

## **ELECTRONIC SUPPLEMENTARY INFORMATION**

### **Distribution of five SVOCs in a model room: effect of vacuuming and air cleaning measures**

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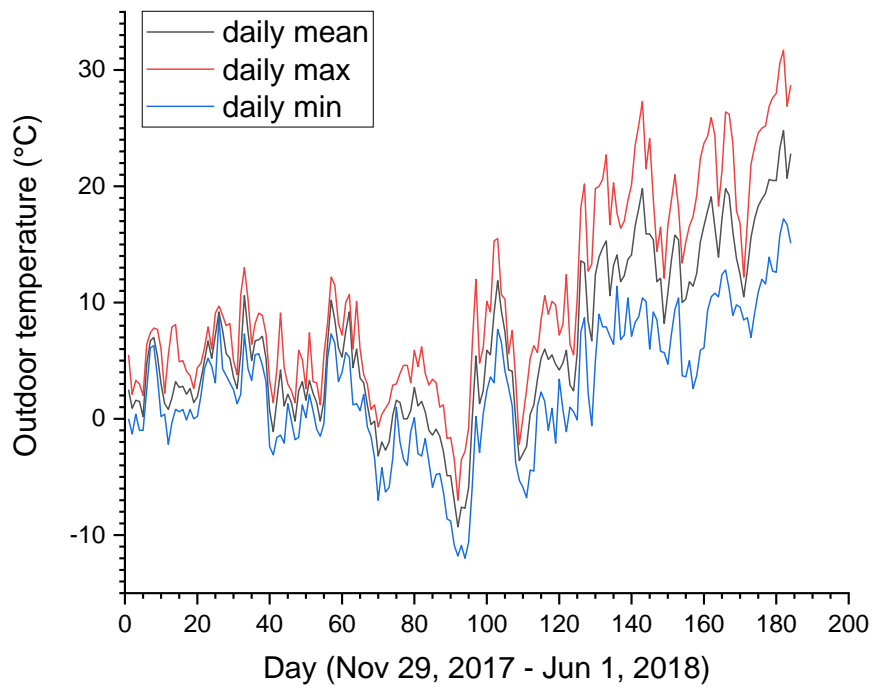
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\*) Author for Correspondence

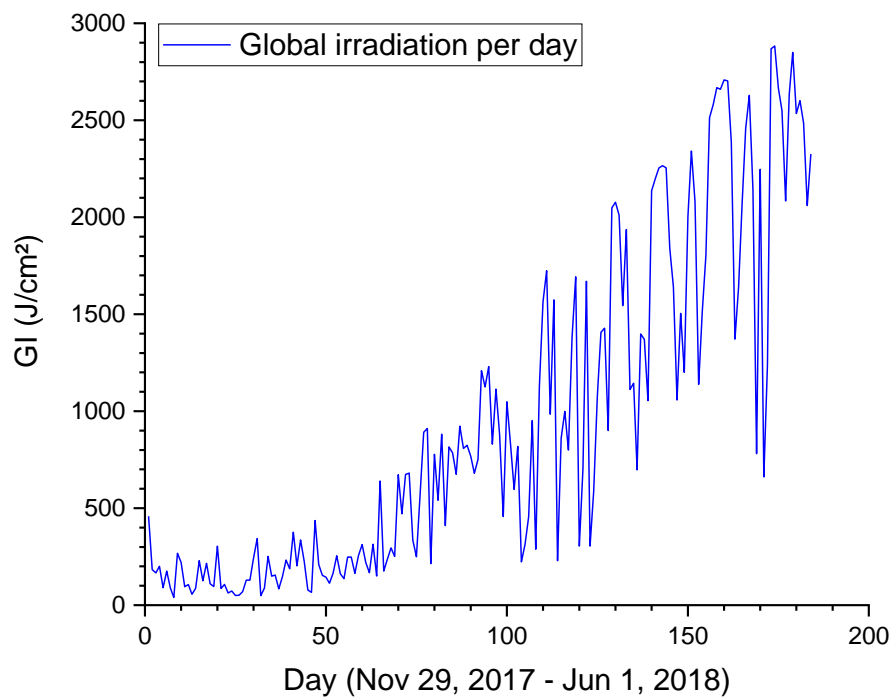
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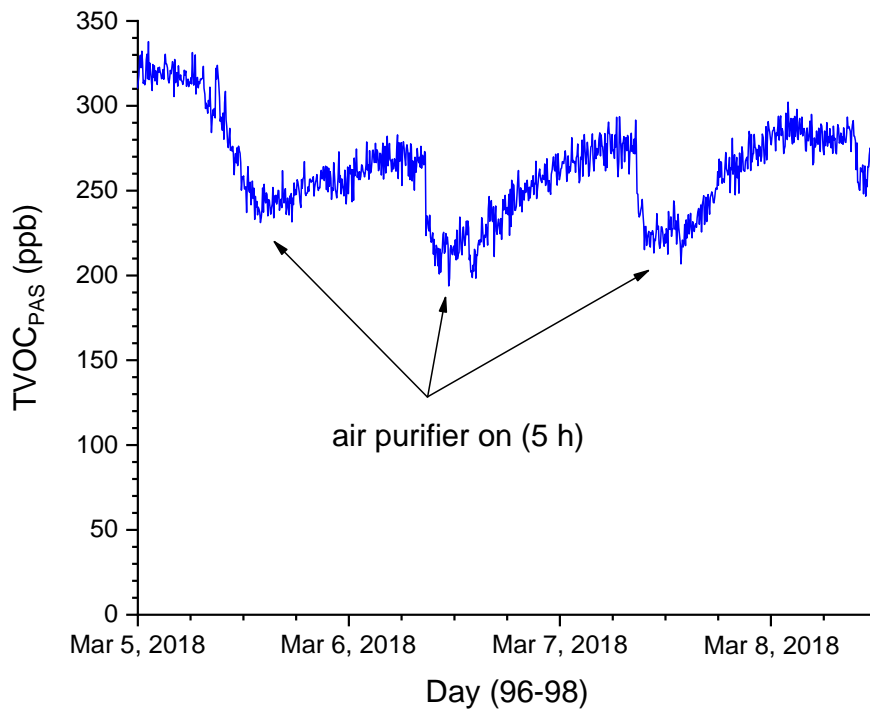
Email [tunga.salthammer@wki.fraunhofer.de](mailto:tunga.salthammer@wki.fraunhofer.de)



