872300	-1.25982900	0.15869400
C	-1.91758800	-1.74767200	0.55285400	H	-4.30711400	-1.38517800	1.82163200
H	-1.67547700	-2.82736300	0.61163700	C	-5.81476400	-1.27201400	-1.23043100
H	0.53609700	-2.44792400	0.30693000	H	-4.78059600	-1.43266500	-3.11739600
C	-0.98301000	2.39777300	-0.15341200	H	-6.55540600	-1.14497600	0.79120000
C	-1.64603800	2.74932300	1.04202100	H	-6.79746500	-1.16989700	-1.68394600
C	-1.76197800	2.14793500	-1.30448200				
C	-3.03005300	2.87910000	1.08115200	<b>2-TS-SS-a</b>			
H	-1.05850500	2.93213800	1.93875700	B3LYP/6-31g(d),			
C	-3.14421500	2.26674800	-1.25790600	el. energy = -1495.913833 a.u.			
H	-1.27913100	1.81049400	-2.21516500	im. frequency -349.42			
C	-3.78380200	2.63824300	-0.06947500	C	1.76802800	-0.01530700	-0.31783500
H	-3.52232800	3.15626600	2.00903600	C	1.40446600	-0.55764300	1.07918800
H	-3.73333700	2.04714200	-2.14315500	C	0.27487200	-1.58743200	1.00556300
H	-4.86640900	2.72115200	-0.03912100	O	1.28000600	0.42700500	2.10711200
C	2.76482600	2.59771800	-1.19158300	C	0.13496700	2.47710400	1.88021300
H	2.88957800	3.67627100	-1.36347300	C	-0.41995300	1.41902900	2.56828400
H	3.20390500	2.33282400	-0.22915200	H	0.87457000	3.07196100	2.41383100
H	3.30209800	2.06483900	-1.97915100	C	-0.15912500	2.91819700	0.52770500
C	3.11801300	1.36372100	2.95640900	C	0.60263100	3.97407600	-0.01520100
H	2.38916700	1.00900500	3.69415500	C	-1.19237700	2.36499900	-0.26032500
H	4.12111600	1.02934400	3.25756900	C	0.34592100	4.46089000	-1.29308600
H	3.10121500	2.45530200	2.91823800	H	1.40517100	4.40506500	0.57789400

C	-1.44418600	2.85271200	-1.53781900	O	2.40946800	-0.99460800	1.85845400
H	-1.79153500	1.54647400	0.12187600	H	-1.16196600	0.79957700	2.07416000
C	-0.67986300	3.90217300	-2.05916200	C	-3.20973600	-1.27457000	-0.11913600
H	0.94610700	5.27342500	-1.69282800	C	-4.27400900	-0.96704300	0.73108400
H	-2.24322200	2.41136900	-2.12671300	C	-3.26849100	-0.89811300	-1.46692700
H	-0.88380000	4.28161200	-3.05674700	C	-5.39228700	-0.28610900	0.24362800
C	-0.30805700	1.27228600	4.05684000	H	-4.23254200	-1.26466200	1.77655300
H	0.56347800	1.80678500	4.44637800	C	-4.38561800	-0.22125100	-1.95392200
H	-1.20636600	1.67693600	4.54387000	H	-2.44040800	-1.15290000	-2.12038000
H	-0.21891000	0.21908300	4.33754800	C	-5.44867400	0.08763800	-1.09910800
H	1.02797100	0.72920000	-0.62278200	H	-6.21794500	-0.05361500	0.91070400
C	0.71166800	-2.72221800	0.06711300	H	-4.43267800	0.05966800	-3.00293400
C	1.87327700	-1.15353700	-1.35671000	H	-6.31954500	0.61336400	-1.48162100
H	1.71251300	-0.77212400	-2.37344000				
H	1.59098000	-3.22786500	0.48658400				
O	0.98945800	-2.21958300	-1.24209200	<b>2-TS-SS-b</b>			
O	3.22571800	-1.56945000	-1.19273500	B3LYP/6-31g(d),			
O	3.05572200	0.56631200	-0.35926800	el. energy = -1495.911864 a.u.			
O	-0.93881000	-1.00702800	0.51630300	im. frequency -346.80			
C	-0.44838900	-3.69692600	-0.09547700	C	-2.20090400	-0.11630100	0.61554200
H	-0.60451300	-4.23978200	0.85109000	C	-1.41465500	0.71483900	-0.41647600
H	-0.24185300	-4.41722900	-0.88992900	C	-0.44481000	-0.17805400	-1.19080400
O	-1.64042600	-3.01333300	-0.47861300	O	-0.84832200	1.94764500	0.05746500
C	3.99026900	-0.39812700	-0.90354800	C	-0.04809000	2.45495700	1.79668500
C	-1.98292000	-1.97565700	0.40601900	C	1.09456600	1.89747300	1.25554100
H	-2.16154600	-2.39655800	1.41375400	H	1.31031700	0.86206900	1.50869000
C	5.05844700	-0.74614100	0.12228800	H	-0.25157900	3.50509400	1.60885700
H	5.65043200	0.14430000	0.35731300	H	-1.55289600	-0.37172200	1.45759300
H	4.57908100	-1.10536800	1.03358100	C	-1.26187200	-1.25993300	-1.91335800
H	5.72693300	-1.51562000	-0.27821300	C	-2.78298100	-1.39372000	-0.02754300
C	4.57352200	0.19432800	-2.18876800	H	-2.97902000	-2.15853300	0.73566200
H	5.07839400	1.14027300	-1.96843400	H	-1.92338000	-0.78746000	-2.65027900
H	5.29721700	-0.49679500	-2.63273000	O	-2.01791600	-2.04480300	-0.98372000
H	3.78228100	0.39103500	-2.91875200	O	-4.01352700	-0.90837300	-0.55955000
H	0.12630200	-1.98227900	2.02168700	O	-3.35392100	0.54695000	1.09422700
				O	0.50555000	-0.79709500	-0.31888400

C	-0.29852700	-2.22940000	-2.58888500
H	0.19011300	-1.72294300	-3.43751000
H	-0.82869600	-3.11053800	-2.95698600
O	0.67713600	-2.70830700	-1.66532200
C	-4.51203600	0.06114800	0.36036600
C	1.38230300	-1.66625800	-1.03027500
H	1.91398700	-1.06693200	-1.79290300
C	-5.16173900	1.19548200	-0.41666500
H	-5.54791500	1.94825600	0.27840200
H	-4.41714300	1.65480000	-1.06745900
H	-5.99556000	0.81033900	-1.01301200
C	-5.46060000	-0.58818000	1.37062000
H	-5.76157100	0.14422200	2.12652400
H	-6.35707700	-0.95978400	0.86414600
H	-4.97356300	-1.42551800	1.87974000
H	0.06810800	0.45554400	-1.92843700
O	-2.11184400	1.50610200	-1.24165600
C	2.06637800	2.54780600	0.39110700
C	3.27186500	1.87188100	0.11502000
C	1.87154300	3.82706600	-0.16996100
C	4.25702500	2.46011700	-0.67408200
H	3.42966300	0.88013400	0.53079500
C	2.85326600	4.40737900	-0.96414500
H	0.93686000	4.35328500	-0.00611500
C	4.05199500	3.73041400	-1.21569400
H	5.18353900	1.92683200	-0.86900600
H	2.68406000	5.39012100	-1.39543700
H	4.81711100	4.19016600	-1.83521800
C	-0.83045600	1.84859500	2.92127200
H	-1.90268300	1.86165200	2.70158100
H	-0.52187100	0.81930300	3.12768100
H	-0.66902100	2.43808700	3.83409200
C	2.34549400	-2.27381300	-0.04329400
C	3.71869200	-2.04036100	-0.14421500
C	1.85508500	-3.08132700	0.99004200

C	4.60007500	-2.60272400	0.78314800
H	4.10140200	-1.42336400	-0.95423400
C	2.73340700	-3.64261600	1.91457000
H	0.78728900	-3.26595600	1.05167700
C	4.10746900	-3.40300200	1.81398300
H	5.66769300	-2.41920600	0.69638700
H	2.34881900	-4.27081200	2.71372500
H	4.79081600	-3.84289800	2.53558900

**2-TS-SS-c**

B3LYP/6-31g(d),

el. energy = -1495.906903 a.u.

im. frequency -387.76

C	-1.83508300	-1.51265000	0.90788700
C	-0.58188500	-0.68737000	1.22094300
C	0.24280800	-0.33677900	-0.04948900
O	-0.80412500	0.40943600	2.12581700
C	-2.36165000	1.61739300	2.08091800
C	-1.49639500	2.56285300	1.56361800
O	0.09045100	-1.20329500	2.25396600
H	-2.28433600	-1.78743100	1.86861500
C	-0.04271700	-1.36089500	-1.17016800
C	-1.47363900	-2.77162200	0.07836200
H	-1.37581900	-3.67577200	0.68166400
H	-0.94223900	-1.04497300	-1.71157200
O	-0.26249800	-2.66240200	-0.61726800
O	-2.57824300	-2.91398900	-0.81177500
O	-2.77897300	-0.82985100	0.07563300
O	1.60461000	-0.32758300	0.34759500
C	1.10616500	-1.42526500	-2.17400200
H	1.01483800	-0.56473900	-2.85974800
H	1.03605100	-2.34801000	-2.75488000
O	2.38412800	-1.41622600	-1.55890600
C	-3.50893000	-1.84498000	-0.62616700
C	2.52060300	-0.28705800	-0.71341800

H	2.33149600	0.62000100	-1.32427300
C	-3.93549400	-1.29837000	-1.98110000
H	-4.62437600	-0.45719600	-1.85325200
H	-3.06255300	-0.96241900	-2.54664600
H	-4.44399900	-2.07940700	-2.55373000
C	-4.69933500	-2.33306900	0.20588400
H	-5.41928600	-1.52262600	0.35994800
H	-5.20170400	-3.15704500	-0.30991800
H	-4.36838500	-2.69709400	1.18316600
H	-0.04451100	0.66004500	-0.41322300
H	-0.86780100	3.08945400	2.27982200
H	-3.02402800	1.08157400	1.40777300
C	-1.32539400	2.96107600	0.17771700
C	-0.32194700	3.90349700	-0.13095900
C	-2.13183500	2.47597700	-0.87583000
C	-0.12812600	4.34580100	-1.43619000
H	0.30908400	4.28316500	0.66860700
C	-1.93420100	2.91945300	-2.17865800
H	-2.90080000	1.73887700	-0.67209600
C	-0.93487600	3.85615500	-2.46564500
H	0.65161700	5.07104400	-1.65088400
H	-2.56374200	2.53659600	-2.97735000
H	-0.78808200	4.20119900	-3.48533500
C	-2.70817900	1.55733000	3.53977600
H	-1.90942100	1.97920600	4.15687700
H	-3.62908800	2.12537600	3.73130200
H	-2.87758000	0.52425400	3.85532500
C	3.92597800	-0.26986200	-0.15443100
C	5.00717800	-0.18545100	-1.03863800
C	4.16028000	-0.33400000	1.22156500
C	6.31341200	-0.16152500	-0.55249900
H	4.82249900	-0.15066600	-2.10924400
C	5.46988500	-0.30920800	1.70610600
H	3.31544200	-0.40928900	1.89707200
C	6.54731700	-0.22161300	0.82367900

H	7.14806200	-0.09782800	-1.24598600
H	5.64689100	-0.36188400	2.77732500
H	7.56533500	-0.20203700	1.20455800

## 2-TS-RR-a

B3LYP/6-31g(d),

el. energy = -1495.908969 a.u.

im. frequency -345.73

C	1.46122700	-0.63853400	-0.32998100
C	0.94078500	-0.91631700	1.10282200
C	-0.45029100	-1.55507500	1.06482200
O	1.10463400	0.17963300	2.01330800
C	0.00042000	2.13901400	1.09475600
C	0.10509800	1.71077800	2.41135100
H	0.91923200	2.11338500	3.00734500
H	-0.90191100	1.85150900	0.55805700
C	0.97482900	2.89602500	0.34236400
C	0.58426300	3.44246700	-0.90005200
C	2.29560300	3.12109300	0.79176000
C	1.46456500	4.21887200	-1.64673900
H	-0.42449900	3.26106000	-1.26284500
C	3.17339100	3.88757700	0.03750100
H	2.63749400	2.65187600	1.70799000
C	2.76065100	4.44640700	-1.17835500
H	1.14440800	4.64070700	-2.59520600
H	4.18980300	4.04224100	0.38797000
H	3.45315700	5.04538300	-1.76327200
C	-1.07910100	1.22903800	3.19977000
H	-1.82970900	0.77735300	2.54761400
H	-0.76029000	0.49533100	3.94557700
H	-1.53969400	2.07210800	3.73226900
H	0.98463600	0.25722100	-0.73548100
C	-0.36760800	-2.85274400	0.24682900
C	1.23575000	-1.84972600	-1.26057500
H	1.20577200	-1.53543300	-2.31243400

