



*Supplement of*

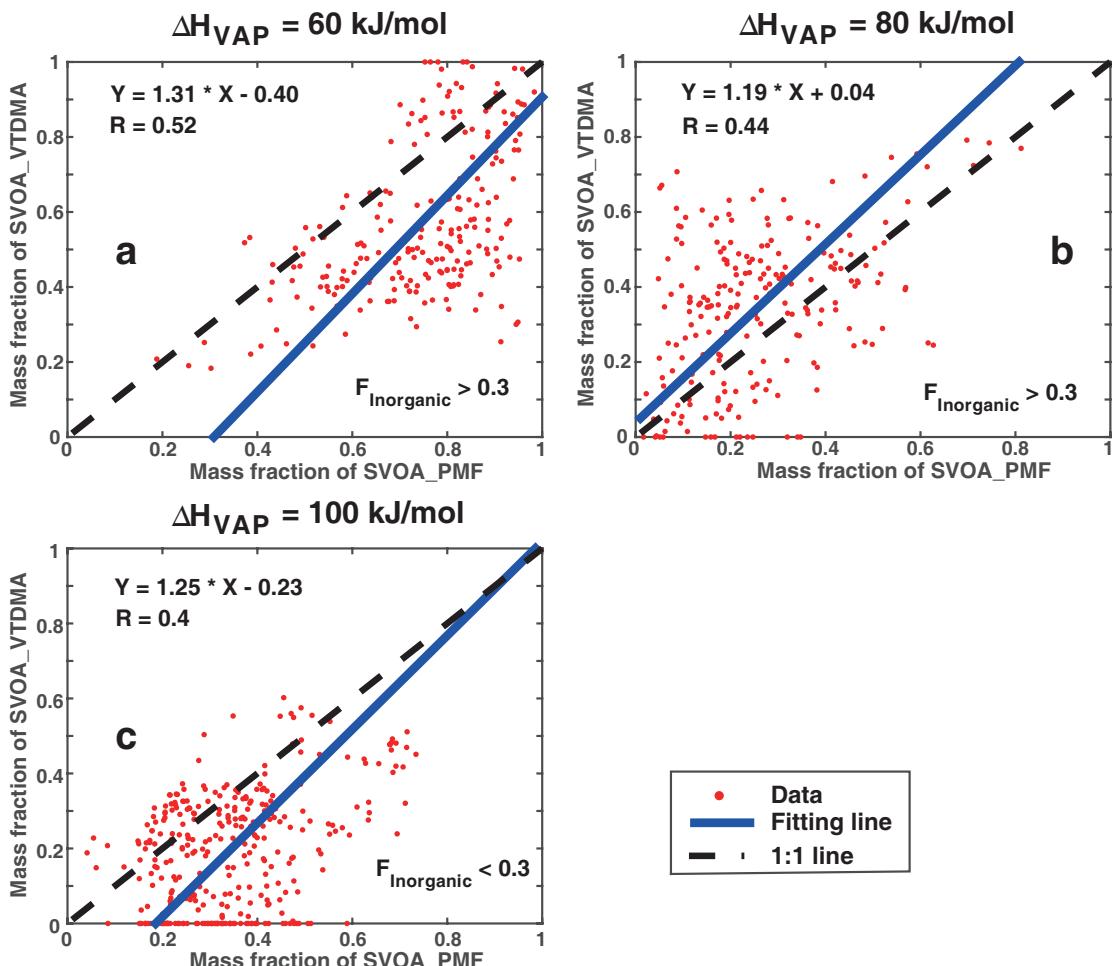
## **Estimates of the organic aerosol volatility in a boreal forest using two independent methods**