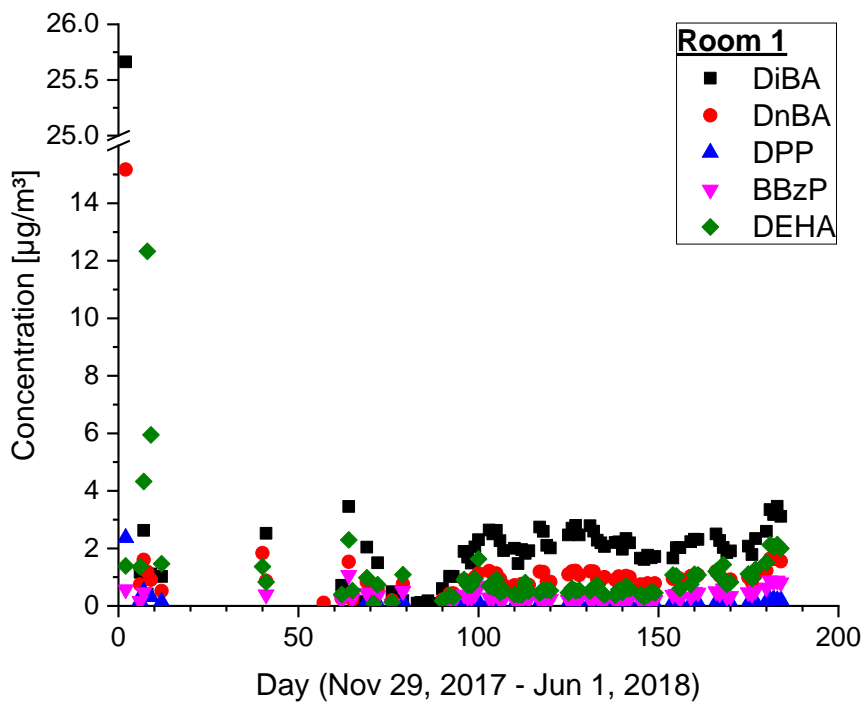
**Figure SI-1:** Temperature profiles (daily mean, maximum and minimum) at the WKI campus (LatN 52° 18' 05", LonE 10° 32' 43").