H	0.30555300	-3.55895100	0.74906800	B3LYP/6-31g(d),			
O	0.07351200	-2.59051400	-1.08808700	el. energy = -1495.909769 a.u.			
O	2.40268400	-2.62766800	-1.01349700	im. frequency -377.47			
O	2.86420100	-0.46906700	-0.37220200	C	-2.22978400	-0.08600700	0.59957100
O	-1.41986100	-0.68132600	0.47359800	C	-1.53194400	0.68093800	-0.54330700
C	-1.76888100	-3.43699800	0.11191100	C	-0.50960800	-0.21936800	-1.23386200
H	-2.10513800	-3.81142100	1.09273500	O	-1.09763700	2.01496900	-0.23450000
H	-1.77902200	-4.25945400	-0.60655600	C	-0.10677500	2.31889900	1.48864600
O	-2.68239600	-2.46133300	-0.38781200	C	0.70725000	3.15386800	0.74935200
C	3.47620600	-1.71085600	-0.79936500	H	0.32022900	4.15740900	0.57457000
C	-2.70764700	-1.29148800	0.39295300	H	0.24182800	1.31012100	1.69758400
H	-3.02958000	-1.54525800	1.42100100	H	-1.54650900	-0.20682500	1.44547400
C	4.38714200	-2.26050800	0.28809200	C	-1.26883900	-1.41502500	-1.83032300
H	5.21411300	-1.56501700	0.46515200	C	-2.73811700	-1.45937400	0.10545100
H	3.81376800	-2.37662700	1.20819600	H	-2.85627600	-2.15683200	0.94533500
H	4.80206600	-3.22540100	-0.02231500	H	-1.96795900	-1.05618000	-2.59623500
C	4.21775900	-1.43684000	-2.11065400	O	-1.96015400	-2.14825500	-0.81266100
H	4.97829800	-0.66488100	-1.95560200	O	-4.01501800	-1.11413400	-0.42587300
H	4.70787200	-2.34794300	-2.46876500	O	-3.41302600	0.54481000	1.04502800
H	3.52549700	-1.08459600	-2.88165100	O	0.47878500	-0.69059900	-0.31047000
H	-0.73225300	-1.79087100	2.10153800	C	-0.25788000	-2.38919700	-2.42158000
O	1.76312000	-1.59368400	1.91670100	H	0.20424000	-1.93834600	-3.31545400
C	-3.64710100	-0.30133700	-0.24562200	H	-0.73957600	-3.32800900	-2.70373200
C	-4.67818300	0.28609000	0.48985000	O	0.73667800	-2.72559000	-1.45713300
C	-3.46676000	0.05006300	-1.58928600	C	-4.55541800	-0.09589800	0.41306100
C	-5.52645600	1.22137600	-0.10822300	C	1.39092500	-1.59238600	-0.92944300
H	-4.82346300	0.00894300	1.53167600	H	1.90080500	-1.05383000	-1.74989400
C	-4.31306400	0.98221900	-2.18615600	C	-5.31636700	0.90356900	-0.44381000
H	-2.66852400	-0.42207400	-2.15328000	H	-5.73261300	1.69401700	0.18918300
C	-5.34387100	1.57047900	-1.44630900	H	-4.63322800	1.34567800	-1.16942000
H	-6.32899500	1.67191900	0.46958000	H	-6.13985000	0.40075200	-0.96174500
H	-4.17369600	1.24855800	-3.23066800	C	-5.41640700	-0.70581200	1.52174500
H	-6.00440500	2.29556300	-1.91455900	H	-5.74653200	0.07638600	2.21275500
				H	-6.29854700	-1.19151700	1.09255600
				H	-4.84993200	-1.44904500	2.09122400

2-TS-RR-b

H	-0.03684800	0.36253300	-2.03785500	C	-0.55837700	-0.85485800	-0.27865200
O	-2.32331000	1.30387100	-1.42669100	O	-0.73603600	0.38617200	1.90485600
C	2.00160200	2.89015600	0.15593100	C	-0.92006300	2.29003400	1.97284800
C	2.58047100	3.89683200	-0.64697800	C	-0.67218100	2.52383500	0.62966000
C	2.73746000	1.70638900	0.37932400	O	-0.94248000	-1.47432000	2.07231000
C	3.84205100	3.73119000	-1.20835400	H	-1.54290100	2.60483600	-0.01778600
H	2.02357700	4.81313200	-0.82622500	H	-0.07939500	2.35176800	2.65800800
C	3.99966000	1.54582900	-0.18020300	H	-3.29474000	-0.57342800	1.77340300
H	2.31837900	0.91061200	0.98433100	C	-0.94991600	-2.25664300	-0.81967300
C	4.55738600	2.55459500	-0.97394900	C	-3.22960000	-1.76217700	-0.09411800
H	4.26859600	4.51761300	-1.82461200	H	-4.02838000	-2.34810200	0.37210800
H	4.55164800	0.62992500	0.00756600	H	-0.92851600	-2.23349900	-1.91544500
H	5.54666500	2.42379100	-1.40414200	O	-2.24707200	-2.69861900	-0.38151500
C	-1.22802800	2.83997800	2.34184500	O	-3.70738300	-1.13889100	-1.28606300
H	-0.89483500	2.92732200	3.38575900	O	-3.14033200	0.60046500	0.05039600
H	-1.54891300	3.82945300	2.00209300	O	0.85253600	-0.67580200	-0.26370700
H	-2.09488700	2.17497800	2.31371000	C	0.01068700	-3.33738200	-0.30066200
C	2.38010200	-2.07526200	0.10237600	H	-0.21851700	-3.52667800	0.75612800
C	3.74113500	-2.15280000	-0.20425300	O	1.36697500	-2.93673400	-0.45646700
C	1.93119500	-2.50263800	1.35720500	C	-4.05367300	0.20286000	-0.98509500
C	4.65088900	-2.64150500	0.73643000	C	1.61217200	-1.75293400	0.27794600
H	4.08961700	-1.83716200	-1.18498100	C	-3.80590700	1.06210100	-2.21531500
C	2.83890500	-2.98645000	2.29833500	H	-3.99986200	2.11496200	-1.98750700
H	0.87083000	-2.45457500	1.58246100	H	-2.76962100	0.94897400	-2.54468000
C	4.20041600	-3.05562400	1.99065600	H	-4.46893500	0.75421900	-3.02919900
H	5.70732000	-2.70103900	0.48842500	C	-5.49764500	0.29794100	-0.47855700
H	2.48433700	-3.31549900	3.27154900	H	-5.74683100	1.33443600	-0.22957100
H	4.90621000	-3.43480400	2.72492400	H	-6.19224600	-0.05795300	-1.24587500
				H	-5.63663200	-0.31236200	0.41969900
				H	-0.91709400	-0.08913800	-0.97122300
				H	-0.11726500	-4.26476300	-0.86527700
				H	1.32733400	-1.90463200	1.32619900
				C	0.61161200	2.65986000	-0.01731300
				C	0.64568400	3.15169500	-1.34047700
				C	1.83418400	2.33382700	0.61065900

**2-TS-RR-c**

B3LYP/6-31g(d),

el. energy = -1495.906387 a.u.

im. frequency -315.88

C	-2.78332400	-0.56223800	0.80474000
C	-1.26846800	-0.63582300	1.06816200

C	1.85484100	3.34650100	-1.99910400
H	-0.29009400	3.39295300	-1.83903700
C	3.03796300	2.51328800	-0.05551600
H	1.82628500	1.88863700	1.59944900
C	3.05410500	3.02782700	-1.35759100
H	1.86377800	3.73581900	-3.01329100
H	3.96763300	2.22593900	0.42597000
H	4.00005700	3.16348900	-1.87447600
C	-2.27140500	2.49801300	2.59578500
H	-3.07225500	2.30395200	1.87834300
H	-2.39469900	1.83342100	3.45553000
H	-2.36244000	3.53226900	2.95527700
C	3.06953100	-1.38915100	0.14654100
C	3.84729100	-1.16888700	1.28511400
C	3.64915000	-1.25455600	-1.12030600
C	5.19374300	-0.81429200	1.16435600
H	3.39869400	-1.27785400	2.26978900
C	4.99206900	-0.90381000	-1.24319200
H	3.03925200	-1.43093000	-2.00041000
C	5.76759500	-0.68108400	-0.10074900
H	5.79298300	-0.65037600	2.05635700
H	5.43799600	-0.80617900	-2.22983000
H	6.81632900	-0.41160500	-0.19807900



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Fig. S3 <sup>1</sup>H Compound 3 CDCl<sub>3</sub> 400 MHz

