Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Supporting Information

Effect of surface–bulk partitioning on the heterogeneous oxidation of aqueous saccharide aerosols

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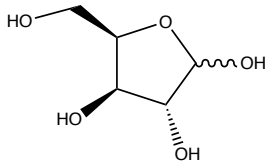
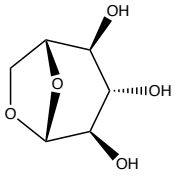
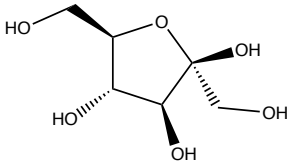
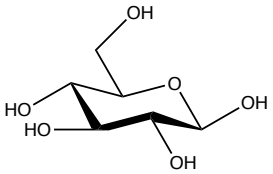
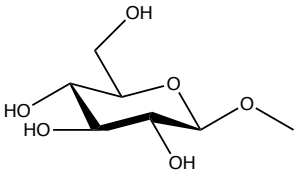
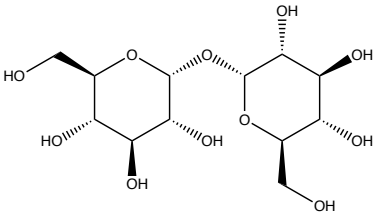
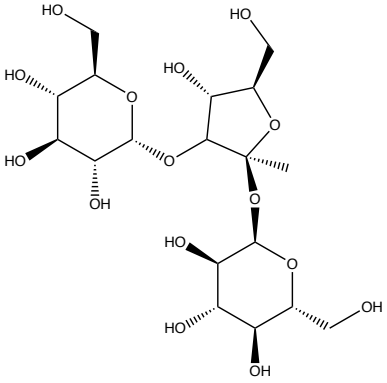
Author contributions: H.F. performed the experiments and the initial data analysis. T. W. M. designed, performed and analyzed the molecular dynamics simulations.

Table S1 List of saccharide compounds

Structure	Common Name	Formula	Molar mass (g mol^{-1})
	Xylose	$C_5H_{10}O_5$	150.13
	Levoglucosan	$C_6H_{10}O_5$	162.14
	Fructose	$C_6H_{12}O_6$	180.16
	Glucose	$C_6H_{12}O_6$	180.17
	β-methyl glucopyranoside	$C_7H_{14}O_6$	194.18
	Trehalose	$C_{12}H_{22}O_{11}$	342.30
	Melezitose	$C_{18}H_{32}O_{16}$	504.44

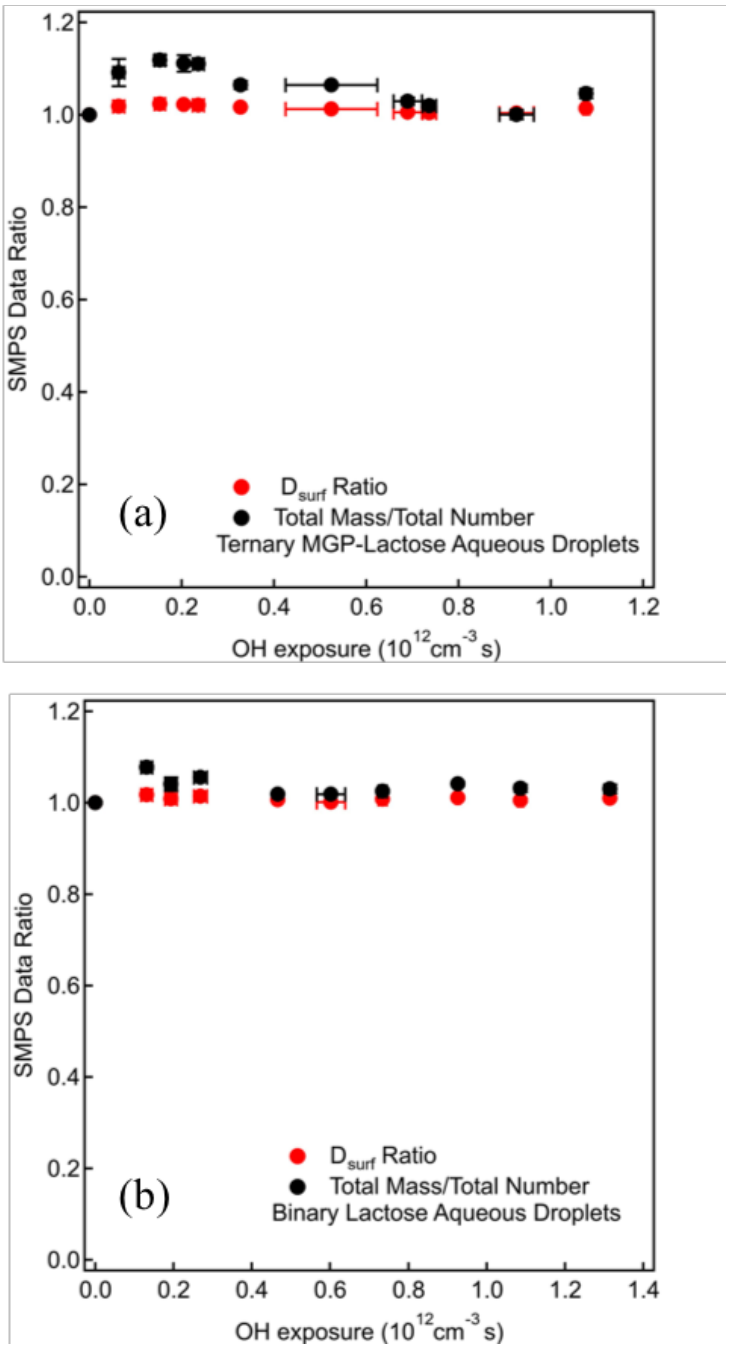


Figure S1 Relative surface-weighted (red dots) and total mass (black dots) for (a) ternary MGP-lactose-water and (b) binary lactose-water aerosols.

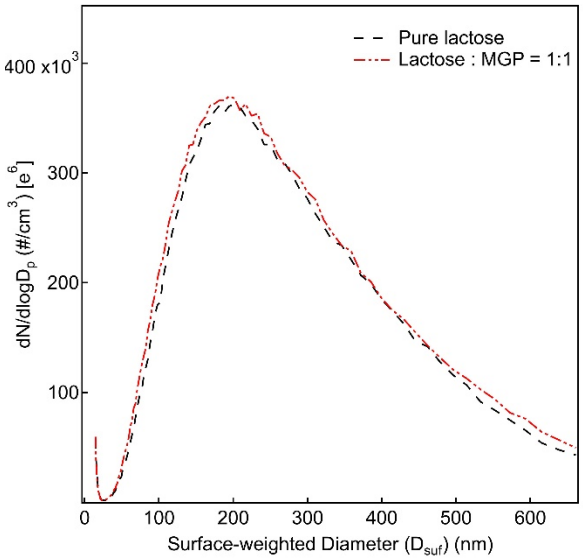


Figure S2. Surface-weighted particle size distribution for unreacted saccharide containing droplets. Pure lactose droplets (black dashed line): the mean surface-weighted diameter is 361.8 nm, and the total concentration of number particle size is 2.32 x 10^5 #/ cm^3. Equimolar MGP/lactose aqueous droplets (red dashed line): the mean surface-weighted diameter is 365.4 nm, and the total concentration of number particle size is 2.46 x 10^5 #/ cm^3.