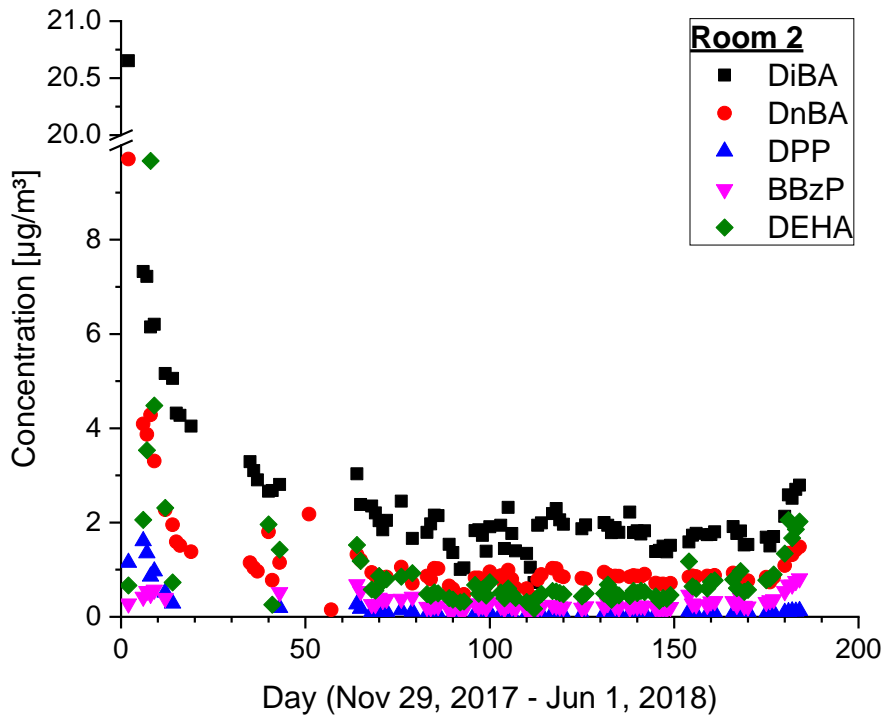
**Figure SI-2:** Global irradiation in Joule per cm<sup>2</sup> and day at the WKI campus (LatN 52° 18' 05", LonE 10° 32' 43").



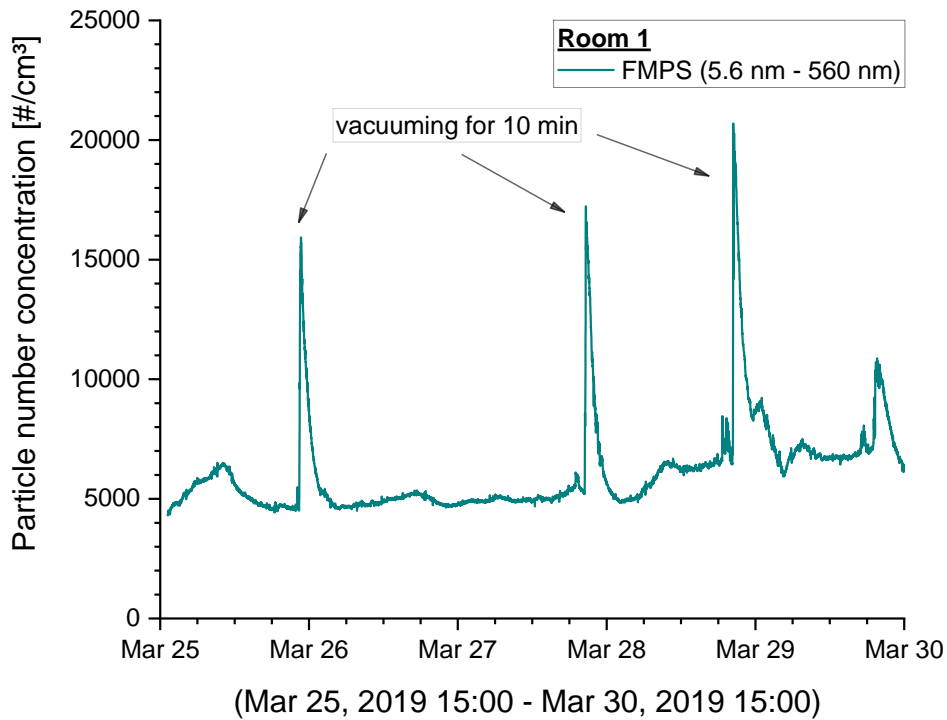
**Figure SI-3:** Time vs. concentration curve of TVOC<sub>PAS</sub> in the test Room 2 for Days 96 – 98. The photoacoustic device was calibrated versus propane.