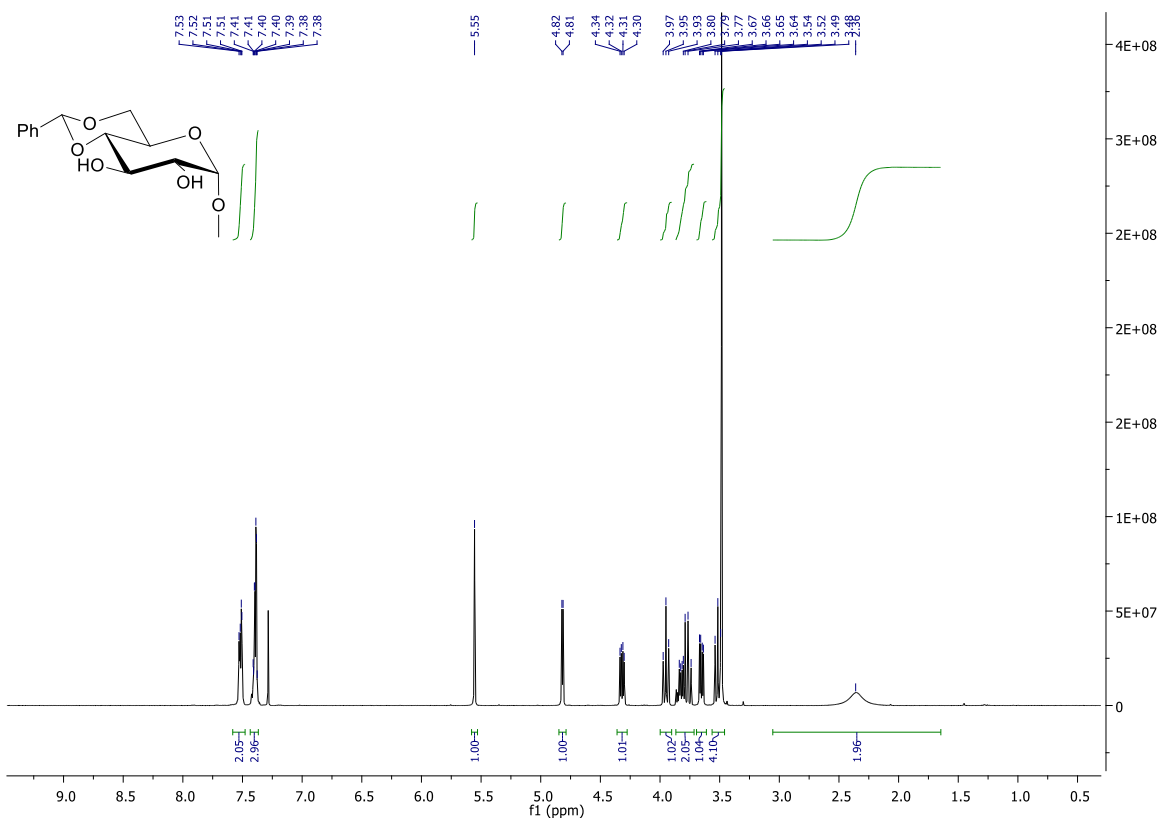


Fig. S4 <sup>1</sup>H Compound 4 CDCl<sub>3</sub> 400 MHz

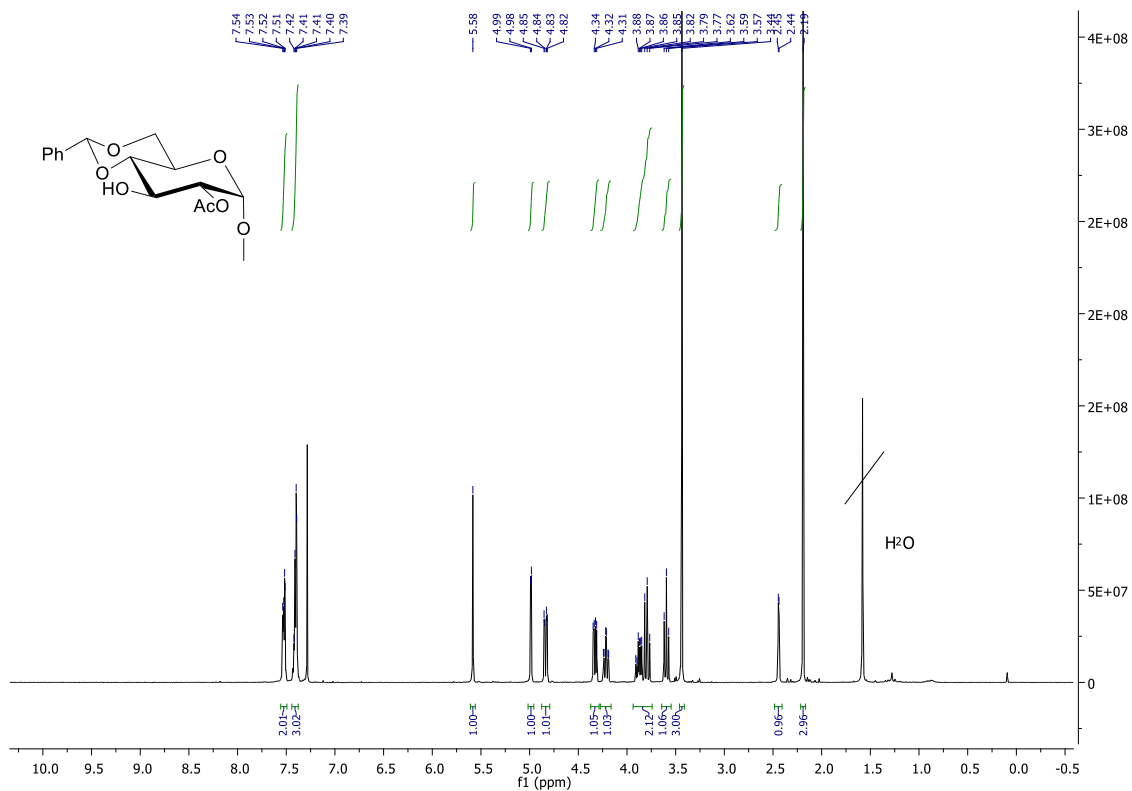


Fig. S5 <sup>1</sup>H Compound 1 CDCl<sub>3</sub> 400 MHz

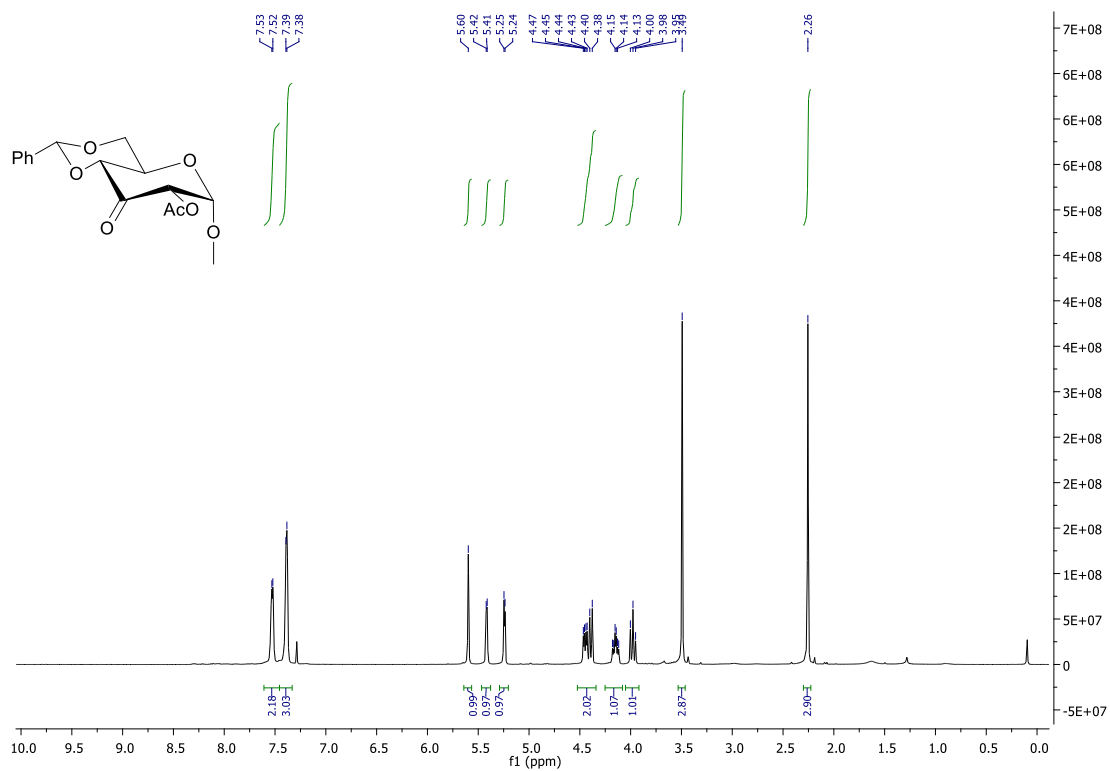


Fig. S6 COSY Compound 1 CDCl<sub>3</sub> 400 MHz

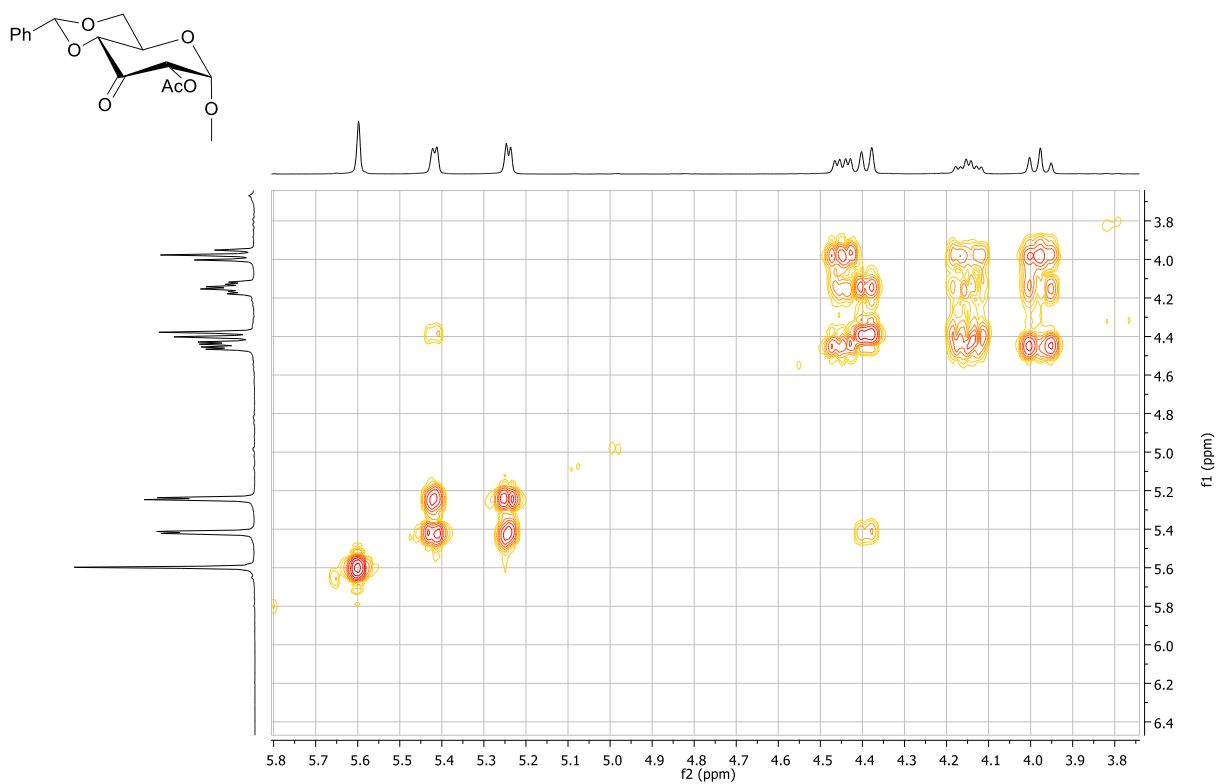


Fig. S7 <sup>13</sup>C Compound 1 CDCl<sub>3</sub> 100 MHz

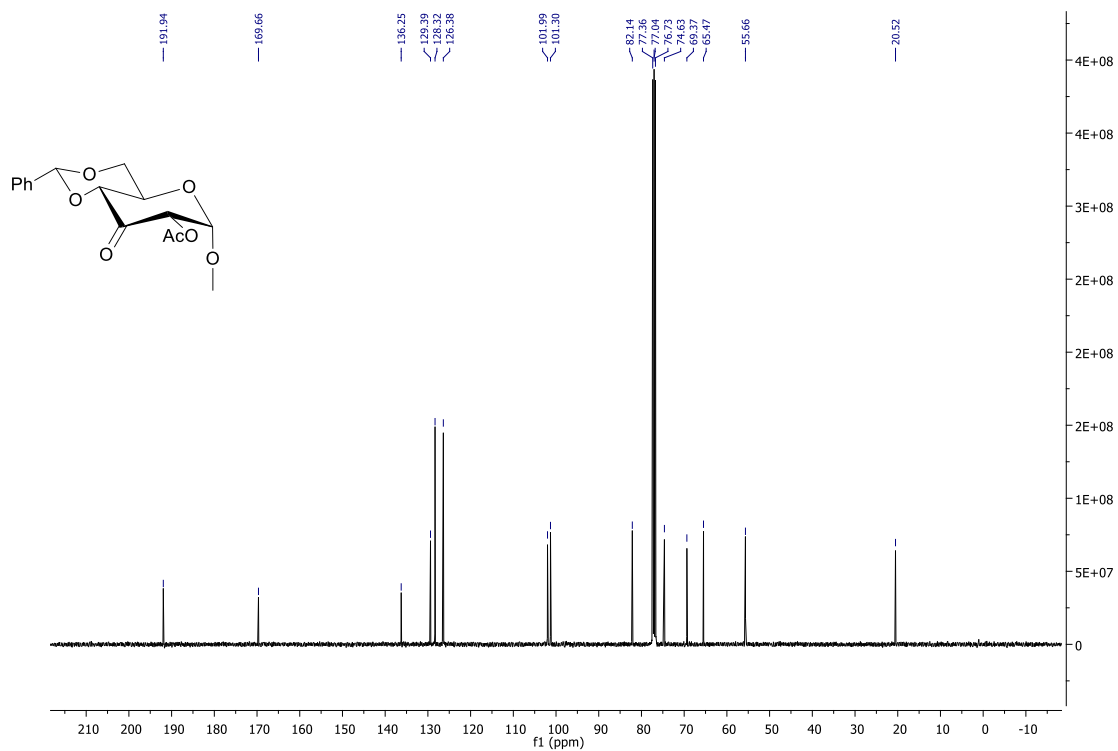


Fig. S8 HSQC Compound 1 CDCl<sub>3</sub>

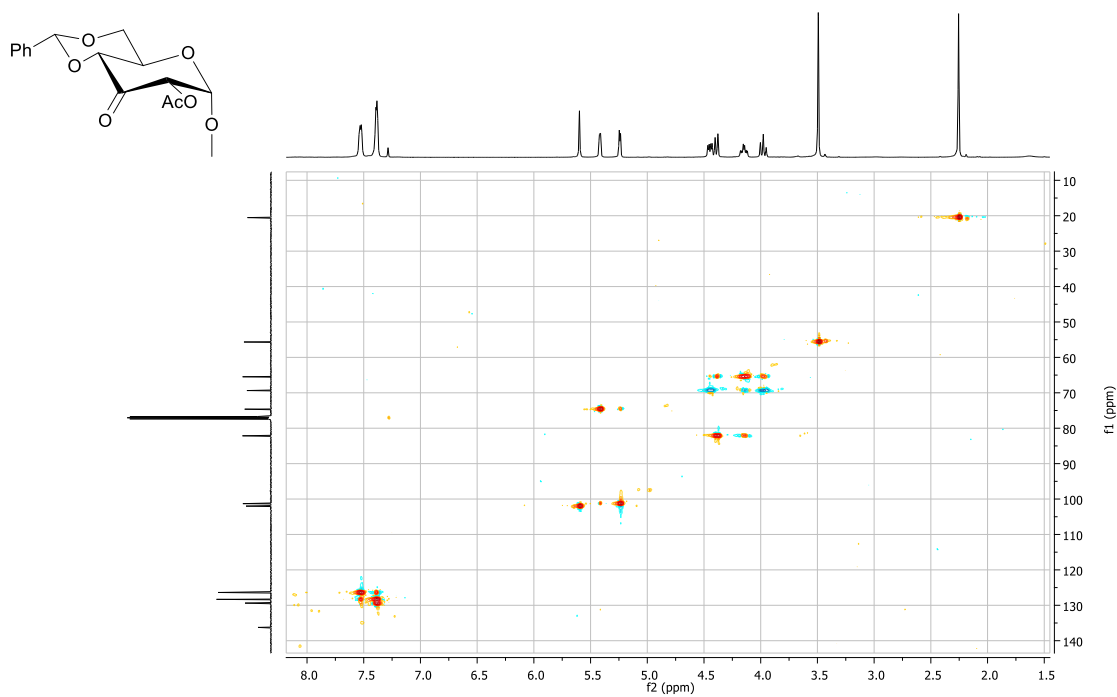


Fig. S9 <sup>1</sup>H Compound 5 CD<sub>3</sub>OD 400 MHz

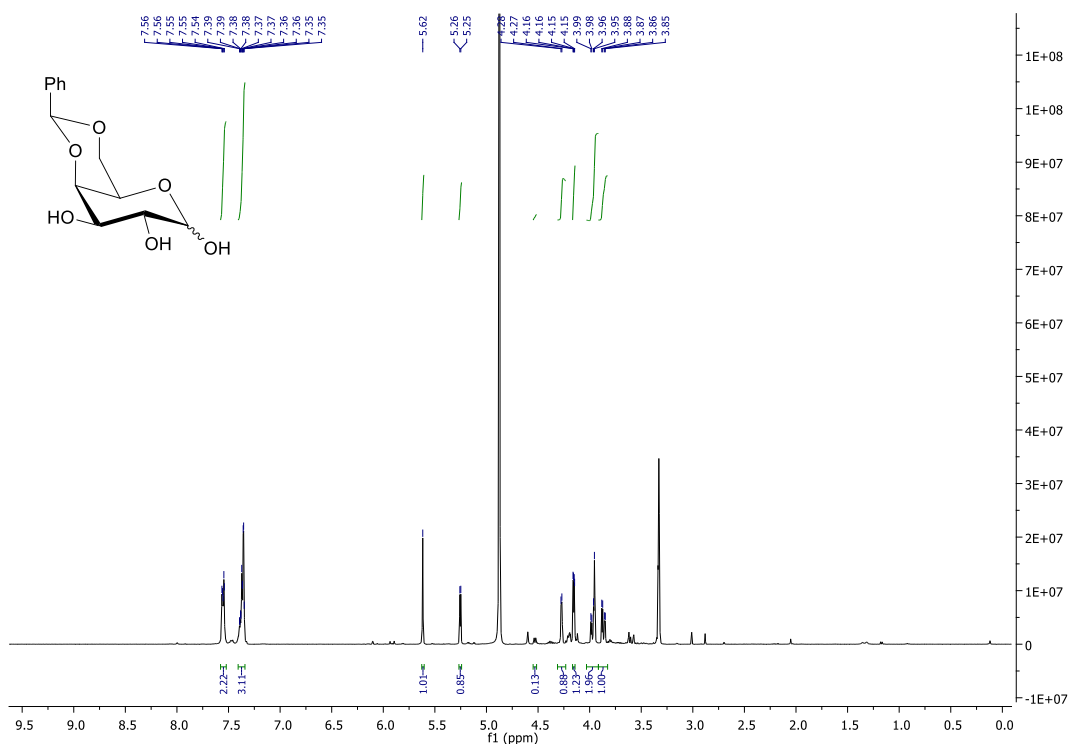


Fig. S10 <sup>1</sup>H Compound 6 CDCl<sub>3</sub> 400 MHz

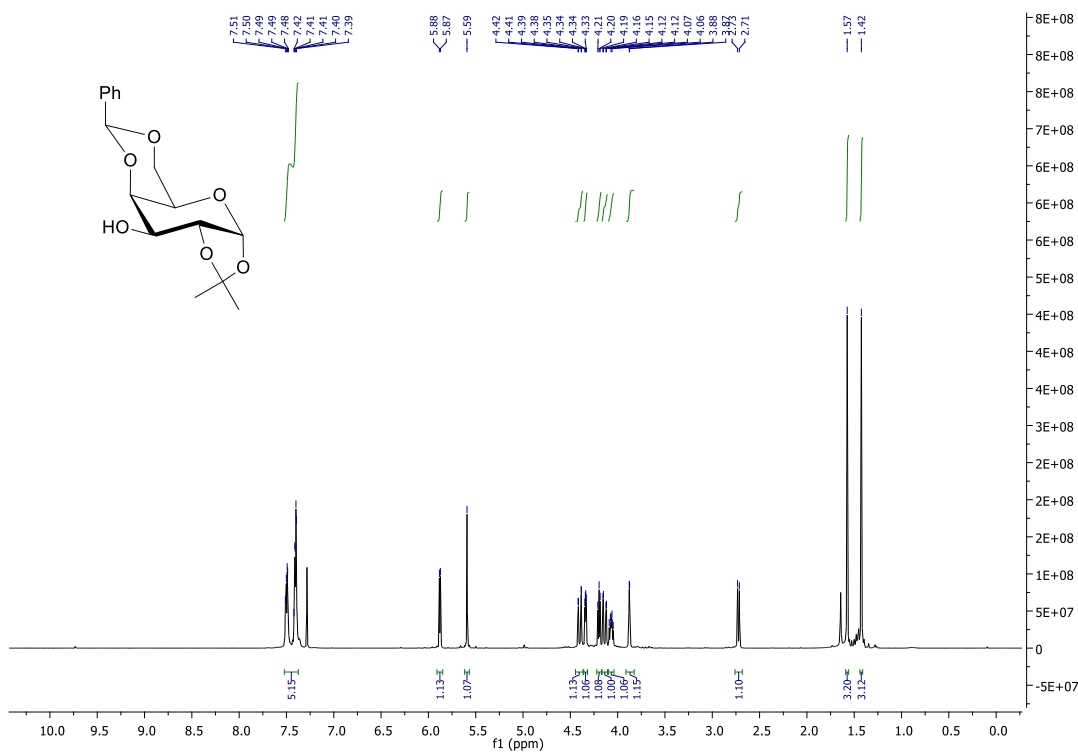


Fig. S11 <sup>1</sup>H Compound 2 CDCl<sub>3</sub> 400 MHz

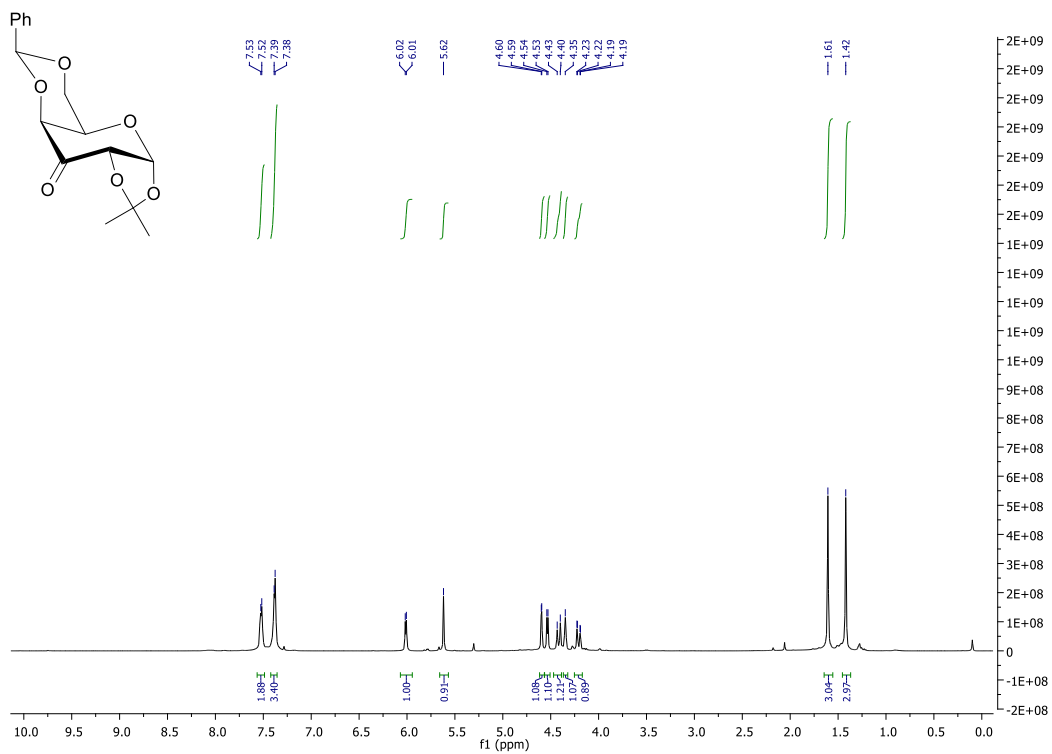


