

Corrections for:

Hinds, W. C., *Aerosol Technology: Properties, Behavior, and Measurement of Airborne Particles*, Second Edition, Wiley, New York (1999).

#### CORRECTIONS TO SIXTH PRINTING:

[Note, the "printing" is given by the last number in the last line of the copyright page, page iv.]

##### 1. Most important corrections

Page 48, Example, fifth equation " $4.18 \text{ H } 10^{-11} \text{ N}$ " should be " $4.18 \text{ H } 10^{-13} \text{ N}$ ".

Page 67, Eq. 3.38. "W" should be "U".

Page 88, Eq. 4.35. " $f_x(d_p)d_p$ " should be " $f_x(d_p)dd_p$ ".

Page 328, Table 15.3, last column, fifth entry. "162" should be "195".

Page 335, Eq. 15.30. " $K_E$ " should be " $-K_E$ ". Two places.

##### 2. Other corrections

Page 86, Eq. 4.27. " $s_i$ " should be " $s_i$ ".

Page 98, next to last line. "diameter of average,  $d^p$ ," should be "diameter of average  $d^p$ ,".

Page 245, second line of Example. "Asume" should be "Assume".

Page 263, line 22. Add sentence " $K_0$  should be replaced by K in Eqs. 12.11 and 12.12." after "...in Table A11."

#### CORRECTIONS TO THIRD PRINTING:

[Note, the "printing" is given by the last number in the last line of the copyright page, page iv.]

##### 1. Most important corrections

Page 8, third line from bottom. "50 :m" should be "50 nm".

Page 33, line before Eq. 2.47. Insert "for turbulent flow" after "flow rate".

Page 48, Example, fifth equation " $4.18 \text{ H } 10^{-11} \text{ N}$ " should be " $4.18 \text{ H } 10^{-13} \text{ N}$ ".

Page 67, Eq. 3.38. "W" should be "U".

Page 88, Eq. 4.35. " $f_x(d_p)d_p$ " should be " $f_x(d_p)dd_p$ ".

Page 151, line 6. " $(KE = 3/2kT)$ " should be " $(KE = (3/2)kT)$ ".

Page 215-216, Example Problem. "0.036" should be "0.36". Three places.

Page 301, Table 13.3, line 3. "1.4" should be "14".

Page 328, Table 15.3, last column, fifth entry. "162" should be "195".

Page 335, Eq. 15.30. " $K_E$ " should be " $-K_E$ ". Two places.

Page 335, line after Eq. 15.30. "0.5 :m" should be "0.05 :m".

##### 2. Other corrections

Page 14, last line. "Elsevier, New York" should be "Taylor & Francis, Philadelphia".

Page 86, Eq. 4.27. " $s_i$ " should be " $s_i$ ".

Page 245, second line of Example. "Asume" should be "Assume".

Page 248, line 17. "weighted" should be "weighed".

Page 334, line 2. "howeever" should be "however".

Page 396, line 5. "Aerosolization" should be "Aerosolization".

## CORRECTIONS TO SECOND PRINTING:

[Note, the "printing" is given by the last number in the last line of the copyright page, page iv.]

### 1. Most important corrections

Page 8, third line from bottom. "50 :m" should be "50 nm".

Page 33, line before Eq. 2.47. Insert "for turbulent flow" after "flow rate".

Page 48, Example, fifth equation "4.18 H 10<sup>-11</sup> N" should be "4.18 H 10<sup>-13</sup> N".

Page 56, Table 3.3. The last nine entries in column 3 should be "1.03, 1.08, 1.12, 1.17, 1.21, 1.26, 1.30, 1.35, 1.39".

Page 67, Eq. 3.38. "W" should be "U".

Page 88, Eq. 4.35. "f<sub>x</sub>(d<sub>p</sub>)d<sub>p</sub>" should be "f<sub>x</sub>(d<sub>p</sub>)dd<sub>p</sub>".

Page 151, line 6. "(KE = 3/2kT)" should be "(KE = (3/2)kT)".

Page 215-216, Example Problem. "0.036" should be "0.36". Three places.

Page 271, Table 12.4. Column heading for columns 2 -7 should be "Average Coagulation Coefficient, K<sup>bn</sup>". See table at end of corrections.

