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Supplement of

Inflammatory responses to secondary organic aerosols (SOA) generated from biogenic and anthropogenic precursors

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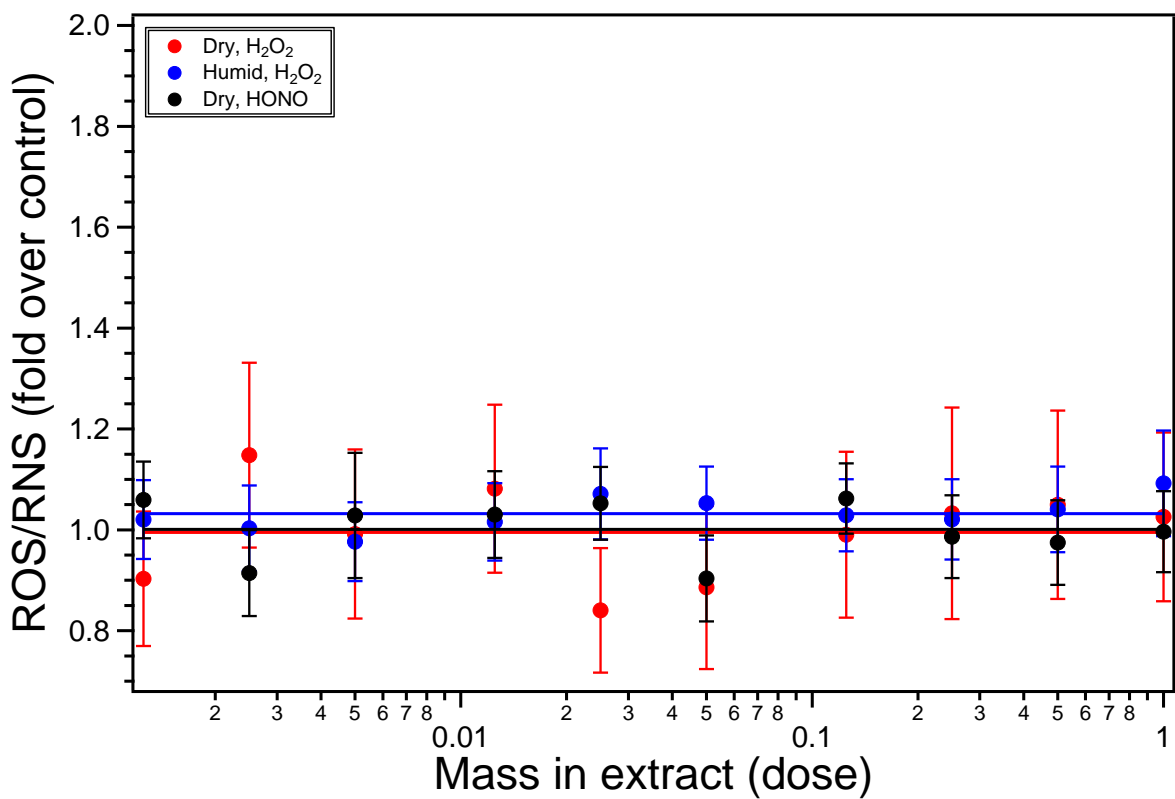


Figure S1. ROS/RNS produced as a result of exposure to background filters (OH precursor and seed only). ROS/RNS is expressed as a fold increase over probe-treated control cells incubated with stimulant-free media. Data shown are means \pm standard error of triplicate exposure experiments.