Fig. S COSY Compound 2 CDCl<sub>3</sub> 400 MHz

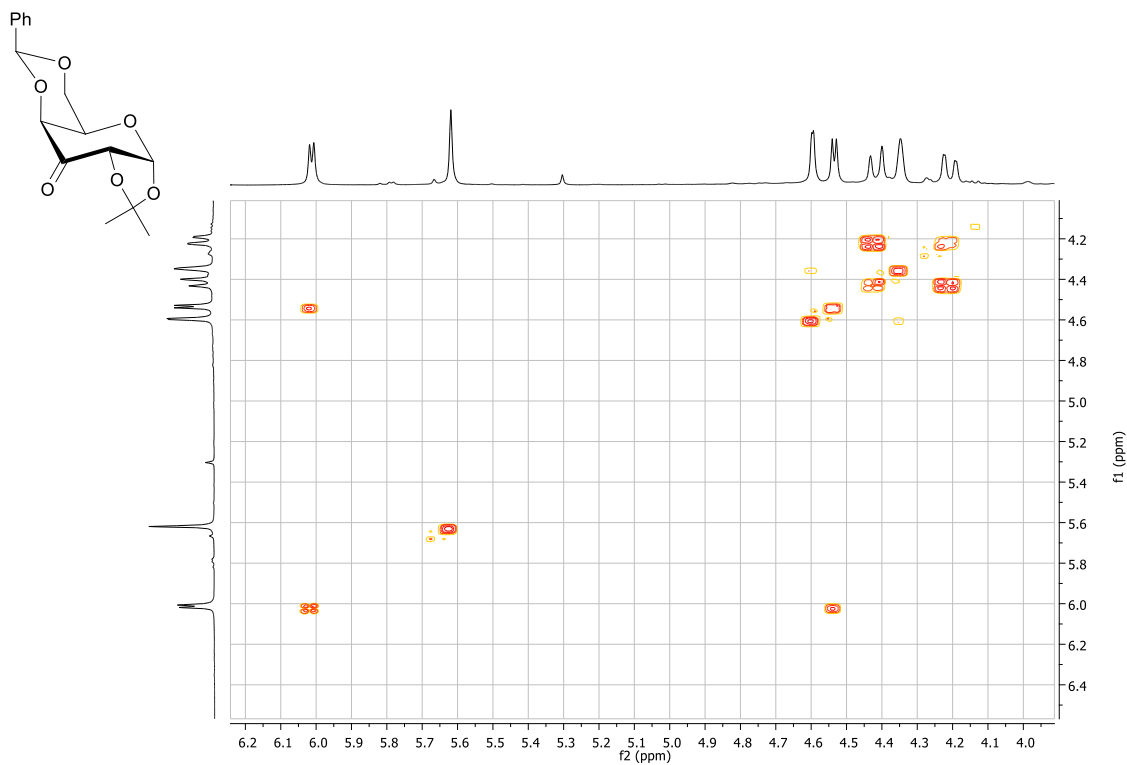


Fig. S12  $^{13}\text{C}$  Compound **2**  $\text{CDCl}_3$  100 MHz

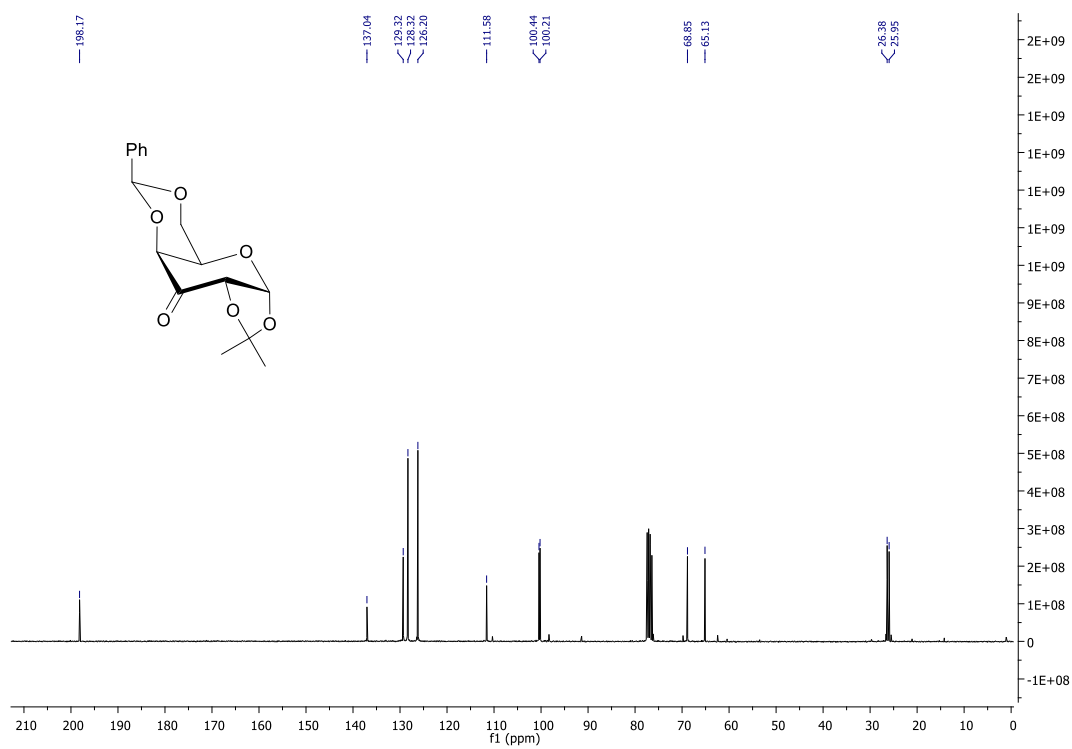


Fig. S13 HSQC Compound **2**  $\text{CDCl}_3$

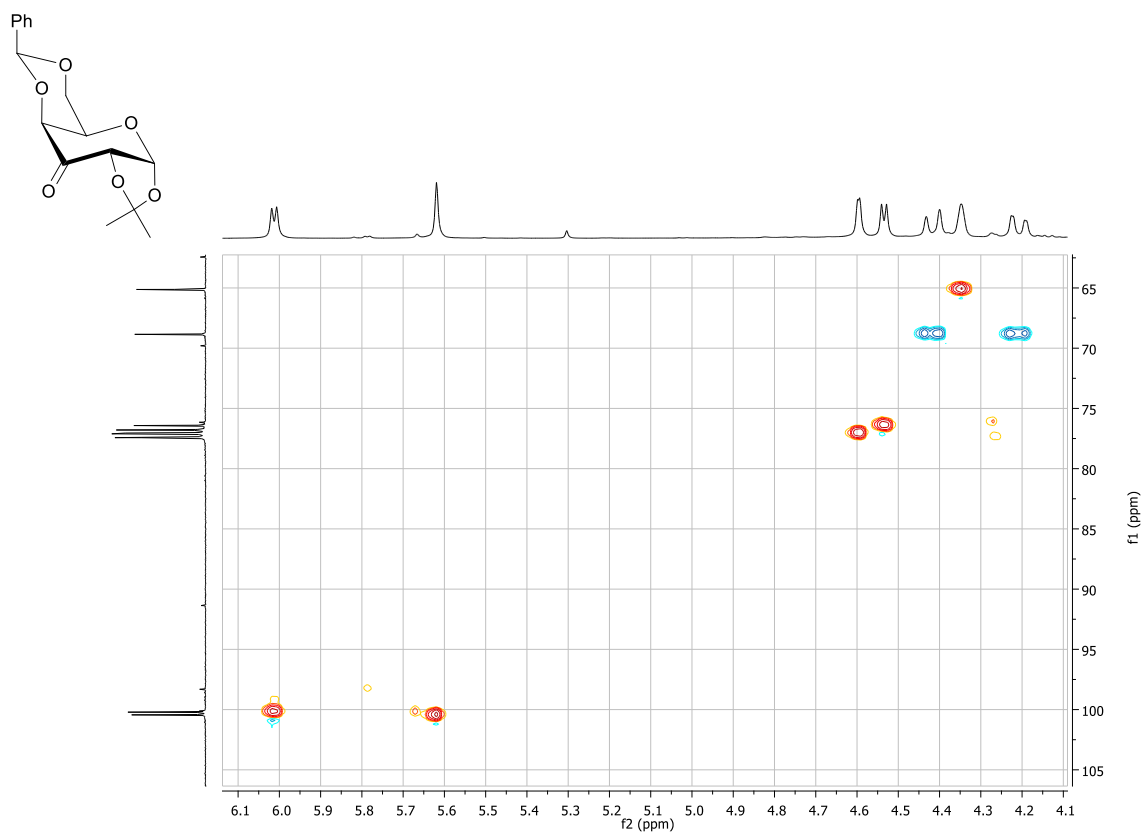


Fig. S14 <sup>1</sup>H Compound **7a** CDCl<sub>3</sub> 400 MHz

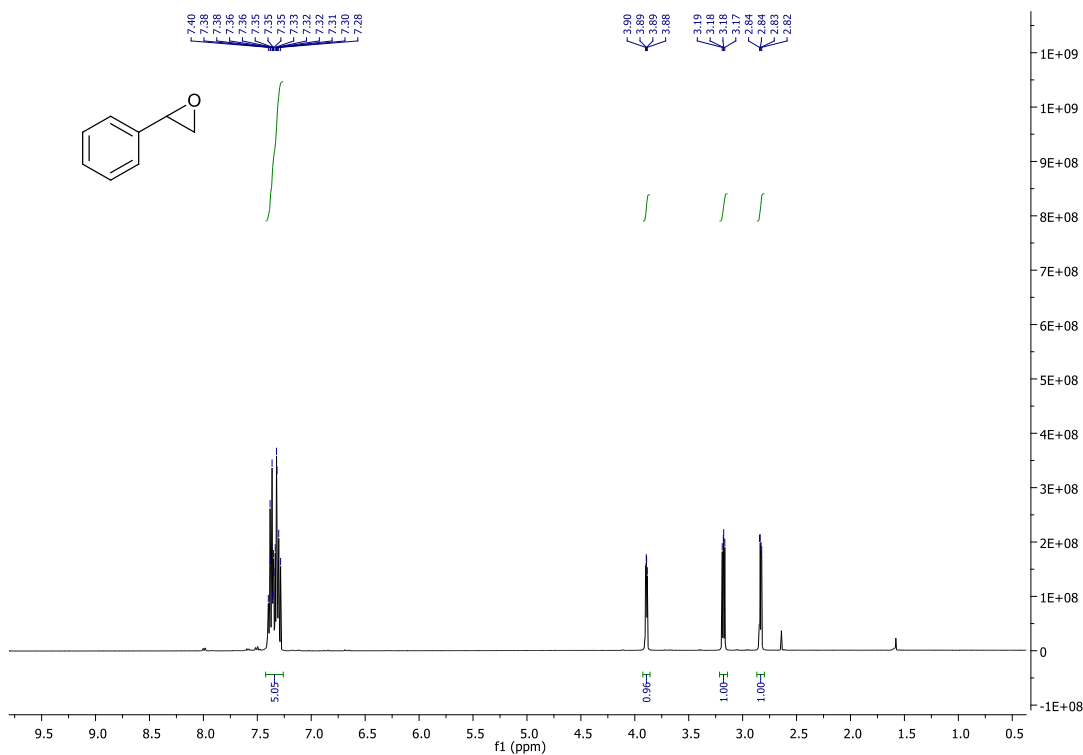


Fig. S15 <sup>1</sup>H Compound **8a** CDCl<sub>3</sub> 400 MHz

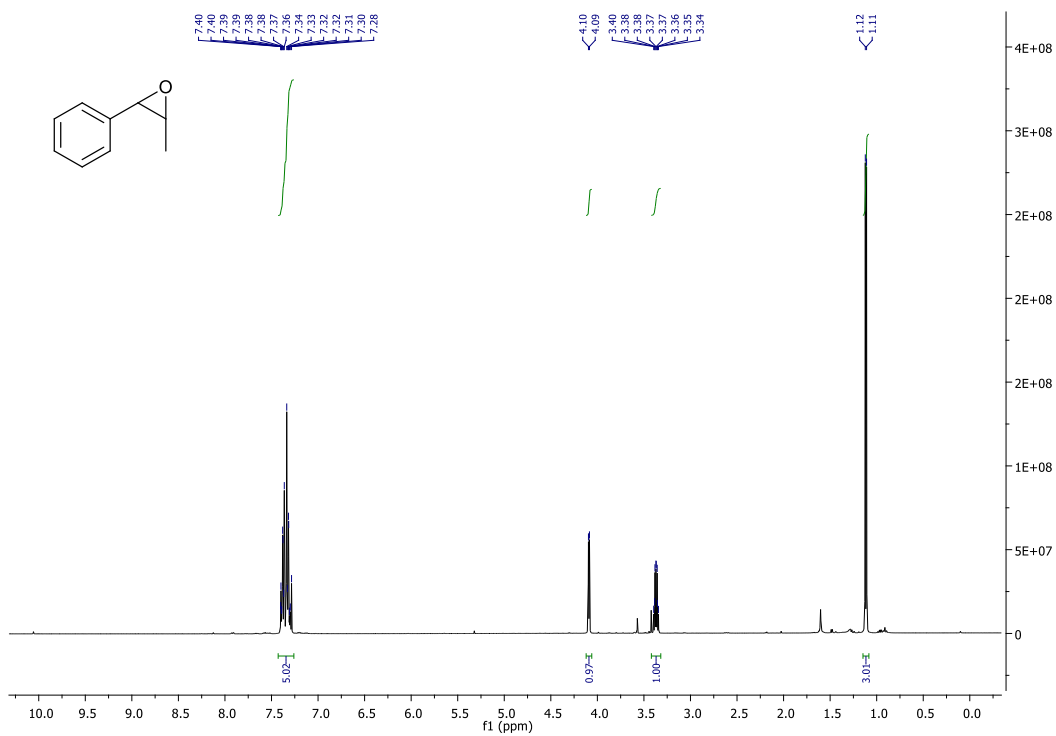




Fig. S16 <sup>1</sup>H Compound **9a** CDCl<sub>3</sub> 400 MHz

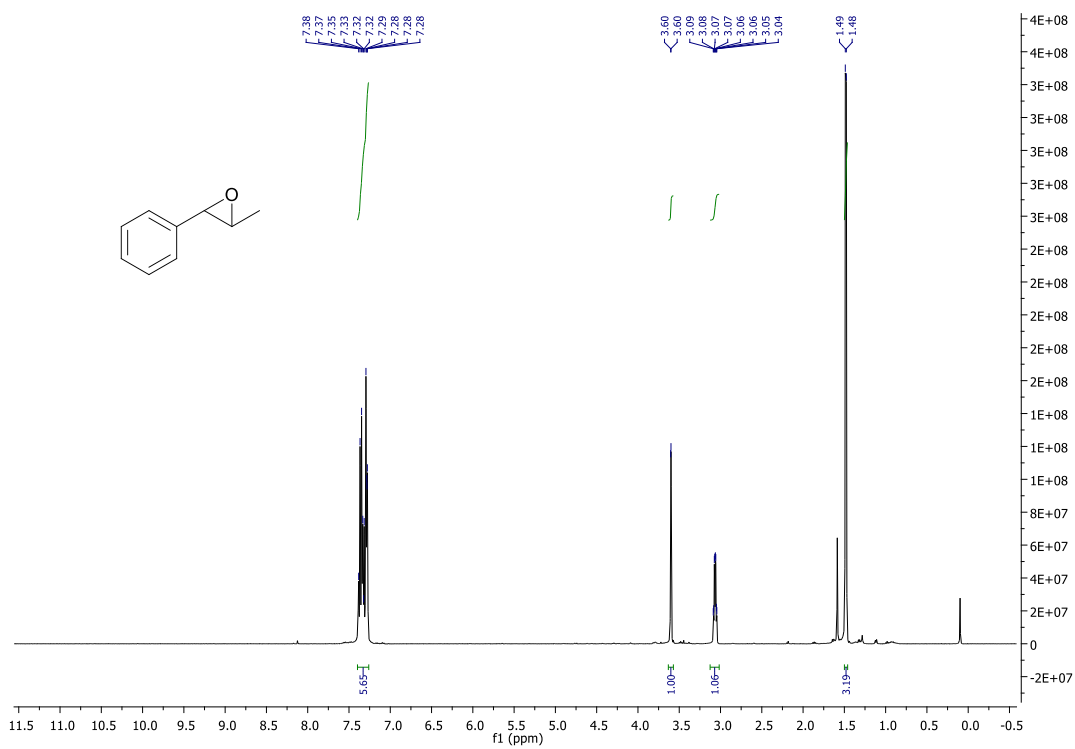


Fig. S17 <sup>1</sup>H Compound **10a** CDCl<sub>3</sub> 400 MHz

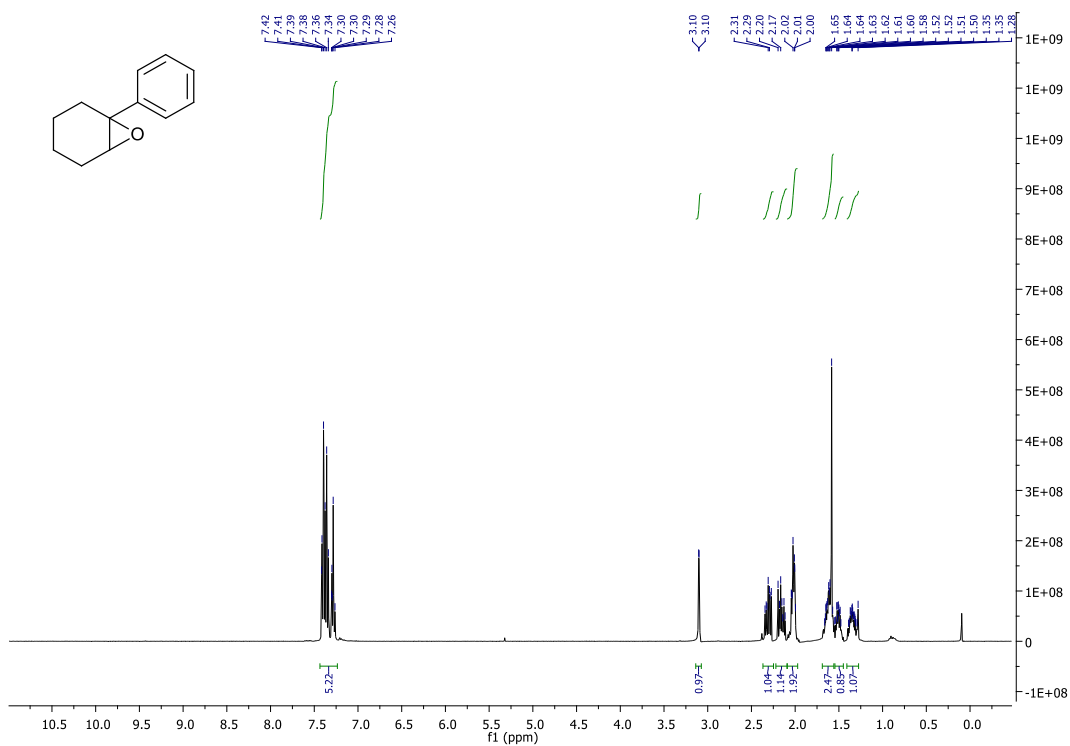


Fig. S18 <sup>1</sup>H Compound **11a** CDCl<sub>3</sub> 400 MHz

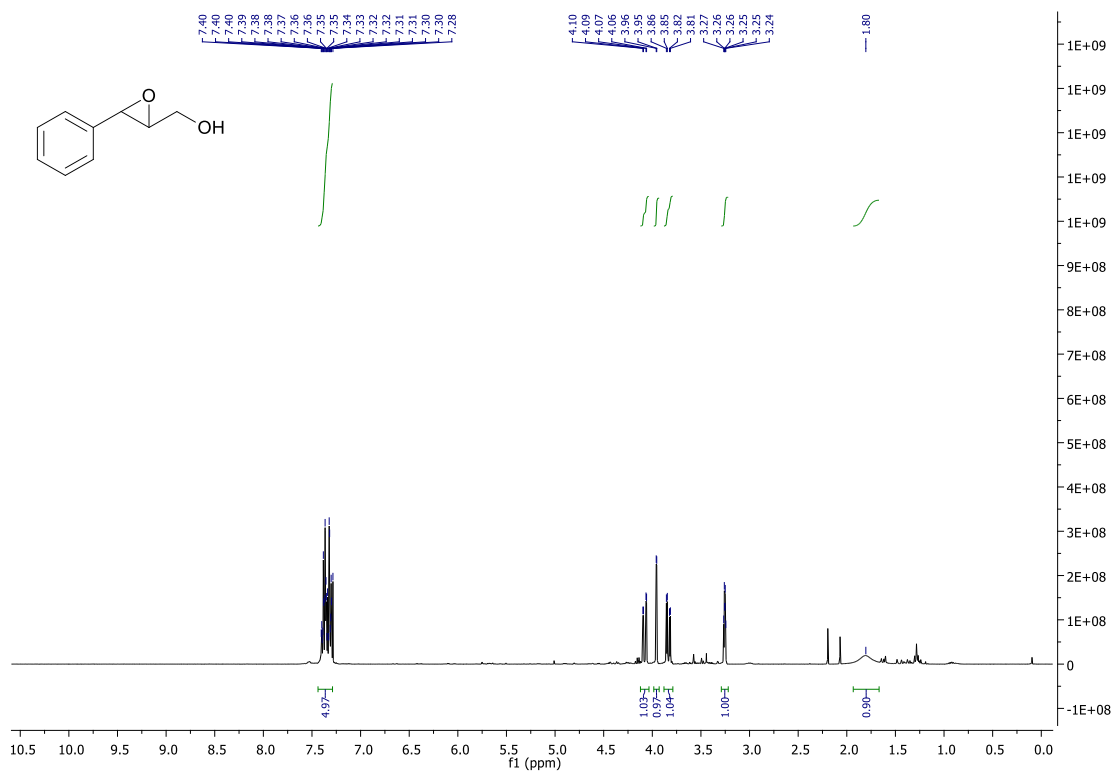


