Sources of PM$_{2.5}$-Associated PAHs and n-Alkanes in Changzhou China

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Table S1 The explanation of some abbreviations in this study.

Abbreviation	Explanation
PM$_{2.5}$	Atmospheric particulate matter with aerodynamic diameters equal to or less than 2.5 μm
OC	Organic carbon
EC	Elemental carbon
I/SVOCs	Intermediate/semi volatile organic compounds
PAHs	Polycyclic aromatic hydrocarbons
∑PAHs	Sum of individual polycyclic aromatic hydrocarbons
∑n-alkanes	Sum of individual n-alkanes
MDLs	Method detection limits
WSIIs	Water-soluble ions
SNA	NO$_3^-$, SO$_4^{2-}$ and NH$_4^+$
OM	Organic matter
SS	Sea salt
CANPAHs	Sum of the carcinogenic PAHs concentrations
COMPAHs	Sum of the combustion-derived PAHs concentrations
C$_{max}$	Carbon number with the maximum concentration
CPI	Carbon preference index
CPI1	Carbon preference index of petrogenic n-alkanes
CPI2	Carbon preference index of biologic n-alkanes
PCA	Principal component analysis

Table S2 Abbreviations, molecular weight and method detection limits of individual n-alkanes and PAHs in this study.

n-alkanes	Abbreviation	MDLs (ng/m^3)	PAHs	Abbreviation	MDLs (ng/m^3)
Nonane	C$_9$	0.057	Acenapthene	Ace	0.0026
Decane	C$_{10}$	0.053	Fluorene	Flu	0.0053

Compound	Abbr.	Value	Compound	Abbr.	Value
Undecane	C_{11}	0.044	Phenanthrene	Phe	0.0052
Dodecane	C_{12}	0.048	Anthracene	Ant	0.0077
Tridecane	C_{13}	0.045	Fluoranthene	Fla	0.0044
Tetradecane	C_{14}	0.051	Pyrene	Pyr	0.0056
Pentadecane	C_{15}	0.046	Benzo[a]anthracene	BaA	0.0085
Hexadecane	C_{16}	0.061	Chrysene	Chry	0.0041
Heptadecane	C_{17}	0.043	Benzo[b]fluoranthene	BbF	0.0063
Octadecane	C_{18}	0.068	Benzo[k]fluoranthene	BkF	0.0055
Nonadecane	C_{19}	0.075	Benzo[a]fluoranthene	BaF	0.0053
Eicosane	C_{20}	0.074	Benzo[e]pyrene	BeP	0.0046
Heneicosane	C_{21}	0.073	Benzo[a]pyrene	BaP	0.0076
Docosane	C_{22}	0.081	Perylene	Per	0.0036
Tricosane	C_{23}	0.052	Dibenzo[a,h]anthracene	DahA	0.0067
Tetracosane	C_{24}	0.058	Indeno[1,2,3-cd]pyrene	InP	0.0072
Pentacosane	C_{25}	0.040	Benzo[ghi]perylene	BghiP	0.0066
Hexacosane	C_{26}	0.057			
Heptacosane	C_{27}	0.052			
Octacosane	C_{28}	0.043			
Nonacosane	C_{29}	0.041			
Tricontane	C_{30}	0.048			
Hentriacontane	C_{31}	0.056			
Dotriacontane	C_{32}	0.043			
Tritriacontane	C_{33}	0.045			
Tetratriacontane	C_{34}	0.054			
Pentatriacontane	C_{35}	0.045			
Hexatriacontane	C_{36}	0.045			
Heptatriacontane	C_{37}	0.047			
Octatriacontane	C_{38}	0.046			
Nonatriacontane	C_{39}	0.053			
Tetracontane	C_{40}	0.046			

Table S3 Resluts of Mann-Witney statistics between samples in different polluted days.

	NO_3^-	nss-SO_4^{2-}	NH_4^+	SS	OM	EC	dust
Severely plooluted VS polluted	0.468	0.079	0.182	0.691	0.111	0.412	0.055
Severely polluted VS non-polluted	0.367	0.000	0.000	0.008	0.184	0.339	0.007
Polluted VS non-polluted	0.687	0.000	0.000	0.022	0.781	0.495	0.351