Page 301, Table 13.3, line 3. "1.4" should be "14".

Page 328, Table 15.3, last column, fifth entry. "162" should be "195".

Page 335, Eq. 15.30. "K<sub>E</sub>" should be "-K<sub>E</sub>". Two places.

Page 335, line after Eq. 15.30. "0.5 :m" should be "0.05 :m".

### 2. Other corrections

Page 14, last line. "Elsevier, New York" should be "Taylor & Francis, Philadelphia".

Page 86, Eq. 4.27. "s<sub>1</sub>" should be "s<sub>i</sub>".

Page 245, second line of Example. "Asume" should be "Assume".

Page 248, line 17. "weighted" should be "weighed".

Page 334, line 2. "howeever" should be "however".

Page 396, line 5. "Aeorosolization" should be "Aerosolization".

Back cover, last paragraph. "PhD" should be "ScD".

## CORRECTIONS TO FIRST PRINTING:

[Note, the "printing" is given by the last number in the last line of the copyright page, page iv.]

### 1. Most important corrections

Page 8, third line from bottom. "50 :m" should be "50 nm".

" $\bar{c}^2$ " should be " $\overline{c^2}$ " and " $\bar{c}_x^2$ " should be " $\overline{c_x^2}$ " Page 18, Eqs. 2.13 and 2.14.

Page 33, line before Eq. 2.47. Insert "for turbulent flow" after "flow rate".

Page 47, Eq. 3.14. " $\Delta_g$ " should be " $\Delta_p$ ".

Page 48, Example, third equation " $2.5 \text{ H } 10^{-4}$ " should be " $2.5 \text{ H } 10^{-6}$ ".

Page 48, Example, fifth equation " $4.18 \text{ H } 10^{-11} \text{ N}$ " should be " $4.18 \text{ H } 10^{-13} \text{ N}$ ".

Page 49, Eq. 3.21. " $\Delta_g$ " should be " $\Delta_p$ ".

Page 52, Eq. 3.24. " $\Delta$ " should be "0".

Page 56, Table 3.3. The last nine entries in column 3 should be "1.03, 1.08, 1.12, 1.17, 1.21, 1.26, 1.30, 1.35, 1.39".

Page 58, Example, numerator of the second equation. "1 H 1.20" should be "8 H 1.20".

Page 58, Example, second line. " $8000 \text{ kg/cm}^3$ " should be " $8000 \text{ kg/m}^3$ ".

Page 67, Eq. 3.38. "W" should be "U".

Page 88, Eq. 4.35. " $f_x(d_p)d_p$ " should be " $f_x(d_p)dd_p$ ".

Page 151, line 6. "(KE =  $3/2kT$ )" should be "(KE =  $(3/2)kT$ )".

Page 164, Example, line 2. "will deposit on the tube walls?" should be "will pass through the tube?"

Page 169, Problem 7.8, Answer. "15" should be "2.7".

Page 173, Eq. 8.4. "for  $d < 8$ " should be "for  $d > 8$ ".

Page 215-216, Example Problem. "0.036" should be "0.36". Three places.

Page 227, Table 10.2, line 1. "283" should be "2.83".

Page 231, Prob. 10.4. "3.3-mm probe" should be "33-mm probe".

Page 271, Table 12.4. Replace table with revised and enlarged table given at end of this list of corrections.

Page 301, Table 13.3, line 3. "1.4" should be "14".

Page 328, Table 15.3, last column, fifth entry. "162" should be "195".

Page 335, Eq. 15.30. " $K_E$ " should be " $-K_E$ ". Two places.

Page 335, line after Eq. 15.30. "0.5 :m" should be "0.05 :m".

Page 346, Problem 15.8, line 1. "0.15-mm" should be "0.15-:m".

Page 362, Example, numerator of the first equation. " $0.5 \text{ H } 10^{-6}$ " should be " $0.05 \text{ H } 10^{-6}$ ".

## 2. Other corrections

Page xiii, paragraph 3, line 2. "Phelan" should be "Phalen".

Page 13, ninth reference, "*Introduction to Aerosol Science*" should be "*Aerosol Science and Technology*".