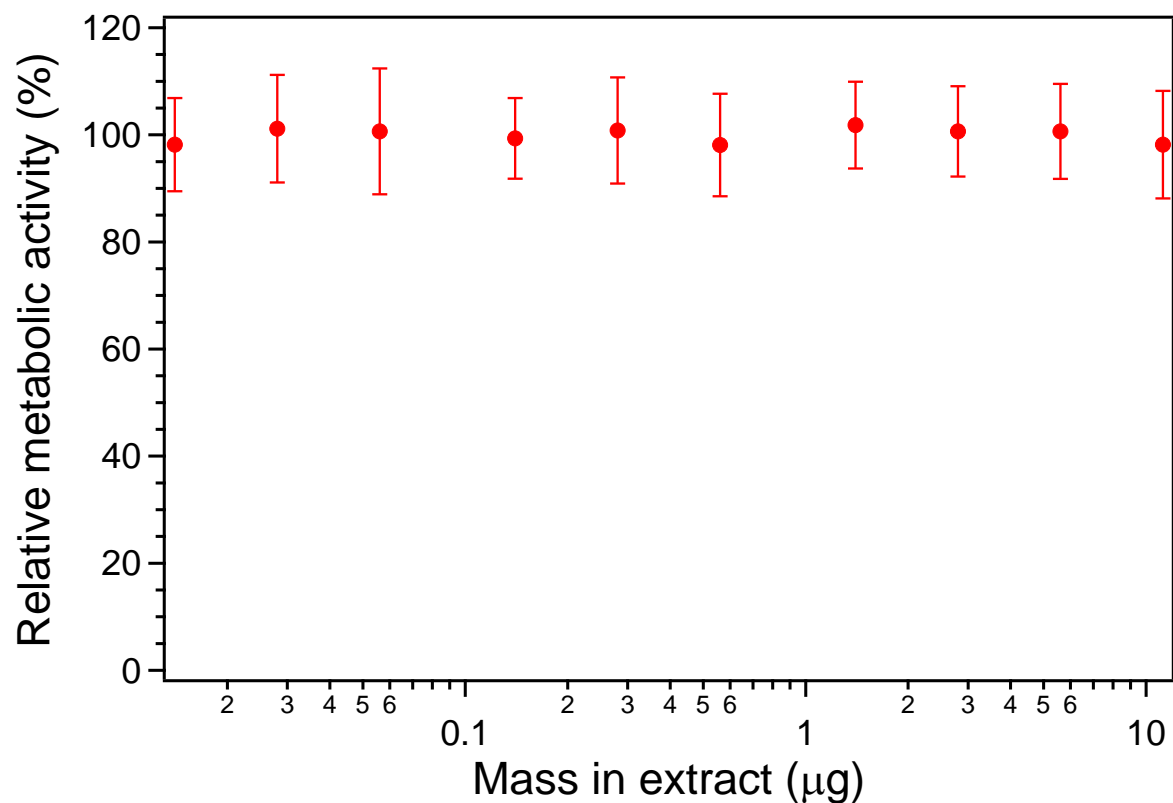


Figure S2. Post filter exposure cellular metabolic activity as measured by the MTT assay (filter: naphthalene SOA formed under dry, RO₂ + NO dominant conditions). Cellular metabolic activity is normalized to cells exposed to stimulant-free media. Data shown are means \pm standard error of triplicate exposure experiments. All filter exposures produced similar results.

