

1 **Supporting Information**

2 **A transition in atmospheric emissions of particles and gases from**
3 **on-road heavy-duty trucks**

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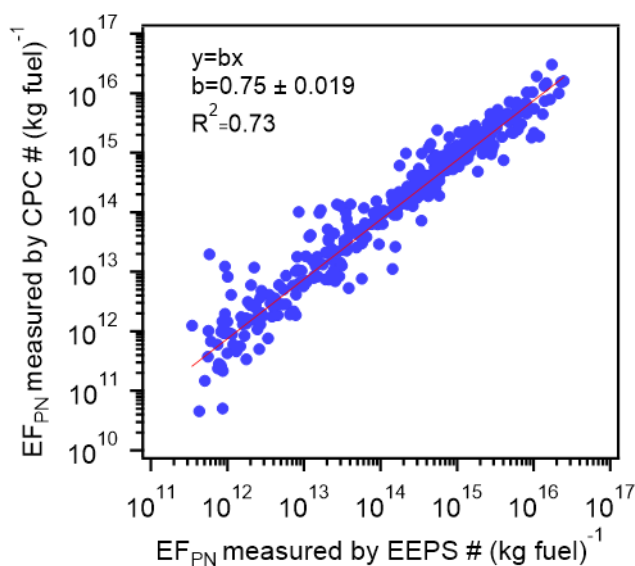
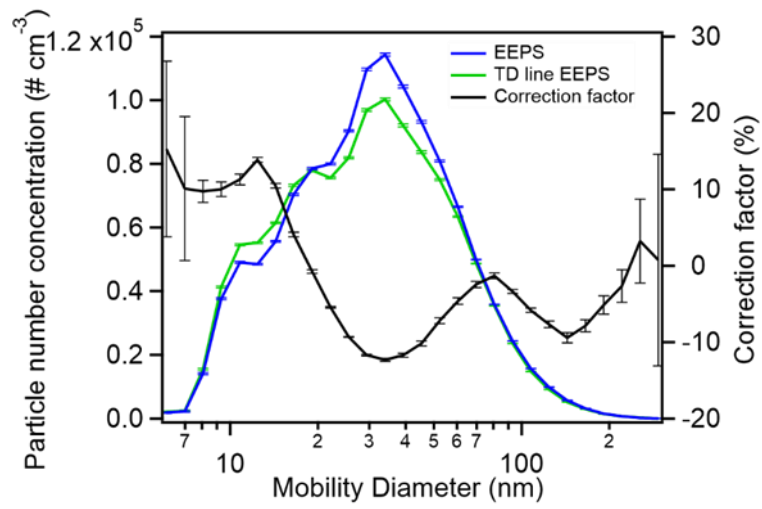
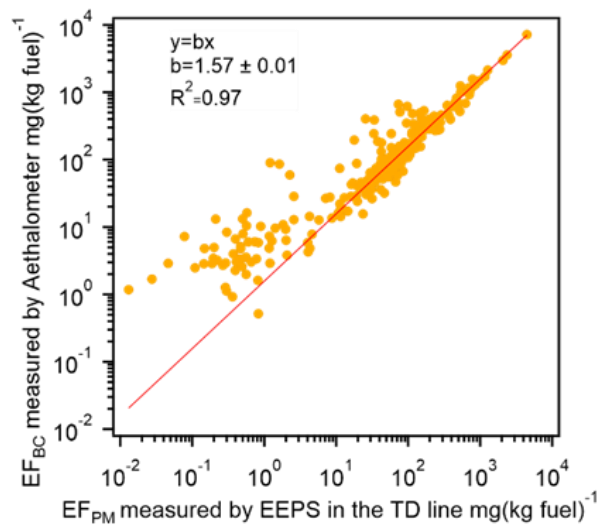


Fig. S1. Relationship between EF_{PN} measured by CPC and EEPS.