Page 14, last line. "Elsevier, New York" should be "Taylor & Francis, Philadelphia".

Page 20, Fig. 2.2 and 2.3, captions. "293 K" should be "273 K".

Page 25, Example, third equation " $\text{dynAs/cm}^2$ " should be " $\text{dynAs/cm}^2$ ".

Page 47, third line after Eq. 3.15. "unit-density" should be "standard-density".

Page 54, Fig. 3.3. " $4 \text{ g/cm}^3$ " should be " $4000 \text{ kg/m}^3$ " two places.

Page 54, Fig. 3.3. "0.22 cm/s" should be "2.2 mm/s" three places.

Page 54, Fig. 3.3. "1 g/cm<sup>3</sup>" should be "1000 kg/m<sup>3</sup>".

Page 55, paragraph 3, line 3. "unit-density" should be "standard-density".

Page 83, Equation between Eq. 4.20 and 4.22. "(4.12)" should be "(4.21)".

Page 86, Eq. 4.27. "s<sub>1</sub>" should be "s<sub>i</sub>".

Page 139, Problem 5.8. "unit-density" should be "standard-density".

Page 139, Problem 5.4. "(The" should be "The".

Page 147, line 13. "materials ranged" should be "materials gave ∃ values that ranged".

Page 148, Problem 6.4, second line. "particle. of" should be "particle of".

Page 169, Problem 7.4, second line. "at distance" should be "at a distance".

Page 169, Problem 7.5, line 4. "the other." should be "the other?".

Page 187, first full paragraph, line 1. "between between" should be "between".

Page 192, first line. "basis" should be "basic".

Page 195, fourth line after Eq. 9.31. "10 cm/s" should be "0.1 m/s [10 cm/s]".

Page 202, last line, fourth word should be "effective".

Page 231, Prob. 10.4. "ANSWERS" should be "ANSWER".

Page 244, line 18. "airway" should be "airways".

Page 248, line 17. "weighted" should be "weighed".

Page 249, line 6. "1998" should be "1999".

Page 250, line 13. "variable x" should be "variable  $x$ ".

Page 250, line 12. "where IF the is" should be "where IF is the".

Page 255, line 4. "1998" should be "1999".

Page 258, third reference, line 2. "*of Health Related Aerosols*" should be "*for Particulate Air Contaminants*".

Page 258, third reference, line 2. "1998" should be "1999".

Page 258, sixth reference, line 1-2. "*of Health Related Aerosols*" should be "*for Particulate Air Contaminants*".

Page 258, sixth reference, line 2. "1998" should be "1999".

Page 262, Table 12.1. "K<sub>0</sub>" should be "K<sub>0</sub>" and "K" should be "K".

Page 262, Table 12.1. "Coagulation coefficient K" should be "Coagulation coefficient".

Page 265, Eq. 12.16. "K<sub>0</sub>" should be "K".

Page 267, line 4. "10<sup>6</sup>/cm<sup>3</sup>" should be "10<sup>12</sup>/m<sup>3</sup> [10<sup>6</sup>/cm<sup>3</sup>]". Line 6. "3 H10<sup>4</sup>/cm<sup>3</sup>" should be "3 H10<sup>10</sup>/m<sup>3</sup> [3 H10<sup>4</sup>/cm<sup>3</sup>]". Line 9. "10<sup>6</sup>/cm<sup>3</sup>" should be "10<sup>12</sup>/m<sup>3</sup> [10<sup>6</sup>/cm<sup>3</sup>]". Line 10. "10<sup>3</sup>" should be "10<sup>9</sup>/m<sup>3</sup> [10<sup>3</sup>/cm<sup>3</sup>]". Line 12. "10<sup>6</sup>/cm<sup>3</sup>" should be "10<sup>12</sup>/m<sup>3</sup> [10<sup>6</sup>/cm<sup>3</sup>]".

Page 267, Table 12.2, first column, heading, line 2. "(number/cm<sup>3</sup>)" should be "(number/m<sup>3</sup> [number/cm<sup>3</sup>]".