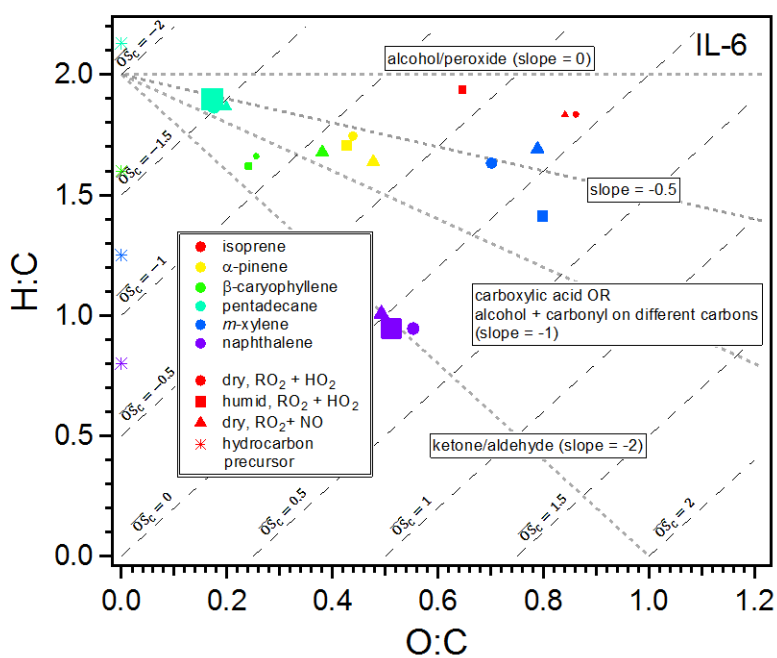
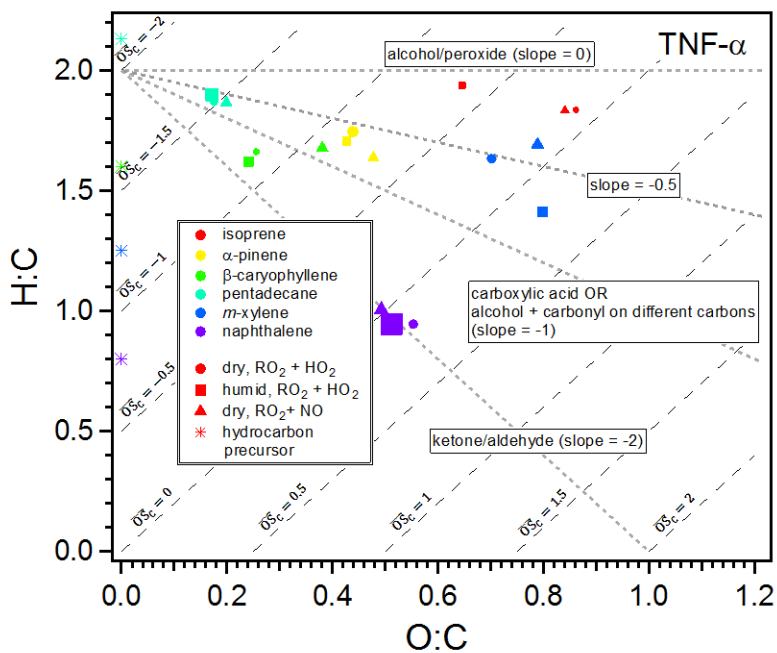


Figure S3. van Krevelen plot for various SOA systems. Data points are colored by SOA system (red: isoprene, yellow: α -pinene, green: β -caryophyllene, light blue: pentadecane, blue: *m*-xylene, and purple: naphthalene), shaped according to formation conditions (circle: dry, $RO_2 + HO_2$; square: humid, $RO_2 + HO_2$; and triangle: dry, $RO_2 + NO$), and sized by TNF- α and IL-6 levels. SOA precursors are shown as stars, colored by SOA system.

