Errata list for "Chemical Thermodynamics of Technetium"

Chapter I

Page 6, line 8: The Greek word for artificial should be "$\textit{tecnht}\acute{o}V$".

Chapter III

Page 38, entry for TcO_4^{3-} should be deleted.

Page 39, the correct value is $C^o_{p,m} = 120.703 \pm 2.629$ 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 $\Delta_r G^o_m > -22.832$.

Page 41, entry for TcO_4^{3-} should be deleted.

Page 42, entry for $TcF_6(g)$ should be $\log_{10} K^o = -0.535 \pm 0.002$ and $\Delta_r G^o_m = 3.055 \pm 0.012$.

Chapter V.2

Page 78, line 34 and 37: "$E / \Delta \log_{10} a_{TcO_4^-}$" should be "$\Delta E / \Delta \log_{10} a_{TcO_4^-}$" 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 $\Delta_f G^o_m(Tc^{3+}, aq, 298.15K) > 89.6 kJ \cdot mol^{-1}$, after adjusting the value derived by Rard [83RAR] from these emfs [79GRA/DEV] for the change in $\Delta_f G^o_m(TcO^{2+}, aq, 298.15K)$, 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 "$[\{TcN(S_2CNEt_2)\}_2(m-O)_2]$".

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 "$\mathrm{dm}^6 \cdot \mathrm{kg}^{-1} \cdot \mathrm{mol}^{-1}$".

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: "$((n-\mathrm{C_4H_9})_4\mathrm{N})_4\mathrm{PW_{11}(TcO)O_{39}}$", "$((n-\mathrm{C_4H_9})_4\mathrm{N})_5\mathrm{SIW_{11}(TcO)O_{39}}$", "$((n-\mathrm{C_4H_9})_4\mathrm{N})_4\mathrm{PW_{11}(TcN)O_{39}}$", "$((n-\mathrm{C_4H_9})_4\mathrm{N})_4\mathrm{PW_{11}(TcO)O_{39}}$".

Chapter VI

Page 267, second electrochemical cell: "KCl" should be "TlCl".

Page 268, line 17 should read "$\Delta_\mathrm{f} G^\mathrm{o}_\mathrm{m}(\mathrm{Tl}^+, \mathrm{aq}, 298.15\mathrm{K}) = -(32.40 \pm 0.30)\mathrm{kJ} \cdot \mathrm{mol}^{-1}$".

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 $E_{1/2} = -1.15\mathrm{V}$, both *vs.* SCE."

Page 406, line 6 of reference [60COL/DAL]: "$\mathrm{TcO_4^{3-}}$" should be "Tc(V)".

Page 419, Table A.2, line 9 and 13 in table: "$2\mathrm{H}^+$" should be "$4\mathrm{H}^+$", and footnote "(b)" should be "(c)".

Page 448, Table A.5: The formula in footnote (a) should read "$A_\mathrm{c} = A/\sqrt{r^\mathrm{o}}$".

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

Page 449, line 30: "$\mathrm{TlCO_4}$" should be "$\mathrm{TlTcO_4}$".

Page 457, line 17: The correct value is "*K*(A.19) = 0.14", at $I_\mathrm{m} = 3.20\mathrm{mol} \cdot \mathrm{kg}^{-1}$. This value was used in the least-squares calculations so the final result is correct.

Page 457, line 21: The last term in Equation A.22 should be "$\Delta e I_\mathrm{m}$".

Page 457, line 23: "…indicated that e was…" should be "…indicated that Δe was…"

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 "$\mathrm{NaS_2CNEt_2 \cdot 3H_2O}$".

Page 466, line 43: The formula should read "$\mathrm{NTc(\mu-O)_2TcN(OH)(OH_2)}]$".

Page 467, line 14: The formula should read "$[\mathrm{As(C_6H_5)_4}]_2[(\mathrm{TcNX_2})_2(\mu-\mathrm{O})_2]$".

Page 467, line 18: The correct value is "$\mathrm{Tc-N} = (1.650 \pm 0.016) \times 10^{-10}\,\mathrm{m}$".

Page 477, second last line: The formula should read "$((n-\mathrm{C_4H_9})_4\mathrm{N})_3\mathrm{Tc_2Br_8(s)}$".

Page 478, first line: The formula should read "$\mathrm{Cs_3Tc_2Br_8(s)}$".

Page 481, line 17: The formula should read "$[(n-\mathrm{C_4H_9})_4\mathrm{N}]_2\mathrm{Os_2X_{10}(s)}$".