Fig. S19 <sup>1</sup>H Compound **12a-b** CDCl<sub>3</sub> 400 MHz

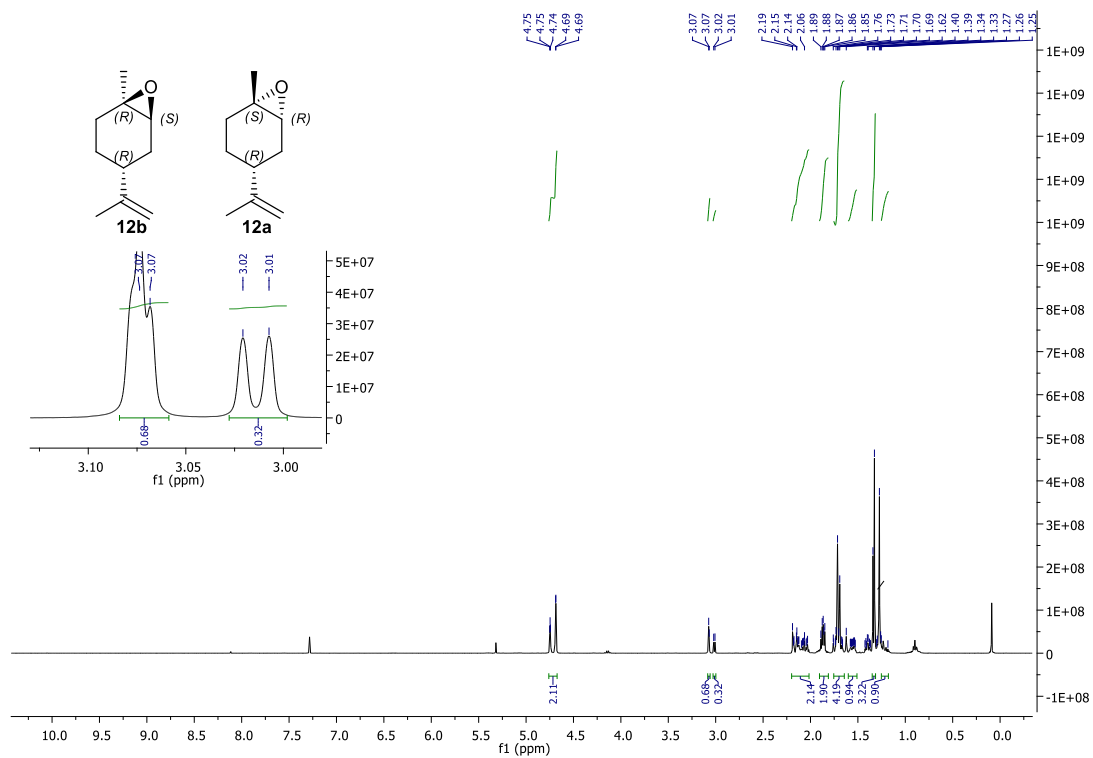


Fig. S20  $^{13}\text{C}$  Compound **12a-b**  $\text{CDCl}_3$  100 MHz

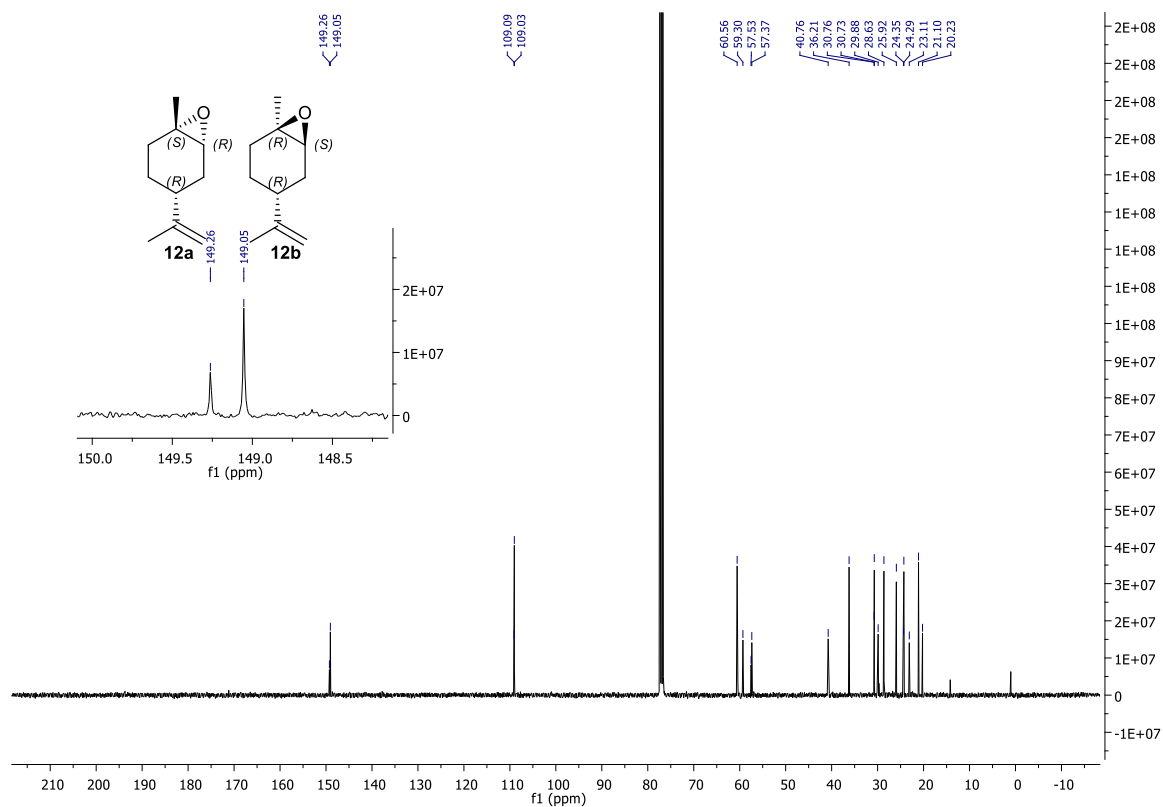


Fig. S21  $^1\text{H}$  Compound **12c-f**  $\text{CDCl}_3$  400 MHz

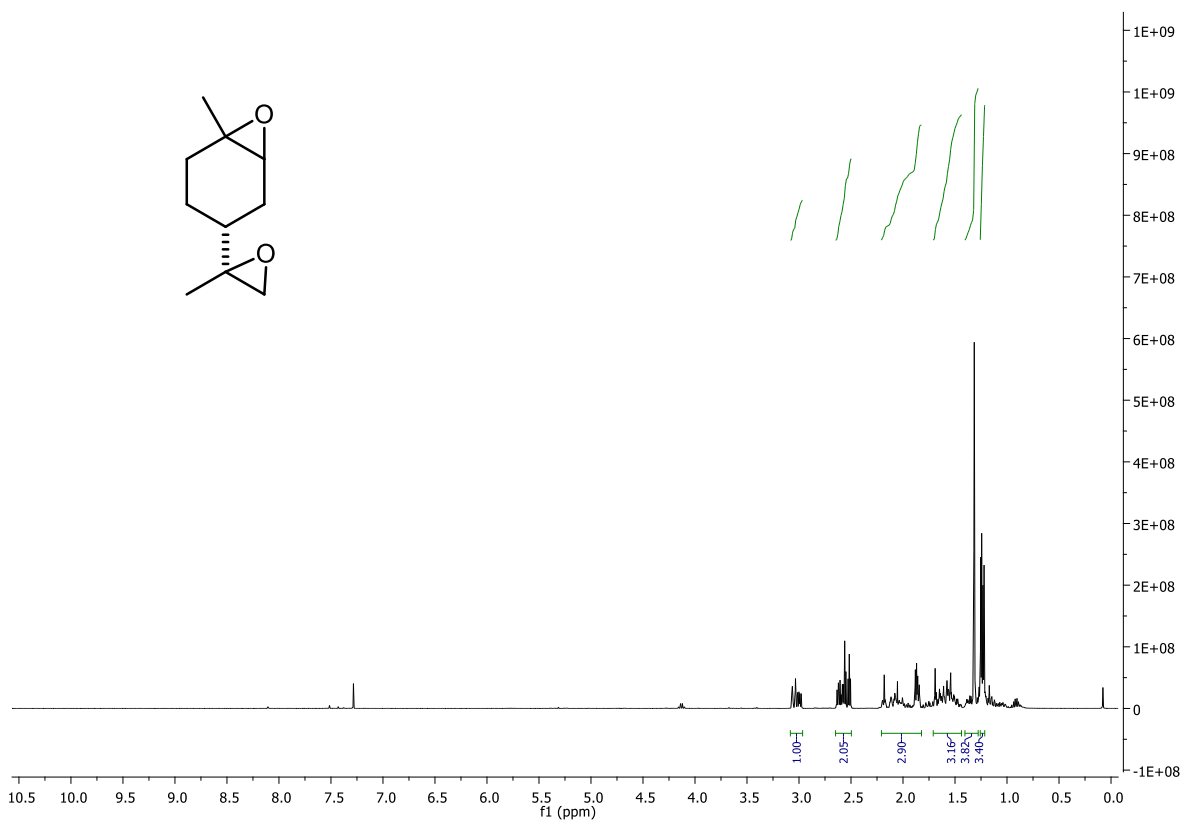
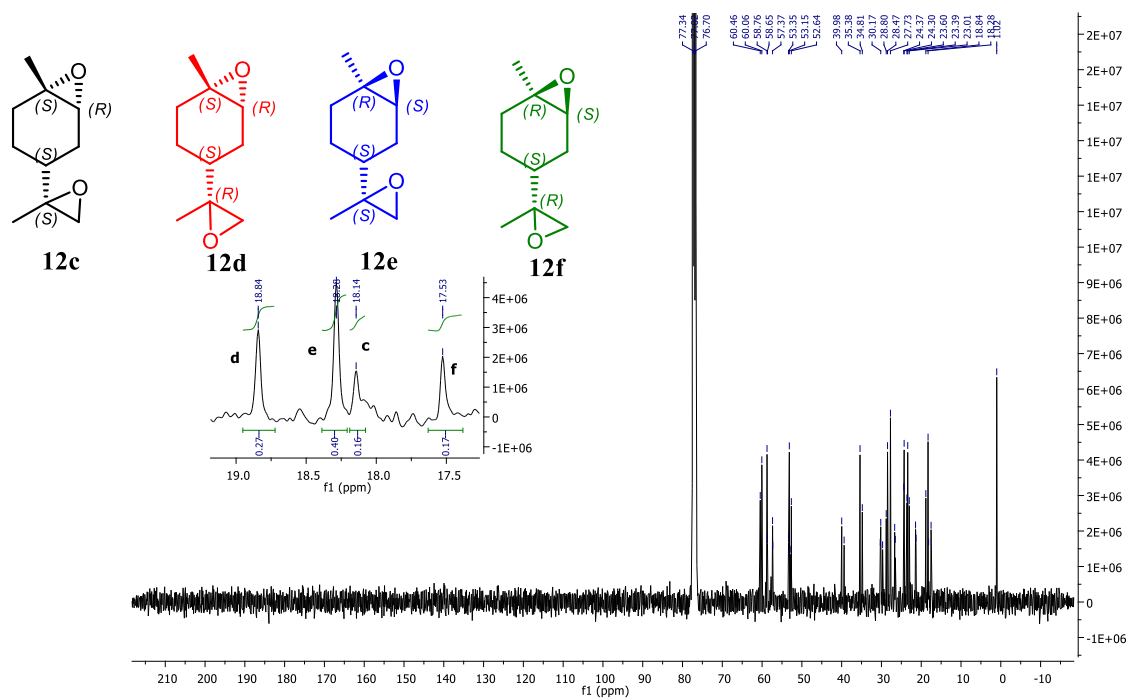
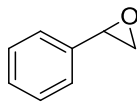


Fig. S22  $^{13}\text{C}$  Compound **12c-f**  $\text{CDCl}_3$  100 MHz



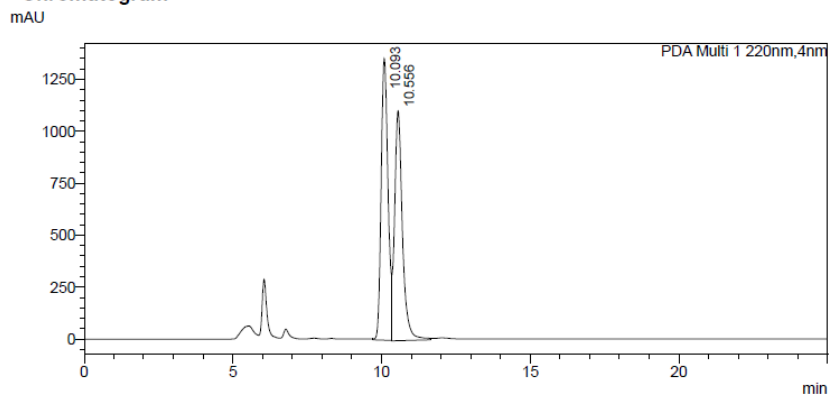
# HPLC chromatograms of epoxidation performed with 1



7a

Lux 5 $\mu$ m Cellulose 2, 95:5 hexane/2-propanol, 0.5 mL/min, monitor at 220 nm

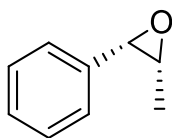
## <Chromatogram>



## <Peak Table>

PDA Ch1 220nm

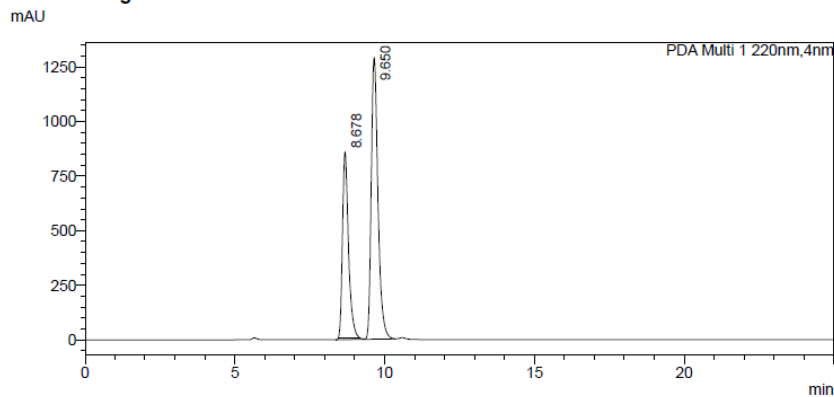