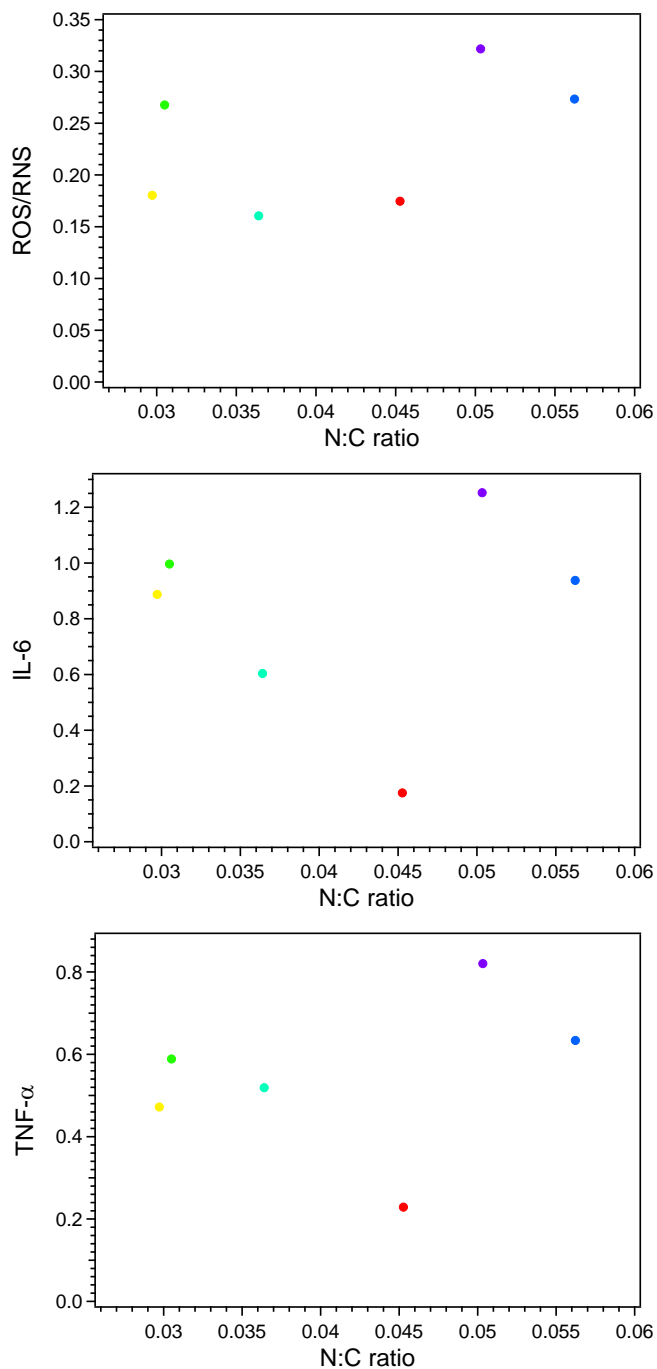
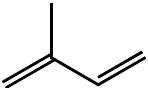
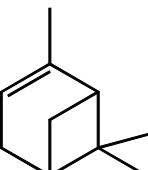
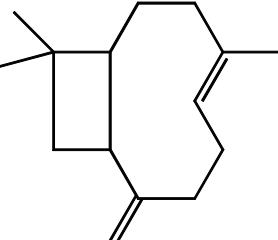

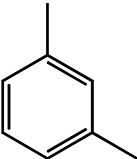
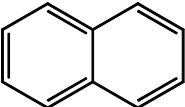


Figure S4. ROS/RNS, TNF- α , and IL-6 (represented as AUC per μg) for various SOA systems spanning a wide range of N:C ratios. Data points are colored by SOA system (red: isoprene, yellow: α -pinene, green: β -caryophyllene, light blue: pentadecane, blue: *m*-xylene, and purple: naphthalene).

Table S1. SOA precursor structures.

Compound	Structure
Isoprene	 The structure of isoprene is a branched diene, specifically 2-methyl-1,3-butadiene, shown as a skeletal structure with a central carbon atom bonded to a methyl group and two vinyl groups.
α -pinene	 The structure of α -pinene is a bicyclic monoterpene, specifically 1,2,3,4,4,5-hexamethyl-1,2,3,4,4,5-hexahydronaphthalene, shown as a skeletal structure with a bicyclic ring system and six methyl groups.
β -caryophyllene	 The structure of β -caryophyllene is a bicyclic sesquiterpene, specifically 1,2,3,4,4,5,6,7,8,9,10,11,12,13,14,15-hexadecahydronaphthalene, shown as a skeletal structure with a bicyclic ring system and several methyl groups.
Pentadecane	 The structure of pentadecane is a straight-chain alkane with 15 carbon atoms, shown as a zigzag skeletal structure.
m-xylene	 The structure of m-xylene is a benzene ring with two methyl groups attached at the meta position, shown as a skeletal structure.
Naphthalene	 The structure of naphthalene is a polycyclic aromatic hydrocarbon consisting of two fused benzene rings, shown as a skeletal structure.