Errata list for “Chemical Thermodynamics of Technetium”

Chapter I

Page 6, line 8: The Greek word for artificial should be “τεχνητός”.

Chapter III

Page 38, entry for TcO$_4^{3-}$ should be deleted.

Page 39, the correct value is $G_{p,m}^o = 120.703 \pm 2.629$ for TcF$_6$ (g).

Page 39, entry for TcBr$_6^{2-}$ should have a footnote (f), “TcBr$_6^{2-}$ (f).”

Page 41, entry for TcO$_{2+}$ should be $\Delta G_m^o > -22.832$.

Page 41, entry for TcO$_4^{3-}$ should be deleted.

Page 42, entry for TcF$_6$ (g) should be $\log K^o = -0.535 \pm 0.002$ and $\Delta G_m^o = 3.055 \pm 0.012$.

Chapter V.2

Page 78, line 34 and 37: “$E/\Delta \log_{10} a_{\text{Tc}O_4}$” should be “$\Delta E/\Delta \log_{10} a_{\text{Tc}O_4}$” and “$E/\Delta pH$” should be “$\Delta E/\Delta pH$”.

Page 81, Table V.6: The reference [91MEY/ARN] in the third entry on this page should be moved to the first entry on the page.

Page 88, last line: “Tc(V)” should be “TcO$_4^{3-}$”.

Page 89, Table V.8: The footnote (d) should be (e) on the 12th line of column 4 in the table.

Page 90, first line: “Tc(V)” should be “TcO$_4^{3-}$”.

Page 95, line 17: This paragraph should begin: “We tentatively accept the value of $\Delta G_m^o (\text{Tc}^{3+}, \text{aq}, 298.15K) > 89.6 \text{kJ} \cdot \text{mol}^{-1}$, after adjusting the value derived by Rard [83RAR] from these emfs [79GRA/DEV] for the change in $\Delta G_m^o (\text{TcO}^{2+}, \text{aq}, 298.15K)$, since including this value…”.

Chapter V.3

Page 103, line 12 below the equation: “Tc(4.5)” should be “Tc(3.5)”.

Page 105, Table V.11, line 14 in table: “5.9195” should be “5.5195”.

Chapter V.4

Page 144, Table V.20: “295” should be “2.95” in footnote (a).

Chapter V.5

Page 172, lines 11-21 should be deleted.

Chapter V.6

Page 181, Table V.29: Parentheses should be added in the formula for the sixth entry in the table so it reads “[{TcN(S$_2$CNEt$_2$)$_2$}$_2$ (μ - O)$_2$].”

Page 183, line 14 of Section V.6.1.3.5: The formula should read “[Tc(NH$_3$)$_4$(NO)(OH$_2$)]^{3+}”.
Chapter V.8
Page 215, third and fourth line in footnote 5: The unit for $a$ should be \( \text{dm}^6 \cdot \text{kg}^{-1} \cdot \text{mol}^{-1} \).

Page 228, Table V.40, line 13 from bottom in table: “$c = 10.046$” should be “$c = 14.046$”.

Page 229, Table V.40, footnote (e): The correct values are $a = 5.758 \times 10^{-10}$ m and $c = 14.046 \times 10^{-10}$ m.

Chapter V.9
Page 247, Table V.44: The last two lines of column 4 should be “17577±0.83 $T$” and “15197+0.83 $T$”, not “$\pm$”.

Chapter V.10
Page 264, line 27: “0.01-0.06 M” should be “0.001-0.03 M”.

Page 265, second paragraph in section V.10.2: Unbalanced parentheses in formulas, the correct formulas are: “\((n-C_{4}H_{9})_{4}N\)\(_{4}\)PW\(_{11}\)(TcO)O\(_{39}\)”, “\((n-C_{4}H_{9})_{4}N\)\(_{5}\)SIW\(_{11}\)(TcO)O\(_{39}\)”, “\((n-C_{4}H_{9})_{4}N\)\(_{4}\)PW\(_{11}\)(TcN)O\(_{39}\)”, “\((n-C_{4}H_{9})_{4}N\)\(_{4}\)PW\(_{11}\)(TcO)O\(_{39}\)”.

Chapter VI
Page 267, second electrochemical cell: “KCl” should be “TlCl”.

Page 268, line 17 should read “$\Delta_{f}G_{m}^{o}(\text{Tl}^{+},\text{aq};298.15K) = -(32.40 \pm 0.30)\text{kJ} \cdot \text{mol}^{-1}$”.

Appendix A
Page 406, line 2-4 of reference [60COL/DAL]: The sentence should read: “They observed that the reduction… , and a one-electron step with $E_{1/2} = -1.15 \text{V}$, both vs. SCE.”

Page 406, line 6 of reference [60COL/DAL]: “TcO\(_{4}^{3-}\)” should be “Tc(V)”.

Page 419, Table A.2, line 9 and 13 in table: “2H\(+\)” should be “4H\(+\)”, and footnote “(b)” should be “(c)”.

Page 449, Table A.5: The last line of footnote (b) should read “Table 1”.

Page 460, the second last line in reference entry [86SPI/TAR] should contain the reference “[98GUE]”, not “[98GUE2]”.

Page 466, line 8: The formula should read “NaS\(_{2}\)CNET\(_{2}\) \cdot 3H\(_{2}\)O”.

Page 467, line 14: The formula should read “[As(C\(_{6}\)H\(_{5}\)\(_{4}\))]_{2}[(\text{TcNX})_{2}\text{(}\mu-O\text{)}_{2}]]”.

Page 477, second last line: The formula should read “\((n-C_{4}H_{9})_{4}N\)\(_{3}\)Tc\(_{2}\)Br\(_{8}\)(s) ”.

Page 481, line 17: The formula should read “[\((n-C_{4}H_{9})_{4}N\)\(_{2}\)Os\(_{2}\)X\(_{10}\)](s)”.