Peak#	Ret. Time	Area%
1	10.093	51.204
2	10.556	48.796
Total		100.000



8a

Lux 5 $\mu$ m Cellulose 2, 90:10 hexane/2-propanol, 0.5 mL/min, monitor at 220 nm

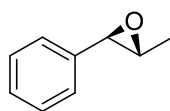
## <Chromatogram>



## <Peak Table>

PDA Ch1 220nm

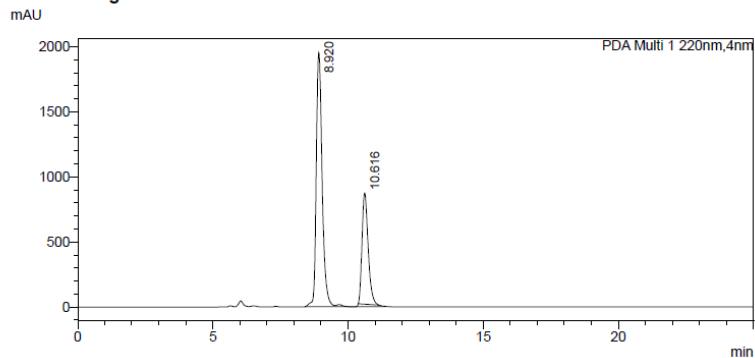
Peak#	Ret. Time	Area%
1	8.678	36.626
2	9.650	63.374
Total		100.000



9a

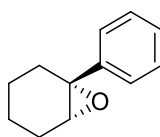
Lux 5 $\mu$ m Cellulose 2, 90:10 hexane/2-propanol, 0.5 mL/min, monitor at 220 nm

<Chromatogram>



<Peak Table>

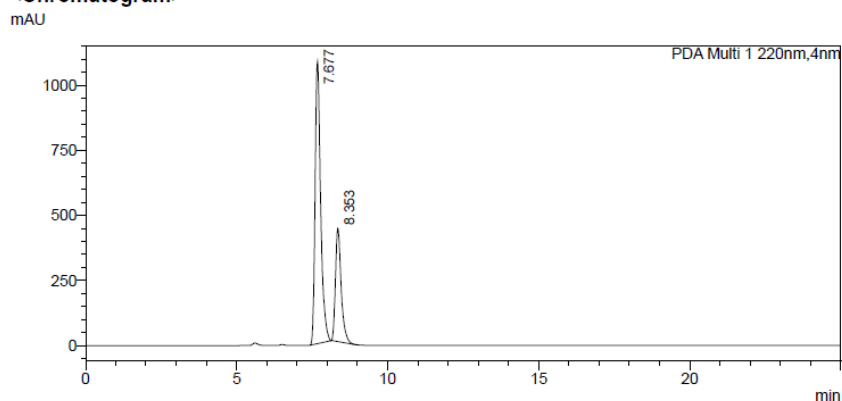
PDA Ch1 220nm		
Peak#	Ret. Time	Area%
1	8.920	69.569
2	10.616	30.431
Total		100.000



10a

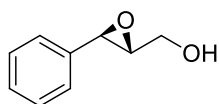
Lux 5 $\mu$ m Cellulose 2, 95:5 hexane/2-propanol, 0.5 mL/min, monitor at 220 nm

<Chromatogram>



<Peak Table>

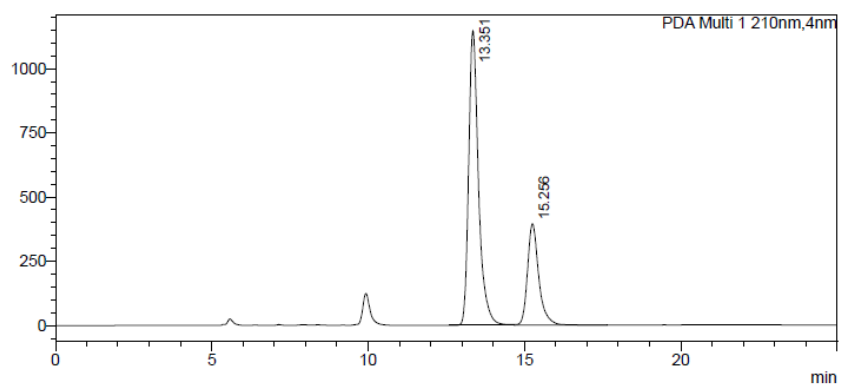
