Chemical Reactor Analysis and Design Fundamentals

2nd Edition

Errata for Second Edition, Second Printing

September 2, 2023

1. p. 60, Exercise 2.13. For clarity, add this assumption to the exercise. "Assume any elements appearing as species are in a single form, e.g., O_2 only, and not O_2 and O_3."
2. p. 103, third line from bottom. Change $\pi(n-1)$ to $\pi(n+1)$.
3. pp. 205–207, Example 5.1. Replace all occurrences of "oxirane" with "trioxane." Thanks to Travis Arnold of UW for pointing out this erratum.
4. p. 279, second line of Example 6.1. Change "elementary and irreversible" to "exothermic, elementary, and irreversible."
5. p. 287, last line. Change -5.33 to -5.4. Thanks to Sam Toan of U. Minnesota-Duluth for pointing out this erratum.
6. p. 366, 11 lines from bottom. Change $x = \Phi r$ to $x = \Phi\overline{r}$. Thanks to Matthew Lenz of UCSB for pointing out this erratum.
7. p. 385, Table 7.4. In top block under Thiele modulus heading, replace B with $\sqrt{B}$. Thanks to UCSB students for pointing out this erratum.
8. p. 386, Equation 7.60. Change $\frac{D_A}{a}$ to D_A. Thanks to Fox Bernhard of UCSB for pointing out this erratum.
9. pp. 405–407, Example 7.6. The rate constant should be $k = 1.3828 \times 10^{19} \exp(-13,500/T)$. The flowrate should be $Q_f = 792$ L/s. With the adjusted rate constant and flowrate given above, the reactor volume should be $V_R = 233$ cm^3 instead of L. Also change the units on the x-axis from L to cm^3 in Figures 7.27 and 7.28. Thanks to Jason Haugh and the students at NC State for reporting this erratum. See also Exercise 7.21.
10. p. 405, seventh line from bottom. Replace "The catalyst pellet radius is 0.1 cm." with, "The spherical catalyst pellet radius is 0.1 cm, and the densities are $\rho_p = 0.68, \rho_B = 0.60$ g/cm^3."
11. p. 416, 11th line, change "bulk fluid density" to "bulk fluid viscosity."
12. p. 425, Exercise 7.19, ninth line. Change "diameter" to "area." Thanks to Natalie Altvater of UW for pointing out this erratum.
13. p. 426, Exercise 7.21. The rate constant should be $k = 1.3828 \times 10^{19} \exp(-13,500/T)$. The flowrate should be $Q_f = 792$ L/s. See also Example 7.6.
14. p. 477, Table 8.3, change units of k_1 from min^{-1} to L/mol·min.
15. p. 519. Second line from bottom. Change 0.05 to 0.025. Thanks to Travis Arnold of UW for pointing out this erratum.
16. p. 553. Change concentration (kmol/dm^3) to total amount (kmol) in y-axis labels and captions of Figures 9.33 and 9.34. Change figure labels c_j to n_j. Thanks to Joel Andersson of UW for pointing out this erratum.
17. p. 566. Figure 9.41. Exchange the figure labels c_A and c_B.