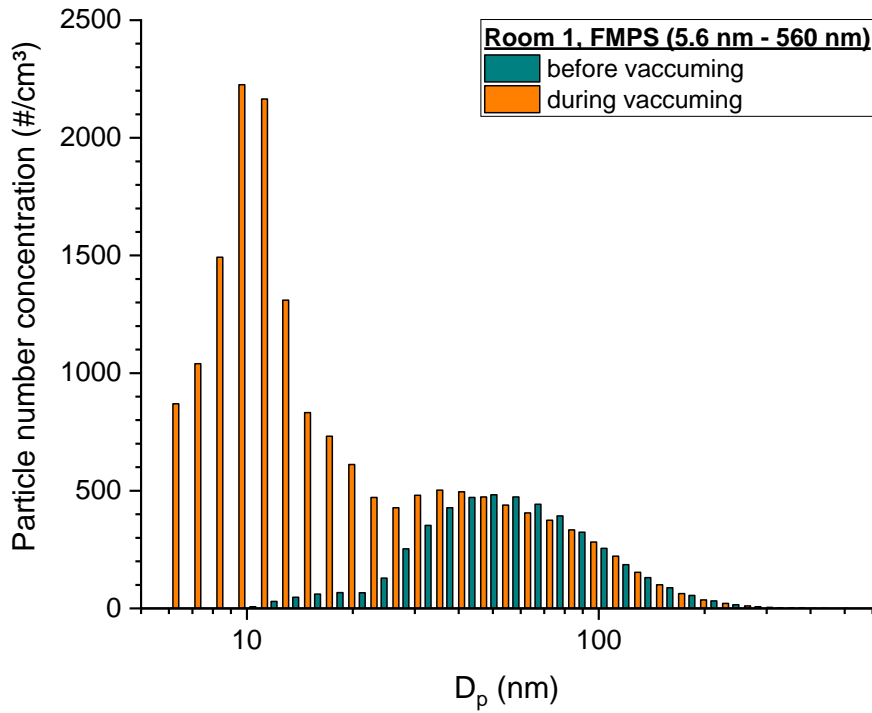
**Figure SI-4:** Time vs. concentration curves of the five target compounds in the reference Room 1.



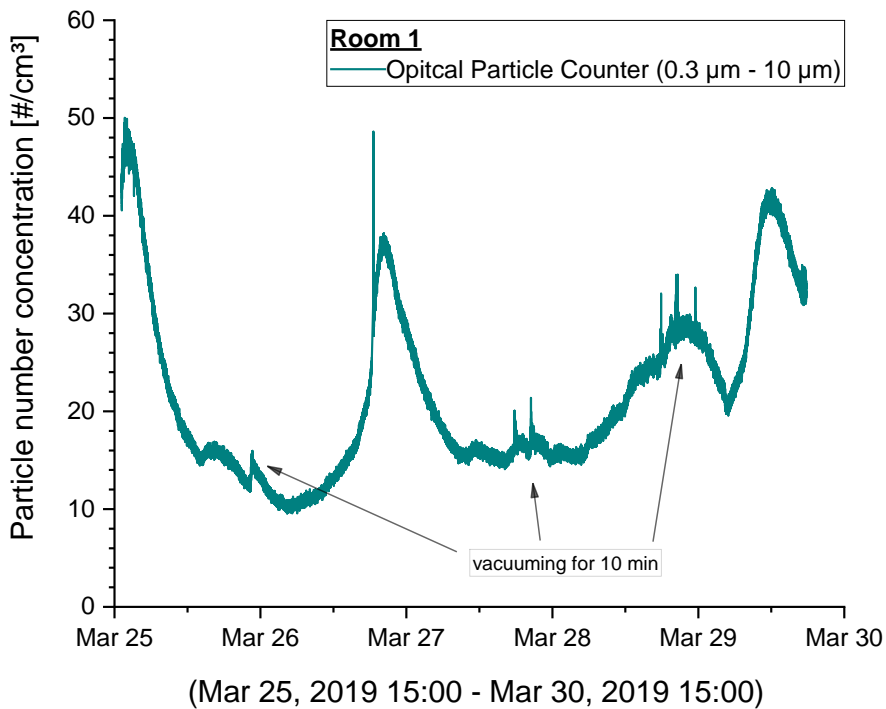
**Figure SI-5:** Time vs. concentration curves of the five target compounds in the test Room 2.