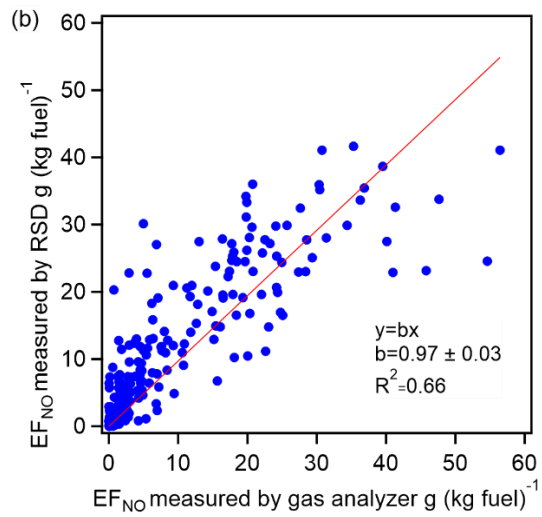
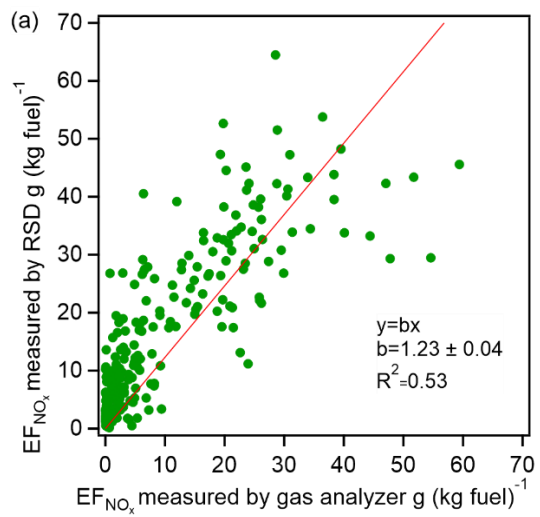
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15 **Fig. S2.** Size-dependent ammonium sulfate concentrations measured by bypass EEPS and TD line EEPS and corresponding
 16 correction factors.



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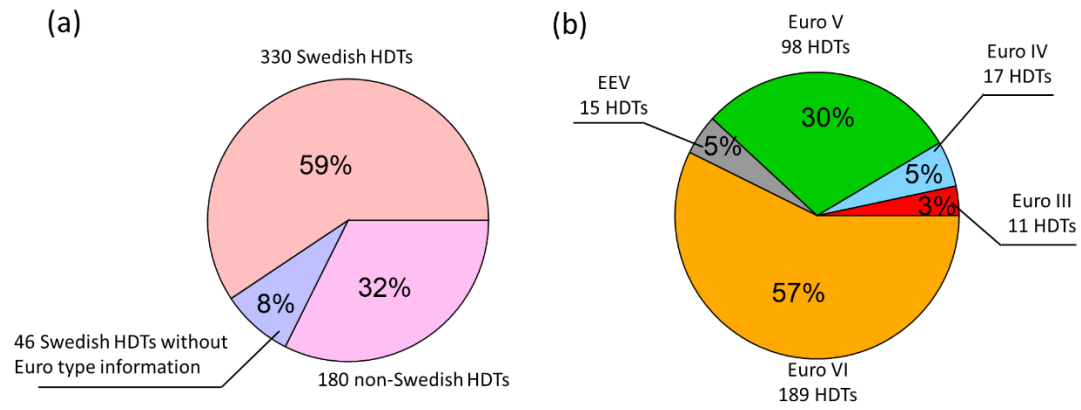
18 **Fig. S3.** Relationship between EF_{BC} measured by the Aethalometer and (a) EF_{non-volatile PM} measured by the EEPS in the TD line
19 (unity density of particles was assumed).



