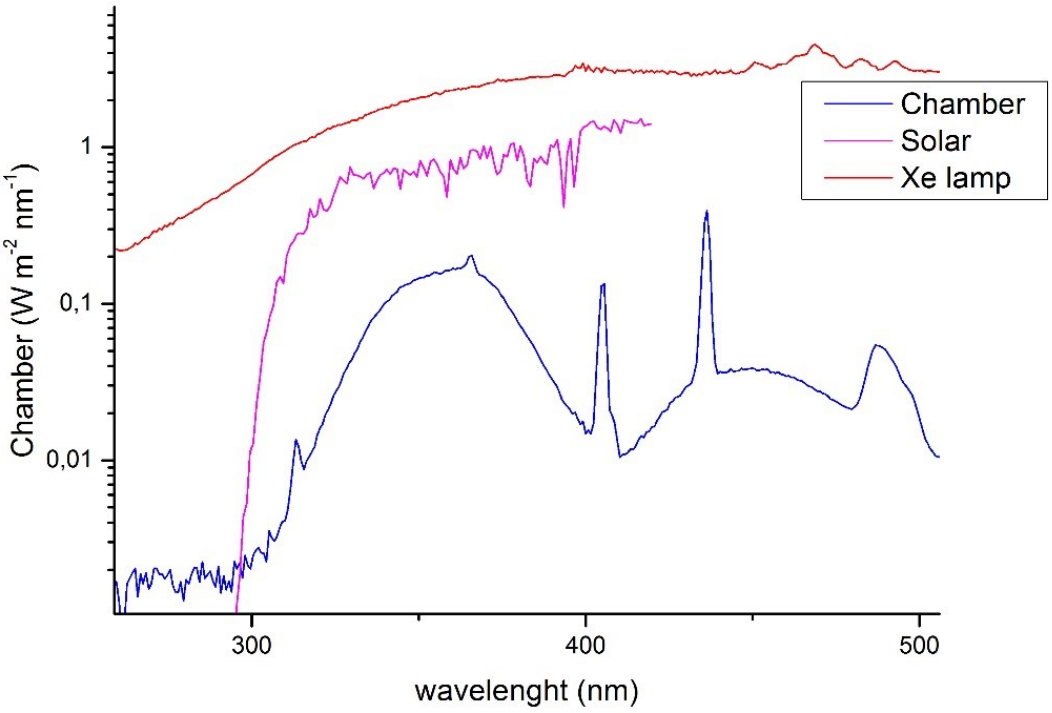

Figure S1. UV spectrum of the lamps used in the atmospheric simulation chamber compared to the solar spectrum and the spectrum generated by a Xenon lamp (Xe lamp).