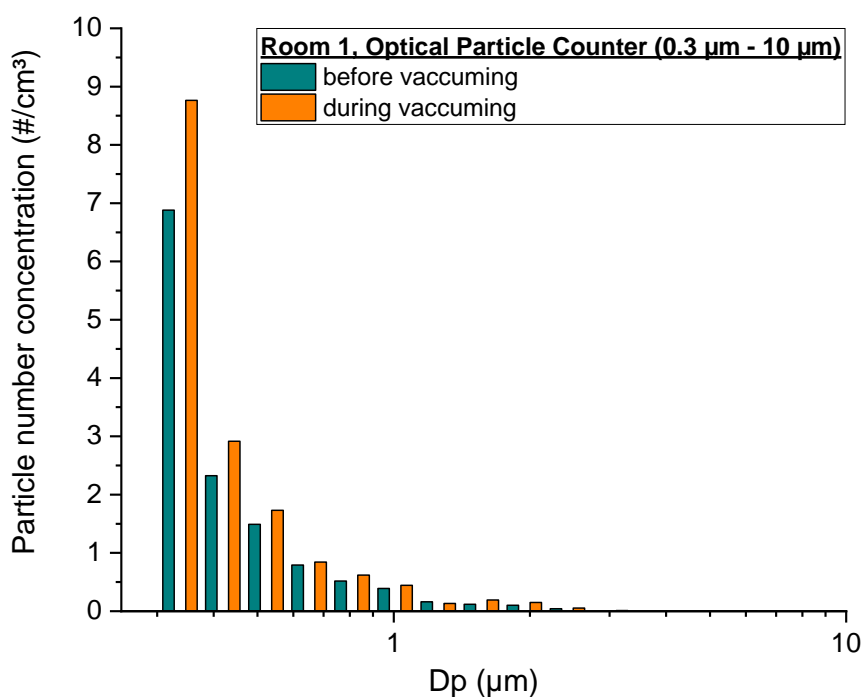
**Figure SI-6:** Particle number concentration (FMPS data) vs. time in the reference Room 1. The humidifier was turned on and the floor was vacuumed on March 26, 28 and 29 for 10 min.



**Figure SI-7:** Particle size distribution (FMPs data) before and during vacuuming in the reference Room 1. The humidifier was turned on.



**Figure SI-8:** Particle number concentration (OPC data) vs. time in the reference Room 1. The humidifier was turned on and the floor was vacuumed on March 26, 28 and 29 for 10 min.



**Figure SI-9:** Particle size distribution (OPC data) before and during vacuuming in the reference Room 1. The humidifier was turned on.

**Note:** For the results presented in Tables SI-1 – SI-4 the limit of quantitation was LOQ = 0.1 μg/g, which results from an increased sample mass for extraction and a different calibration procedure.

**Table SI-1:** Analysis of carpet on the five target compounds (mass related) and praseodymium (Pr) (surface related) on Day 453 in the reference Room 1 (uncleaned surface). The samples (2 cm x 7 cm) were taken at different locations from a 50 cm x 50 cm piece.

Room 1 (uncleaned) [μg/g]					[μg/m²]
DiBA	DnBA	DPP	BBzP	DEHA	Pr
1.9	1.4	1.3	2.9	3.1	13.2
7.0	8.6	43.7	3.1	3.2	24.2
5.7	7.2	21.3	3.1	3.2	19.1

**Table SI-2:** Analysis of carpet on the five target compounds (mass related) and praseodymium (Pr) (surface related) on Day 453 in the test Room 2 (cleaned surface). The samples (2 cm x 7 cm) were taken at different locations from a 50 cm x 50 cm piece.

Room 2 (cleaned) [ $\mu\text{g/g}$ ]					[ $\mu\text{g/m}^2$ ]
DiBA	DnBA	DPP	BBzP	DEHA	Pr
4.3	4.9	8.9	2.8	2.5	16.1
6.8	9.3	17.1	2.7	2.7	20.0
3.5	4.2	7.1	2.8	2.8	13.4

**Table SI-3:** Analysis of carpet on the five target compounds (surface related) and praseodymium (Pr) (surface related) on Day 453 in the reference Room 1 (uncleaned surface). The samples (2 cm x 7 cm) were taken at different locations from a 50 cm x 50 cm piece.

Room 1 (uncleaned) [ $\text{mg/m}^2$ ]					[ $\mu\text{g/m}^2$ ]
DiBA	DnBA	DPP	BBzP	DEHA	Pr
9.8	7.1	6.7	14.9	16.1	13.2
33.0	40.4	206.5	14.8	15.1	24.2
25.3	31.8	94.2	13.8	14.2	19.1

**Table SI-4:** Analysis of carpet on the five target compounds (surface related) and praseodymium (Pr) (surface related) on Day 453 in the test Room 2 (cleaned surface). The samples (2 cm x 7 cm) were taken at different locations from a 50 cm x 50 cm piece.

Room 2 (cleaned) [ $\text{mg/m}^2$ ]					[ $\mu\text{g/m}^2$ ]
DiBA	DnBA	DPP	BBzP	DEHA	Pr
18.9	21.6	38.9	12.3	11.1	16.1
29.5	40.5	74.4	11.8	10.3	20.0
14.8	17.8	29.9	11.8	10.2	13.4