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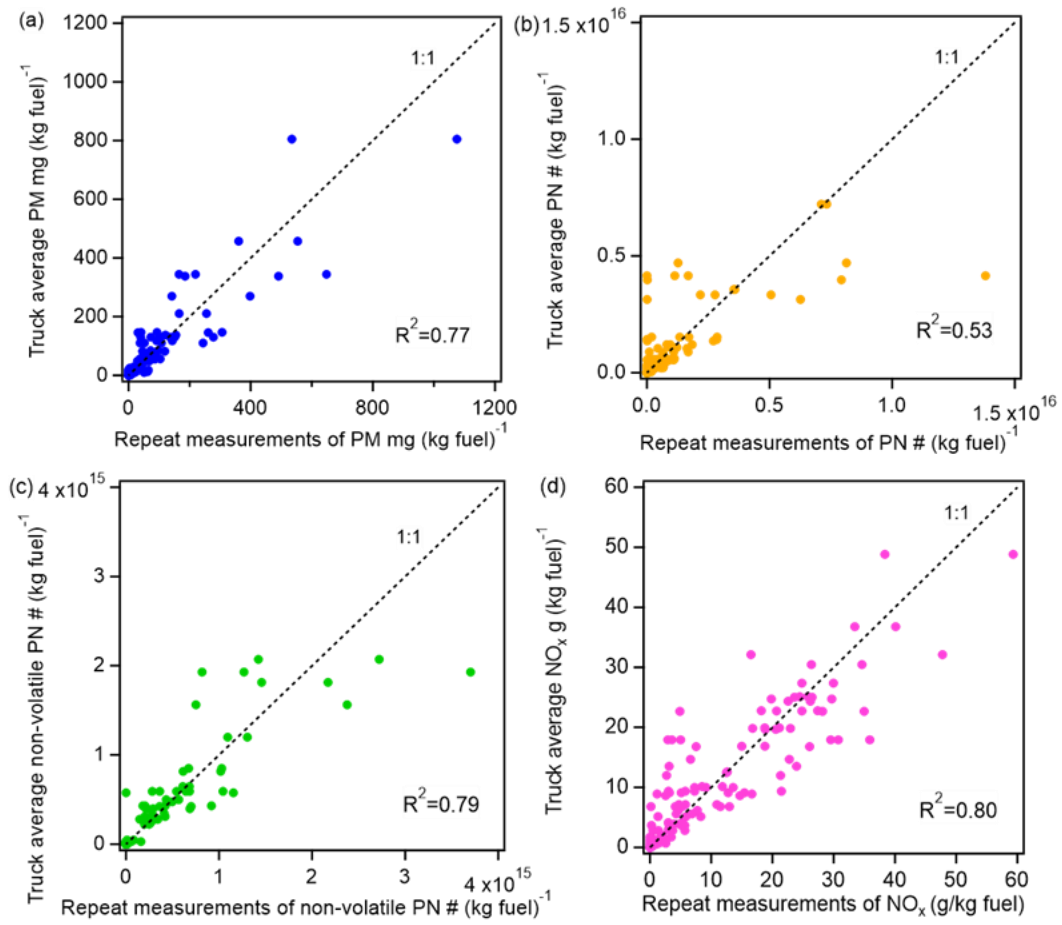
Fig. S4. Relationship between EF_{NO_x} and EF_{NO} (NO₂ equivalents) measured by the gas analyzers and RSD.



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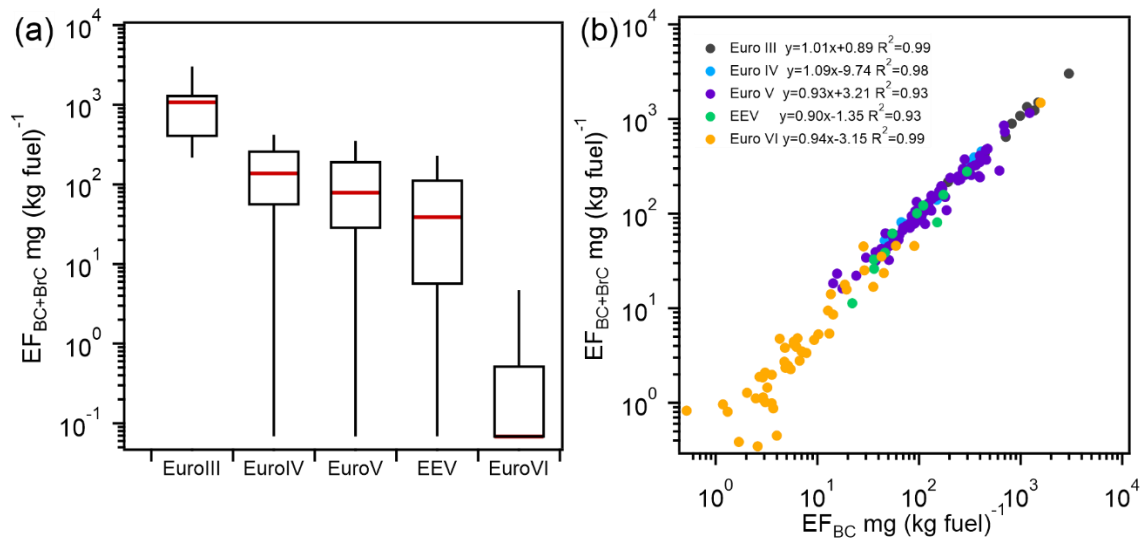
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Fig. S5. (a) Composition of all 556 HDTs trucks and (b) 330 Swedish HDTs with valid Euro type information.