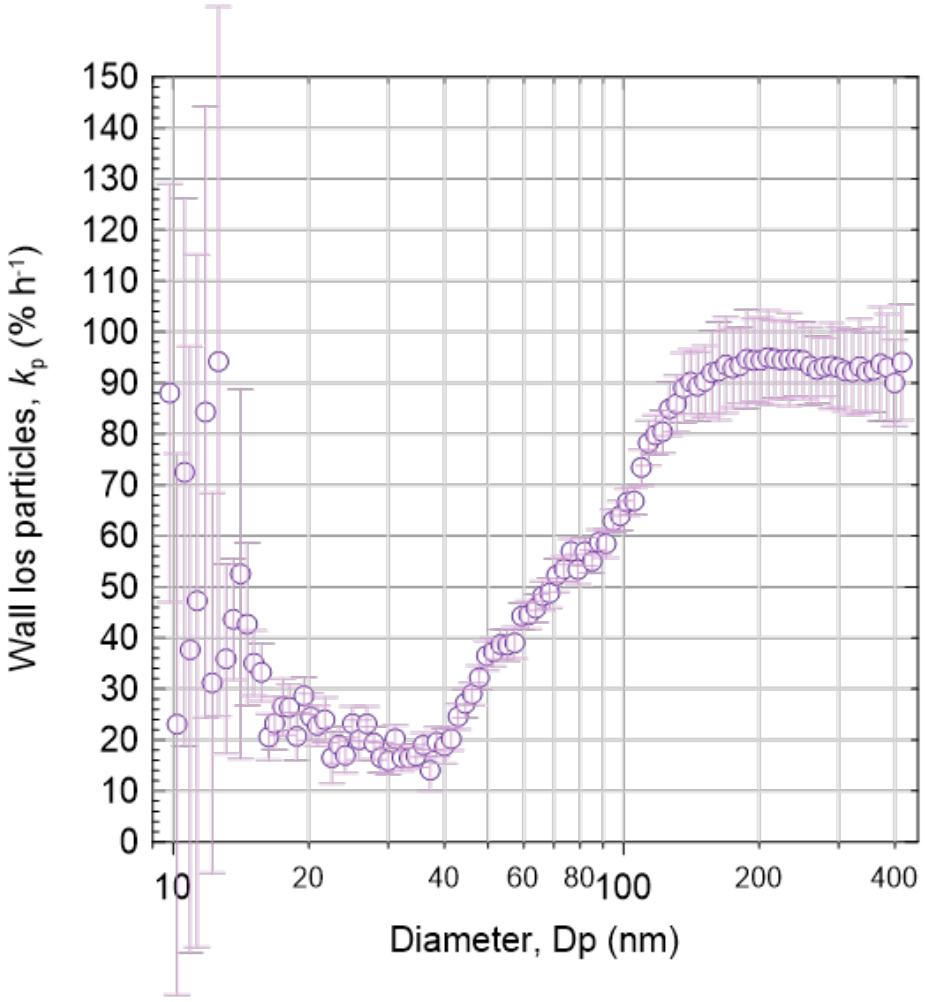

Figure S2. Estimation of the wall loss particles per diameter (nm) in the multiphase simulation chamber.

Table S1. Tentative identification and most likely formula of the most emitted compound for the UV, O_3, and UV_O_3 conditions.

LIST OF THE MOST EMITTED COMPOUNDS		
Masses	**Most likely formula**	**Tentative identification**
31.02		
33.03	CH4O	Methanol
42.03	C2H3N	Acetonitrile
43.02	C2H2O	Hexyl acetate fragment/ketene
43.03		
43.05	C3H6	Propene
45.03	C2H4O	Acetaldehyde
45.99		
46.03	CH3NO	Formamide
47.01	CH2O2	Formic acid
47.02	CH2O2/C2H6O	Formic acid/ethanol
47.05	C2H6O	Ethanol
49.01		
49.99		
51.04	CH4O-H2O	Methanol-water cluster
55.93		
57.03	C3H4O	2-propenal (acrolein)
57.07	C4H10O/C4H8	Butanol/butene
59.04	C3H6O	Acetone
60.05	C2H5NO	Acetamide/ N-methyl formamide/ nitrosoethano
61.03	C2H4O2	Acetic acid
69.07	C5H8	Isoprene
71.05	C4H6O	Methyl vinyl ketone (MVK)
71.08	C5H10	Pentene
73.03	C3H4O2	2-propenoïc acid
73.06	C4H8O	2-butanone, (MEK)/2-methypropanal
74.06	C3H7NO	N, N-dimethylformamide/Propanamide
75.01	C3H6O2	Hydroxyacetone
87.04	C4H6O2	Butenoic acid
87.07	C5H10O	2-methyl butanal/pentanone
88.04		
89.06	C5H12O/C4H8O2	2-pentanol /Butanoic acid/Acetoin
90.06		
90.95		
93.95	C7H8	Toluene
94.99		
96.007	C5H5NO/C6H9N	Pyridine-N-oxide/2,4-dimethylpyrrole
101.06		
108.95		
123.94		
125.95		