PDA Ch1 220nm		
Peak#	Ret. Time	Area%
1	7.677	70.740
2	8.353	29.260
Total		100.000



Lux 5 $\mu$ m Cellulose 2, 80:20 hexane/2-propanol, 0.5 mL/min, monitor at 210 nm

<Chromatogram>

mAU

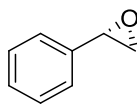


<Peak Table>

PDA Ch1 210nm

Peak#	Ret. Time	Area%
1	13.351	71.759
2	15.256	28.241
Total		100.000

## HPLC chromatograms of epoxidation performed with 2

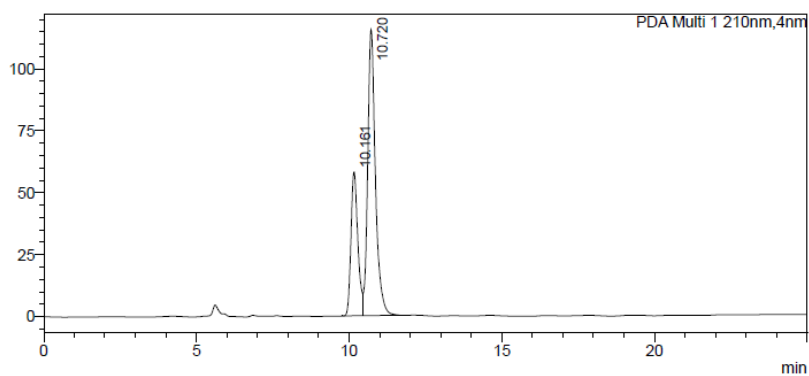


7a

Lux 5 $\mu$ m Cellulose 2, 95:5 hexane/2-propanol, 0.5 mL/min, monitor at 210 nm

### <Chromatogram>

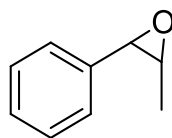
mAU



### <Peak Table>

PDA Ch1 210nm

Peak#	Ret. Time	Area%
1	10.161	31.033
2	10.720	68.967
Total		100.000

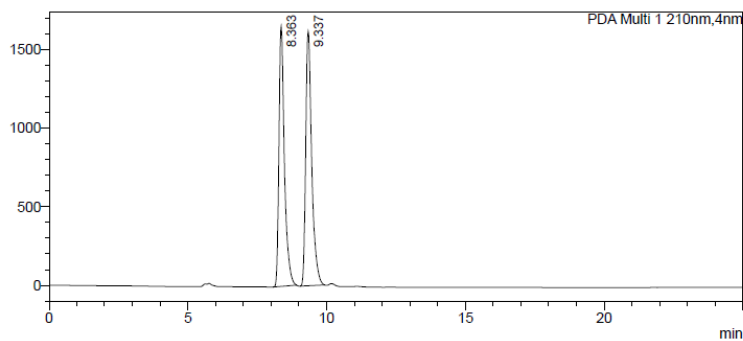


8a

Lux 5 $\mu$ m Cellulose 2, 90:10 hexane/2-propanol, 0.5 mL/min, monitor at 210 nm