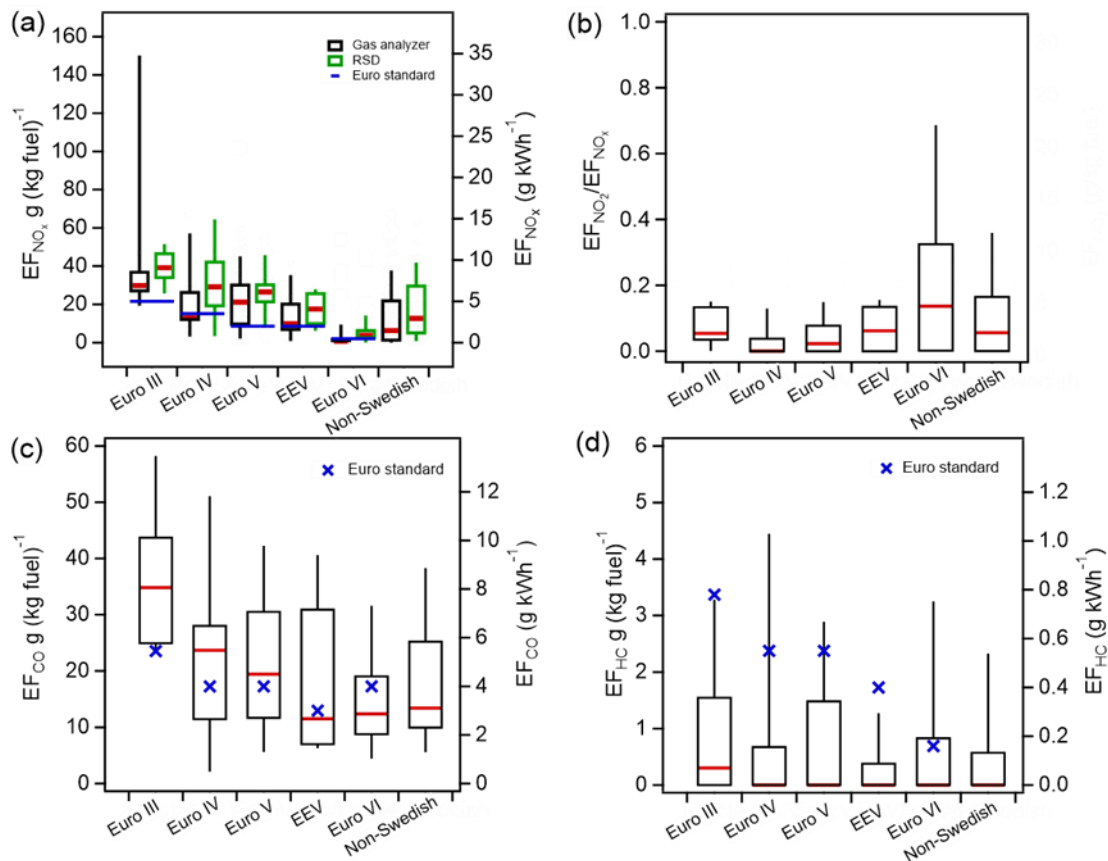
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25 **Fig. S6.** Average pollutant emission factors of PM, PN, non-volatile PN and NO_x for each HDT against the individual plume
 26 measurements of the corresponding HDT.



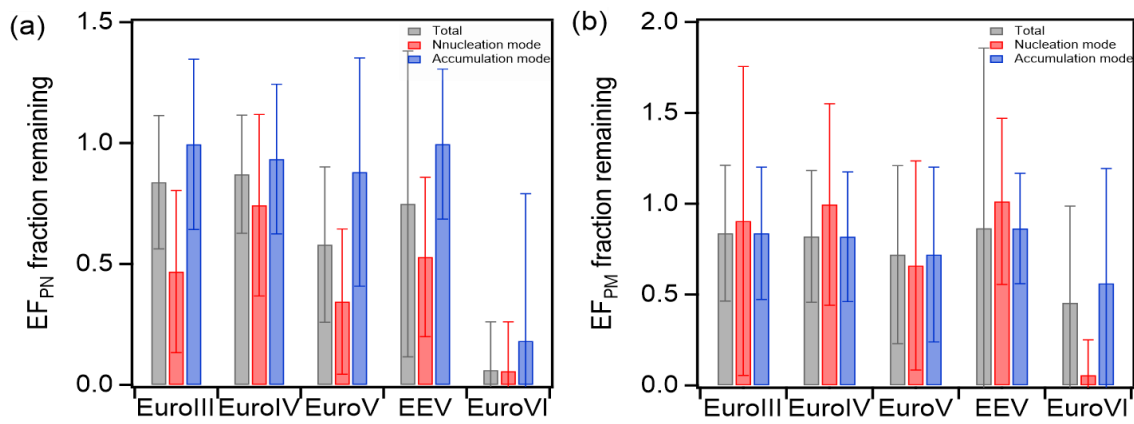
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28 **Fig. S7.** (a) EF_{BC+BrC} for Euro III to Euro VI HDTs. Non-detectable pollutant emission signals for captured plumes have been
 29 replaced by EF_{min} . For box-and-whisker plots, the top and bottom line of the box are 75th and 25th percentiles of the data,
 30 the red line inside the box is the median, and the top and bottom whiskers are 90th and 10th percentiles and (b) scatter plot
 31 of EF_{BC+BrC} and EF_{BC} for Euro III to Euro VI HDTs.



