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A comparison of $PM_{2.5}$-bound polycyclic aromatic hydrocarbons in summer Beijing (China) and Delhi (India)

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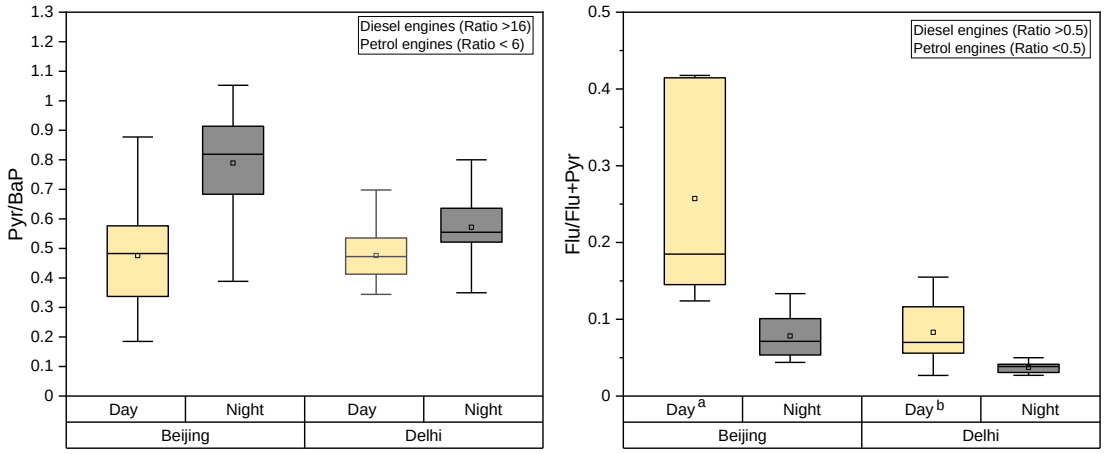

Figure S1: Ratio of Pyrene/Benzo[a]Pyrene (Pyr/BaP) and Fluorene/Fluorene+Pyrene (Flu/Flu+Pyr) during the daytime and night-time. Box plots represents the 25th and 75th percentiles range of the observed ratios and the whisker numbers reflect the data within 1.5 times the interquartile range (IQR). Square symbols represent the mean ratio. Both ratios suggest petrol combustion emissions. Fluorene has been quantified in few samples during the daytime, a & b refer to quantified Fluorene in 5 and 7 samples, respectively.

Table S1. The relative standard deviation (%RSD) of each PAHs (listed in order of elution) from replicate analysis (n=10) of two samples.

Compound / formula	Accurate mass (*m / z*)	%RSD	%RSD
17-PAHs	Monitored ions in EI mode	Beijing	Delhi
Naphthalene / $C_{10}H_8$	128.0628-127.0543-102.0464	10.26	5.63
Acenaphthylene / $C_{12}H_8$	152.0629-151.0546-126.0463	3.36	2.64
Acenaphthene / $C_{12}H_{10}$	154.0779-153.0705-152.0634	< LOD	< LOD
Fluorene / $C_{13}H_{10}$	166.0782-165.0708-164.0621	13.23	10.12
Phenanthrene / $C_{14}H_{10}$	178.0789-176.0626-152.0622	12.54	3.91
Anthracene / $C_{14}H_{10}$	178.0787-176.0627-152.0620	< LOD	< LOD
Fluoranthene / $C_{16}H_{10}$	202.0788-200.0626-101.0388	10.10	3.68
Pyrene / $C_{16}H_{10}$	202.0788-200.0626-101.0389	9.66	3.38
Benzo[a]anthracene / $C_{18}H_{12}$	228.0927-226.0783-101.0388	9.77	4.16
Chrysene / $C_{18}H_{12}$	228.0943-226.0784-101.0387	6.56	3.10
Benzo[b]fluoranthene / $C_{20}H_{12}$	252.0941-250.0784-126.0467	9.38	4.77
Benzo[k]fluoranthene / $C_{20}H_{12}$	252.0940-250.0783-126.0468	4.87	3.01
Benzo[a]pyrene / $C_{20}H_{12}$	252.0940-250.0783-126.0466	6.56	2.66
Benzo[e]pyrene / $C_{20}H_{12}$	252.0940-250.0783-126.0466	13.71	3.20
Indeno[1,2,3-cd]pyrene / $C_{22}H_{12}$	276.0939-274.0783-138.0467	6.75	2.80
Dibenzo[a,h]anthracene / $C_{22}H_{14}$	278.1097-276.0941-139.0545	5.19	4.70
Benzo[ghi]perylene / $C_{22}H_{12}$	276.0942-274.0783-138.0467	8.32	5.15
Average		8.7	4.2

Table S2. Toxicity Equivalency Factor (TEFs) for individual PAHs used in this study.

Compound	TEF	References
PAHs		
Napthalene	0.001	Nisbet and LaGoy., 1992
Acenaphthylene	0.001	Nisbet and LaGoy., 1992
Acenaphthene	0.001	Nisbet and LaGoy., 1992
Fluorene	0.0005	Larsen et al., 1998
Phenanthrene	0.0005	Larsen et al., 1998
Anthracene	0.0005	Larsen et al., 1998
Fluoranthene	0.05	Larsen et al., 1998
Pyrene	0.001	Larsen et al., 1998
Benzo[a]anthracene	0.082	Durant et al., 1996
Chrysene	0.017	Durant et al., 1996
Benzo[b]fluoranthene	0.25	Durant et al., 1996
Benzo[k]fluoranthene	0.11	Durant et al., 1996
Benzo[a]pyrene	1	OEHHA., 1994
Benzo[e]pyrene	0.002	Larsen et al., 1998
Indeno[1,2,3-cd]pyrene	0.1	Larsen et al., 1998
Dibenzo[a,h]anthracene	1.1	Larsen et al., 1998
Benzo[g,h,i]perylene	0.02	Larsen et al., 1998