**Juan Hong et al.**

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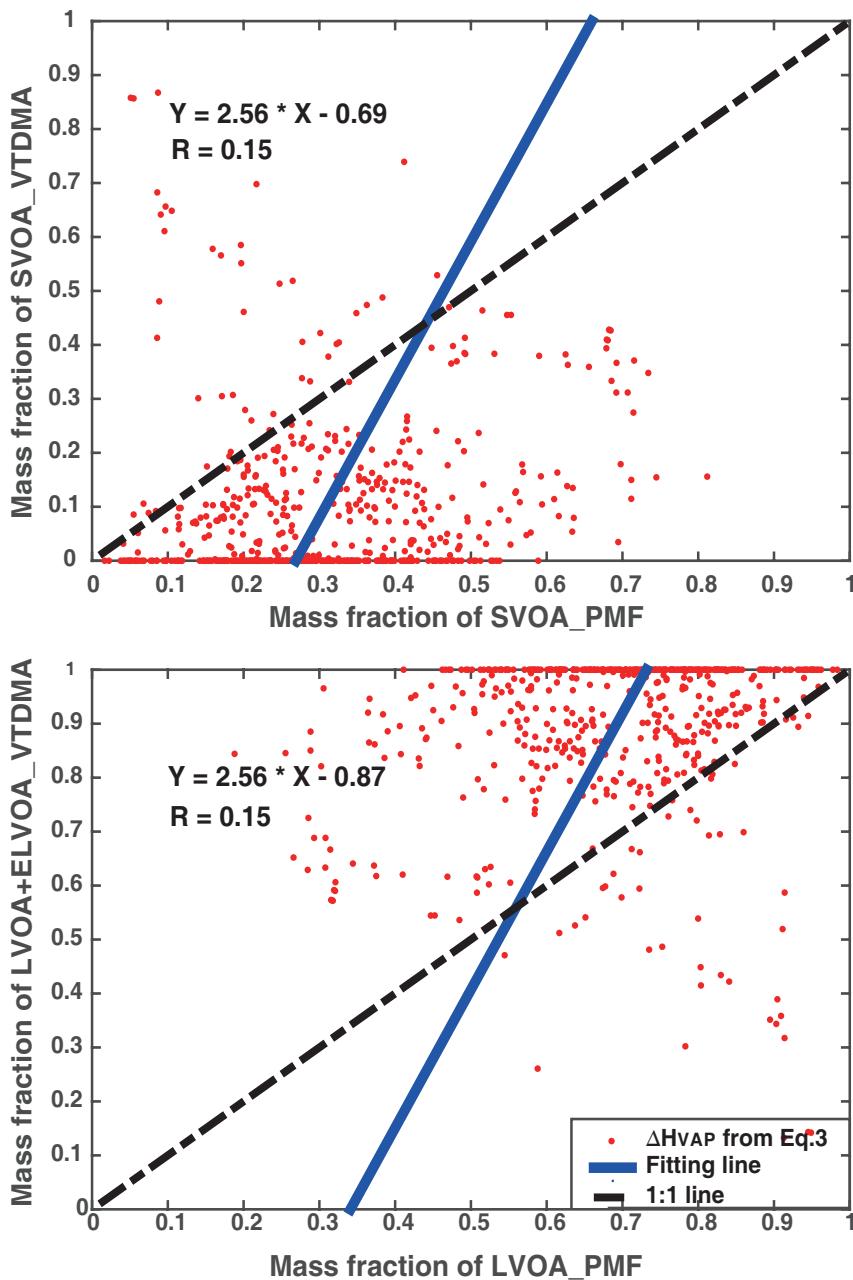
Supplementary materials:



5 Figure S1: Mass fraction of semi-volatile organics obtained from VTDMA vs. the PMF analysis for different inorganic mass fractions. Modeled results were obtained by using a constant enthalpy value for all organics. Enthalpy values were set as 60, 80 and 100 kJ/mol, respectively. In panel a and b ( $\Delta H_{\text{vap}}$  of [60 60 60] and [80 80 80] kJ/mol for organic groups with different volatilities, respectively) only the data points with particle inorganic mass fraction higher than 0.3 are shown. In panel c ( $\Delta H_{\text{vap}}$  of [100 100 100] kJ/mol for organic groups with different volatilities) only the data points with inorganic particle mass fraction of less than 0.3 are shown.

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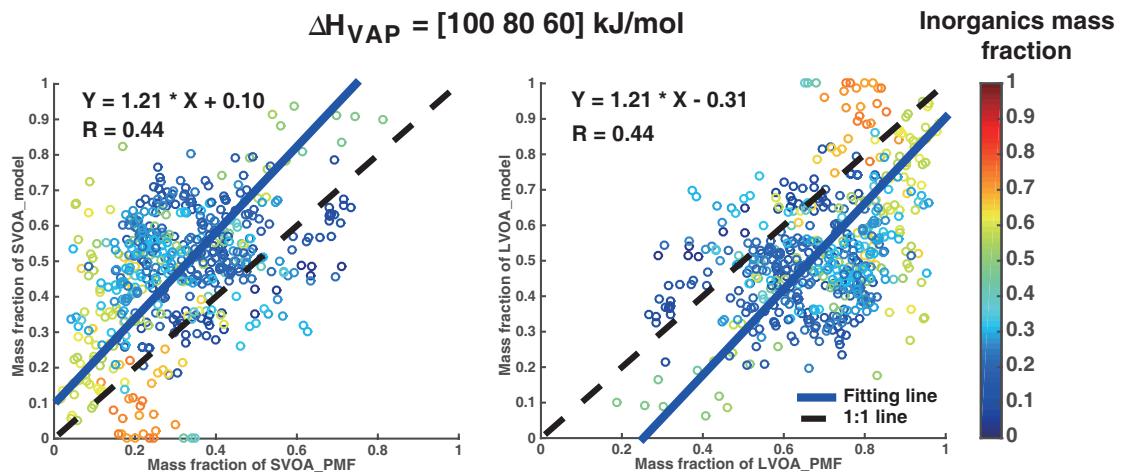


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Figure S2: Mass fractions of SVOA and LVOA of the total organic mass obtained from VTDMA data vs. the ones from the PMF analysis.  $C^*$ -dependent  $\Delta H_{vap}$  values based on Eq. 3 were used as the input for the kinetic model. Correlation coefficient and equation for the line fitted to the data points to describe the agreement between the VTDMA- and PMF-derived organic mass fractions are also given.

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Figure S3: Mass fractions of SVOA and LVOA of the total organic mass obtained from VTDMA vs. the PMF analysis. Model results were obtained by using  $\Delta H_{VAP}$  values as [100 80 60] KJ/mol (Table 2). Note that mass fraction of LVOA<sub>model</sub> means here the sum of LVOA and ELVOA mass fractions obtained from the VTDMA data. The colors of the data points illustrate the particle inorganic mass fraction. Correlation coefficient and equation for the line fitted to the data points are also given.

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