## Supplement

1200

1000

800 Frequency (counts)

600

400

200 0

Error (%)

Compounds phenol m-, o-, p-cresol m-, o-, p-benzenediol /2-methylfuraldehyde dimethylphenols guaiacol/methylbenzenediols naphthalene 2-methylnaphthalene/1-methylnaphthalene acenaphthylene syringol biphenyl/acenaphthene dimethylnaphthalene 2000 Experiments @ 263 K Experiments @ 288 K Normal Curve Fit 1500 Frequency (counts) 1000 500 c -1.0 -0.5 0.0 0.5 1.0 -1.0 -0.5 0.0 0.5 1.0

Table S1. List of NTVOCs compounds considered for the average mixture

Figure S1. Best fitting solution error frequency distributions (counts per bin) for low (blue) and high temperature (red) experiments. Right side is the OA mass. Left side for the O:C ratio. Gaussian normal curve fit (for both temperatures) is reported in dark blue.

Error (%)

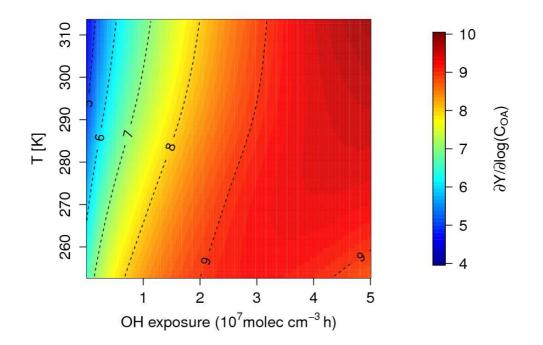


Figure S2. Variation of SOA yields with  $log(C_{OA})$  (at 6, 60, 600 µg/m<sup>3</sup>) as a function of *T* and OH exposure (from Figure 8, bottom panel).