

Table S1. Normalization.

T(°C)	VB (mm)	Ra (μm)	P(kW)	Cn (dB)
0.688679	0.55102	0.506024	0.888617	0.986387
0.899384	0.586957	0.34903	0.689459	0.977138
0.524551	0.428571	0.309202	0.625323	0.974385
0.361983	0.341772	0.180645	0.613176	0.95446
0.555133	0.402985	0.41791	0.795181	0.992952
1	1	0.444444	1	1
0.162342	0.303371	0.306197	0.523055	0.924311
0.286275	0.421875	0.21856	0.553354	0.932124
0.634783	0.658537	1	0.717391	0.987667
0.365	0.333333	0.396226	0.552511	0.960849
0.504028	0.931034	0.272727	0.759414	0.954101
0.463002	0.5625	0.157107	0.632956	0.923974
0.203816	0.284211	0.361549	0.540984	0.923077
0.301861	0.5	0.309582	0.546687	0.915413
0.51049	0.627907	0.184886	0.694737	0.949339
0.58871	0.5	0.115915	0.789989	0.935678

Table S2. Calculation for determining P_{ij} and E_{ij}

P_{ij}					E_{ij}				
T(°C)	VB (mm)	Ra (μm)	P(kW)	Cn (dB)	T(°C)	VB (mm)	Ra (μm)	P(kW)	Cn (dB)
0.036281	0.052745	0.033112	0.046376	0.060509	-0.12032	-0.15519	-0.11284	-0.14242	-0.16973
0.027781	0.049516	0.048005	0.059772	0.061082	-0.09955	-0.14882	-0.14577	-0.16839	-0.17076
0.047633	0.067815	0.054189	0.065902	0.061255	-0.14501	-0.18249	-0.15798	-0.17923	-0.17107
0.069025	0.085038	0.092753	0.067208	0.062533	-0.18452	-0.20959	-0.22055	-0.18146	-0.17335
0.045009	0.072121	0.040093	0.051825	0.060109	-0.13957	-0.18963	-0.12896	-0.1534	-0.169
0.024986	0.029064	0.037699	0.04121	0.059686	-0.09218	-0.10283	-0.12358	-0.13142	-0.16823
0.153908	0.095802	0.054721	0.078788	0.064573	-0.28802	-0.2247	-0.15899	-0.2002	-0.17693
0.087279	0.068891	0.076662	0.074474	0.064032	-0.21284	-0.1843	-0.1969	-0.19343	-0.17598
0.039361	0.044133	0.016755	0.057445	0.060431	-0.12733	-0.13772	-0.06851	-0.16412	-0.16958
0.068454	0.087191	0.042287	0.074587	0.062118	-0.18357	-0.21272	-0.13377	-0.19361	-0.17261
0.049572	0.031216	0.061436	0.054266	0.062557	-0.14893	-0.10822	-0.17139	-0.15812	-0.17339
0.053965	0.051668	0.106649	0.065108	0.064597	-0.15755	-0.15309	-0.2387	-0.17786	-0.17697
0.12259	0.10226	0.046343	0.076176	0.064659	-0.25731	-0.23318	-0.14235	-0.19613	-0.17708
0.082772	0.058127	0.054122	0.075382	0.065201	-0.20624	-0.16538	-0.15785	-0.19488	-0.17802
0.048945	0.046286	0.090625	0.059318	0.062871	-0.14767	-0.14223	-0.21759	-0.16756	-0.17394
0.042442	0.058127	0.144548	0.052166	0.063789	-0.1341	-0.16538	-0.27958	-0.15406	-0.17556

Table S3. Calculated values of normalized entropy E_{ij} and weight (W_j).

Evaluation	T(°C)	VB (mm)	Ra (μm)	P(kW)	Cn (dB)
SUM	-2.64471	-2.71547	-2.6553	-2.75628	-2.77219
E_{ij}	0.953877	0.979399	0.957699	0.994119	0.999855
W_j	0.400888	0.179061	0.367668	0.05112	0.001264

Table S4. Total Relative Importance values based on WSM.

T(°C)	VB (mm)	Ra (μm)	P(kW)	Cn (dB)	$Q_i^{(1)}$
0.276083	0.098666	0.186049	0.045426	0.001247	0.607471
0.360552	0.105101	0.128327	0.035245	0.001236	0.63046
0.210286	0.07674	0.113684	0.031966	0.001232	0.433908
0.145115	0.061198	0.066417	0.031345	0.001207	0.305282
0.222546	0.072159	0.153652	0.040649	0.001256	0.490262
0.400888	0.179061	0.163408	0.05112	0.001264	0.79574
0.065081	0.054322	0.112579	0.026738	0.001169	0.259889
0.114764	0.075541	0.080358	0.028287	0.001179	0.300129
0.254477	0.117918	0.367668	0.036673	0.001249	0.777984
0.146324	0.059687	0.14568	0.028244	0.001215	0.38115
0.202058	0.166712	0.100273	0.038821	0.001206	0.50907
0.185612	0.100722	0.057763	0.032357	0.001168	0.377621
0.081707	0.050891	0.13293	0.027655	0.001167	0.29435
0.121012	0.08953	0.113823	0.027946	0.001157	0.35347
0.204649	0.12433	0.067977	0.035515	0.0012	0.421774
0.236006	0.08953	0.042618	0.040384	0.001183	0.409722

Table S5. Total Relative Importance values based on WPM.

T(°C)	VB (mm)	Ra (μm)	P(kW)	Cn (dB)	$Q_i^{(2)}$
0.861119	0.89878	0.778455	0.993982	0.999983	0.598853
0.958379	0.909005	0.679087	0.981171	0.999971	0.580445
0.772087	0.859231	0.6495	0.976286	0.999967	0.420647
0.665401	0.825108	0.533039	0.975307	0.999941	0.28541
0.789827	0.849812	0.725579	0.988352	0.999991	0.481335
1	1	0.742188	1	1	0.742188
0.482472	0.807685	0.647171	0.967414	0.9999	0.243951
0.605663	0.856811	0.571718	0.970202	0.999911	0.28782
0.833441	0.927929	1	0.983165	0.999984	0.760342
0.667619	0.821422	0.711503	0.970127	0.99995	0.378511
0.759832	0.987286	0.620206	0.98603	0.999941	0.458734
0.734406	0.902104	0.506369	0.976891	0.9999	0.32769
0.528545	0.798304	0.687943	0.969082	0.999899	0.281267
0.618673	0.883278	0.649793	0.969601	0.999888	0.344253
0.763722	0.920049	0.537607	0.981553	0.999934	0.370763
0.808642	0.883278	0.452809	0.988022	0.999916	0.31952