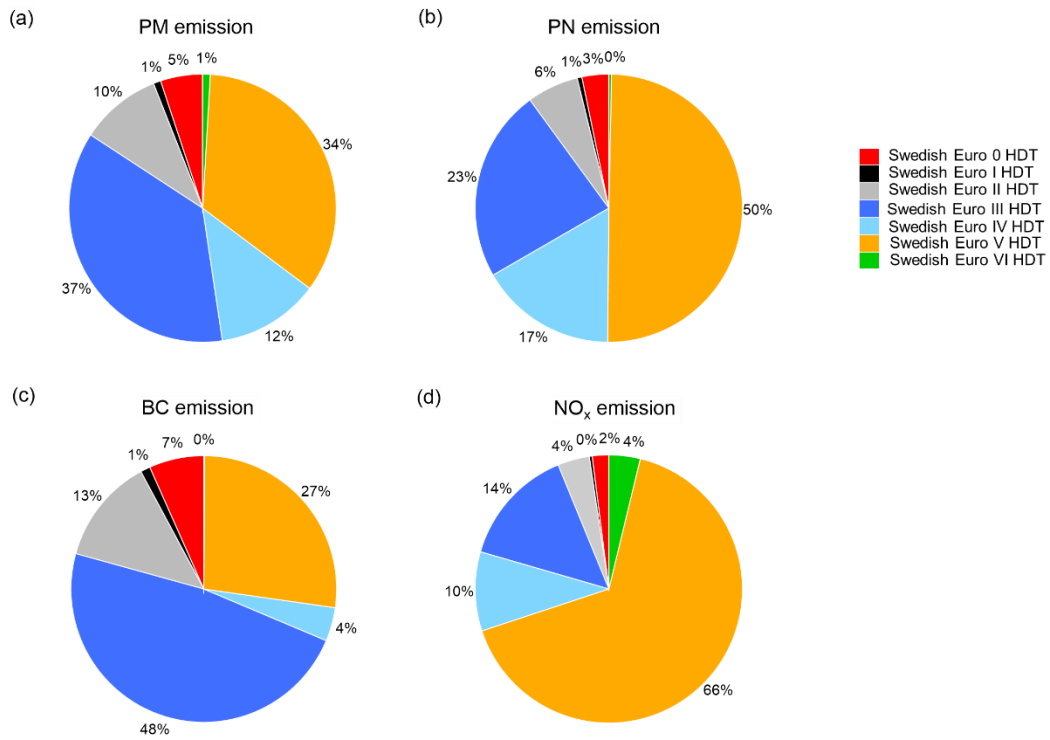
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33 **Fig. S8.** (a) EF_{NO_x} , (b) EF_{NO_2}/EF_{NO_x} , (c) EF_{CO} , and (d) EF_{HC} for Euro III to Euro VI and non-Swedish HDTs. Non-detectable pollutant
 34 emission signals for captured plumes have been replaced by EF_{min} . For box-and-whisker plots, the top and the bottom line of
 35 the box are 75th and 25th percentiles of the data, the red line inside the box is the median, and the top and bottom whiskers
 36 are 90th and 10th percentiles. Note that the comparison with the emission standard is only indicative as they are based on
 37 test cycle performance.



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39 **Fig. S9.** Average EF_{PN} and EF_{PM} fraction remaining of the total particle, nucleation mode, and accumulation mode particle of
 40 Euro III-VI HDTs, error bars represent the standard deviation (1σ).



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42 **Fig. S10.** Approximation of contributions of pollutants emitted from Swedish HDVs in each Euro class to the total (a) PM,
 43 (b) PN, (c) BC and (d) NO_x emissions (by adopting median EFs).