Page 267, Table 12.2, first column, table entries: "10<sup>14</sup>" should be "10<sup>20</sup> [10<sup>14</sup>]"; "10<sup>12</sup>" should be "10<sup>18</sup> [10<sup>12</sup>]"; "10<sup>10</sup>" should be "10<sup>16</sup> [10<sup>10</sup>]"; "10<sup>8</sup>" should be "10<sup>14</sup> [10<sup>8</sup>]"; "10<sup>6</sup>" should be "10<sup>12</sup> [10<sup>6</sup>]"; "10<sup>4</sup>" should be "10<sup>10</sup> [10<sup>4</sup>]"; "10<sup>2</sup>" should be "10<sup>8</sup> [10<sup>2</sup>]".

Page 269, last line. "d > 8" should be "CMD > 8".

Page 276 - 277, Problems 12.1-12.10. "ANSWERS" should be "ANSWER".

Page 276, Problem 12.5, Answer. "147" should be "149".

Page 277, Problem 12.8, Answer. " $5.0 \times 10^{12}/\text{m}^3$  [ $5.0 \times 10^6/\text{cm}^3$ ],  $6.0 \times 10^{12}/\text{m}^3$  [ $6.0 \times 10^6/\text{cm}^3$ ]" should be: " $4.9 \times 10^{12}/\text{m}^3$  [ $4.9 \times 10^6/\text{cm}^3$ ],  $5.9 \times 10^{12}/\text{m}^3$  [ $5.9 \times 10^6/\text{cm}^3$ ]"

Page 301 - 302, Problems 13.1-13.10. "ANSWERS" should be "ANSWER".

Page 302, Problem 13.6, line 2. "2% supersaturation." should be "2% supersaturation?".

Page 302, Problem 13.6, line 3. "cooling" should be "heating".

Page 304, last paragraph, line 1. "The majority" should be "A significant fraction".

Page 315, Problem 14.1-14.2. "ANSWERS" should be "ANSWER".

Page 334, line 2. "however" should be "however".

Page 336, Example. Add "By Eq. 15.31," after first sentence.

Page 376, Problem 16.5, line 2. "0.23" should be " $0.23 \text{ km}^{-1}$ ".

Page 387, line 4. "polyethylene" should be "brown coal".

Page 390, line 5. "produces" should be "produced".

Page 396, line 5. "Aerosolization" should be "Aerosolization".

Page 464, Appendix A16. Replace table with expanded table given at the end of this correction list.

Back cover, last paragraph. "PhD" should be "ScD".

updated August 28, 2000

Table 12.4 Coagulation Coefficients for Polydisperse Aerosols Having Lognormal Size Distributions<sup>a</sup>

Count Median Diameter	Average Coagulation Coefficient, $K^b$						
	(:m)	GSD=1.0	GSD=1.3	GSD=1.5	GSD=1.8	GSD=2	GSD=2.5
0.002		4.4	4.9	5.9	8.3	11.0	26.2
0.005		6.9	7.8	9.2	13.0	17.2	40.0
0.01		9.6	10.8	12.6	17.5	22.9	50.9
0.02		12.1	13.4	15.4	20.8	26.5	55.1
0.05		10.7	11.7	13.4	17.7	22.2	43.8
0.1		7.5	8.2	9.3	12.2	15.2	29.4
0.2		5.2	5.6	6.3	8.0	9.8	18.2
0.5		3.8	4.0	4.4	5.3	6.1	10.1
1		3.4	3.5	3.8	4.4	5.0	7.4

2	3.2	3.3	3.5	4.0	4.4	6.1
5	3.0	3.2	3.3	3.7	4.1	5.4

<sup>a</sup> Calculated for standard conditions by Eq. 12.18 with  $\exists$  correction.

<sup>b</sup> For  $K$  in  $\text{m}^3/\text{s}$  multiply values by  $10^{-16}$  [for  $\text{cm}^3/\text{s}$  multiply values by  $10^{-10}$ ].

#### Appendix A16. SI Prefixes

Factor	Prefix	Symbol		Factor	Prefix	Symbol
$10^{12}$	tera	T		$10^{-3}$	milli	m
$10^9$	giga	G		$10^{-6}$	micro	:
$10^6$	mega	M		$10^{-9}$	nano	n
$10^3$	kilo	k		$10^{-12}$	pico	p
$10^{-2}$	centi	c		$10^{-15}$	femto	f