### <Chromatogram>

mAU

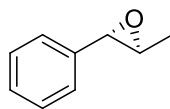


### <Peak Table>

PDA Ch1 210nm

Peak#	Ret. Time	Area%
1	8.363	48.325
2	9.337	51.675
Total		100.000

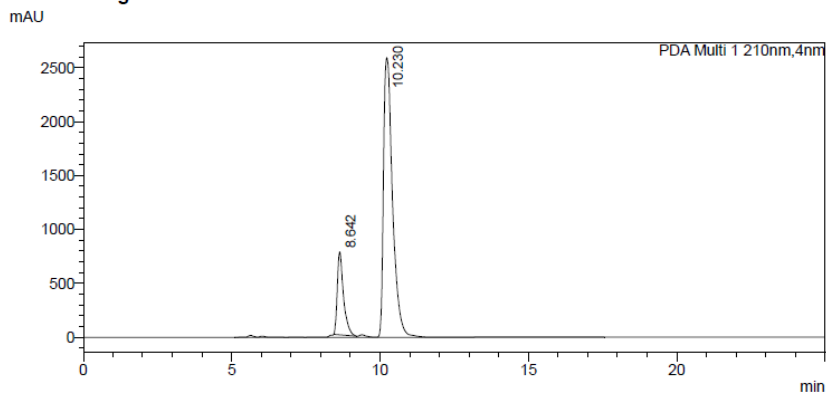




9a

Lux 5 $\mu$ m Cellulose 2, 90:10 hexane/2-propanol, 0.5 mL/min, monitor at 210 nm

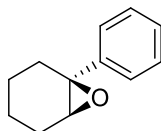
<Chromatogram>



<Peak Table>

PDA Ch1 210nm

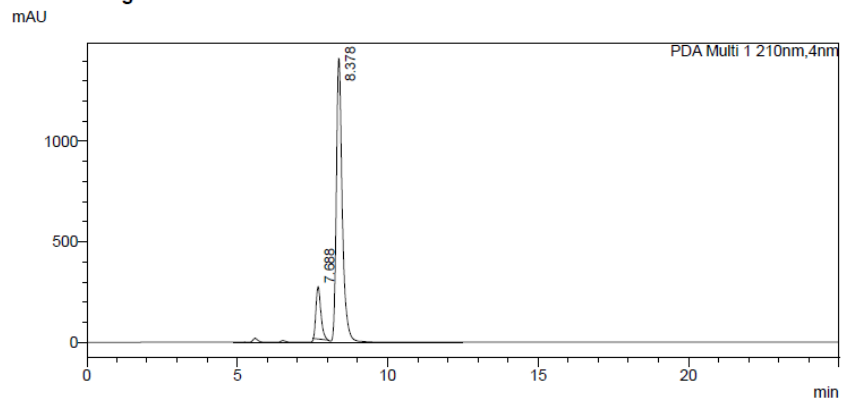
Peak#	Ret. Time	Area%
1	8.642	16.366
2	10.230	83.634
Total		100.000



10a

Lux 5 $\mu$ m Cellulose 2, 95:5 hexane/2-propanol, 0.5 mL/min, monitor at 210 nm

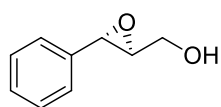
<Chromatogram>



<Peak Table>

PDA Ch1 210nm

Peak#	Ret. Time	Area%
1	7.688	12.602
2	8.378	87.398
Total		100.000

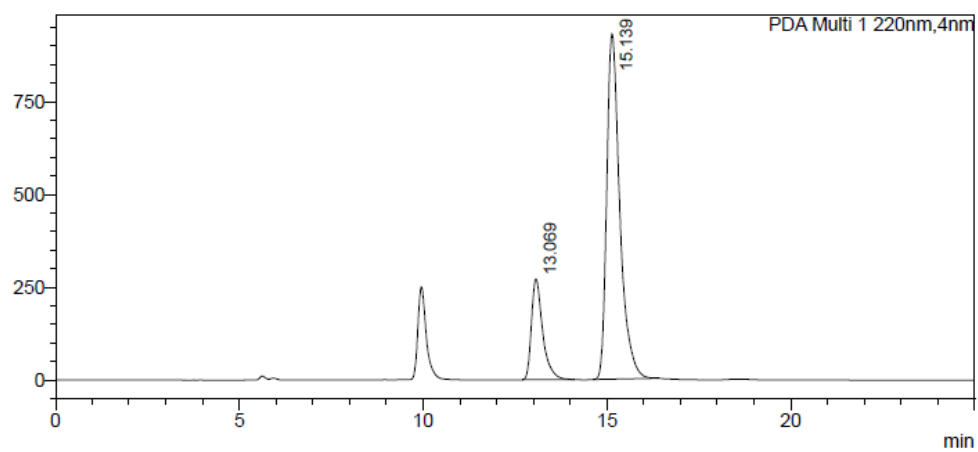


11a

Lux 5 $\mu$ m Cellulose 2, 80:20 hexane/2-propanol, 0.5 mL/min, monitor at 220 nm

<Chromatogram>

mAU

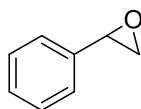


<Peak Table>

PDA Ch1 220nm

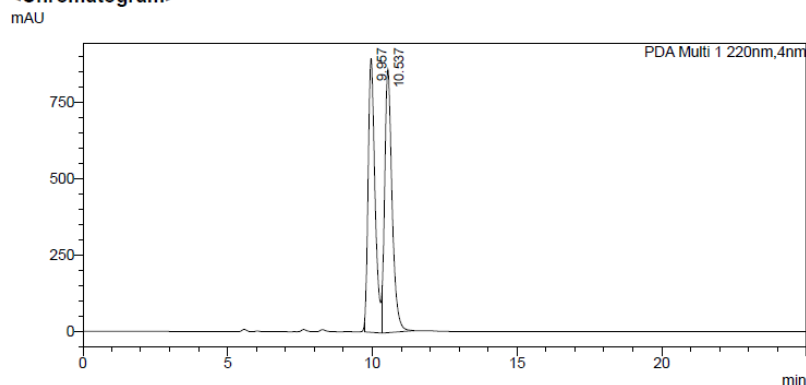
Peak#	Ret. Time	Area%
1	13.069	20.018
2	15.139	79.982
Total		100.000

## HPLC chromatograms of racemic epoxides



Lux 5 $\mu$ m Cellulose 2, 95:5 hexane/2-propanol, 0.5 mL/min, monitor at 220 nm

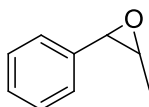
### <Chromatogram>



### <Peak Table>

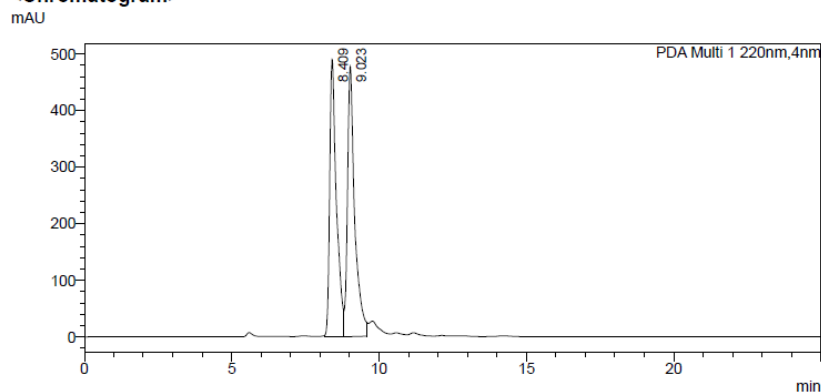
PDA Ch1 220nm

Peak#	Ret. Time	Area%
1	9.957	49.867
2	10.537	50.133
Total		100.000



Lux 5 $\mu$ m Cellulose 2, 90:10 hexane/2-propanol, 0.5 mL/min, monitor at 220 nm

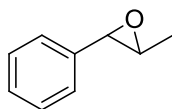
### <Chromatogram>



### <Peak Table>

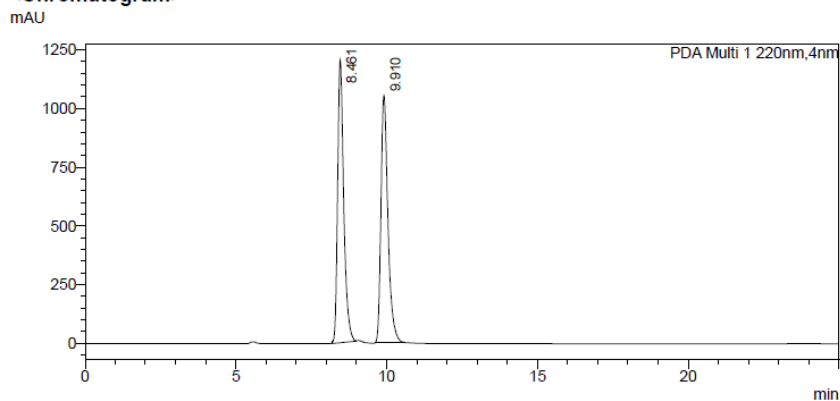
PDA Ch1 220nm

Peak#	Ret. Time	Area%
1	8.409	49.041
2	9.023	50.959
Total		100.000



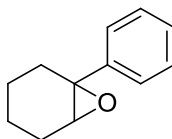
Lux 5 $\mu$ m Cellulose 2, 90:10 hexane/2-propanol, 0.5 mL/min, monitor at 220 nm

<Chromatogram>



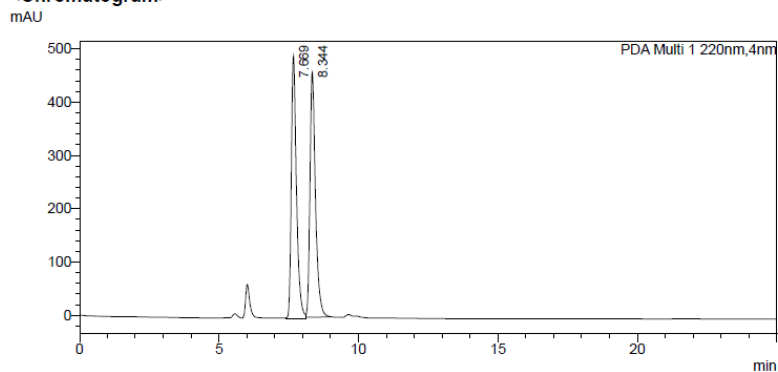
<Peak Table>

PDA Ch1 220nm		
Peak#	Ret. Time	Area%
1	8.461	49.920
2	9.910	50.080
Total		100.000



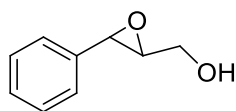
Lux 5 $\mu$ m Cellulose 2, 95:5 hexane/2-propanol, 0.5 mL/min, monitor at 220 nm

<Chromatogram>



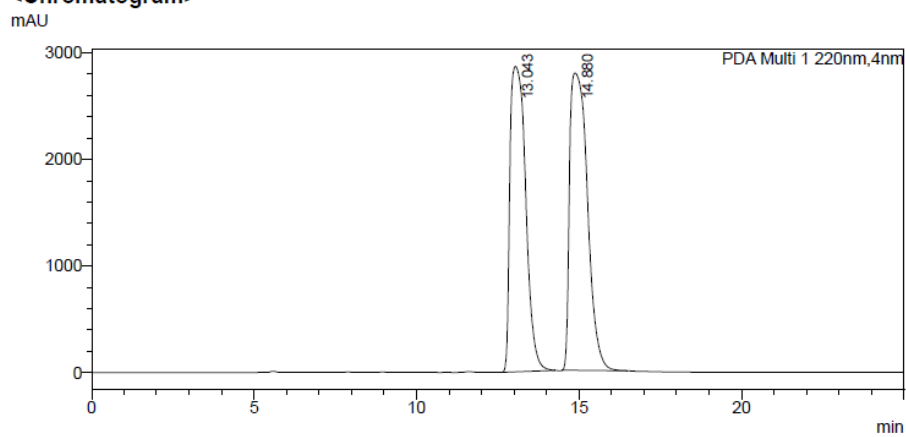
<Peak Table>

PDA Ch1 220nm		
Peak#	Ret. Time	Area%
1	7.669	49.918
2	8.344	50.082
Total		100.000



Lux 5 $\mu$ m Cellulose 2, 80:20 hexane/2-propanol, 0.5 mL/min, monitor at 220 nm

<Chromatogram>



<Peak Table>

PDA Ch1 220nm

Peak#	Ret. Time	Area%
1	13.043	47.569
2	14.880	52.431
Total		100.000