

## Errata

### Publication I

- $\Delta\bar{G}_{Ag_2Se}$ ,  $\Delta\bar{H}_{Ag_2Se}$  and  $\Delta\bar{S}_{Ag_2Se}$  should be  $\Delta_f G_{Ag_2Se}$ ,  $\Delta_f H_{Ag_2Se}$  and  $\Delta_f S_{Ag_2Se}$  for equation (1) to equation (11).
- In Table 2,  $\Delta\bar{G}$ ,  $\Delta\bar{H}$  and  $\Delta\bar{S}$  should be  $\Delta_f G_{298}^0$ ,  $\Delta_f H_{298}^0$  and  $S_{298}^0$ .
- In addition,  $\Delta_f H_{298}^0$  for  $\alpha$ -  $Ag_2Se$  has been modified, as well as the data for  $\beta$ -  $Ag_2Se$  by Nasar and Shmsuddin [14].

**Table 2. A comparison of values of the standard thermodynamic properties of  $Ag_2Se$**

Compounds	$-\Delta_f G_{298}^0$ , kJ/mol	$S_{298}^0$ J · K <sup>-1</sup> mol <sup>-1</sup>	$-\Delta_f H_{298}^0$ , kJ/mol	References
$\alpha$ - $Ag_2Se$	49.47±0.13	144.99±0.56	42.73±0.29	Osadchii and Echmaeva [21]
$\alpha$ - $Ag_2Se$	48.90±1.0	148.20	42.70	Nasar & Shamsuddin [14]
$\alpha$ - $Ag_2Se$	49.59	149.20	43.09	Voronin and Osadchii [17]
$\alpha$ - $Ag_2Se$	49.24±0.46	154.60±0.22	40.87±0.58	This work
$\beta$ - $Ag_2Se$	47.43±0.29	169.01±0.78	35.02±0.48	Osadchii and Echmaeva [21]
$\beta$ - $Ag_2Se$	47.58	169.44	35.04	Voronin and Osadchii [17]
$\beta$ - $Ag_2Se$	47.64±0.07	169.57±1.53	35.06±0.099	This work

### Publication II

- Equations (17) and (19) have been modified as

$$\Delta_f G^\circ(\alpha - Ag_3AuSe_2) = 2\Delta_f G^\circ(\alpha - Ag_2Se) - \Delta_r G^\circ(Ag_3AuSe_2) \quad (17)$$

$$\Delta_f H^\circ(\alpha - Ag_3AuSe_2) = 2\Delta_f H^\circ(Ag_2Se) - \Delta_r H^\circ(Ag_3AuSe_2) \quad (19)$$

- The enthalpy of the phase transformation of  $Ag_3AuSe_2$  should be 5.358 kJ/mol in the conclusion.

### Publication V

- $a_{Ag[Pd]}$  is the activity of silver in silver palladium alloy in equation (6).
- $\Delta G_{Ag}$ ,  $\Delta S_{Ag}$  and  $\Delta H_{Ag}$  shall be  $\Delta\bar{G}_{Ag}$ ,  $\Delta\bar{S}_{Ag}$  and  $\Delta\bar{H}_{Ag}$  in equations (8-12) and Table 4, and  $\Delta H_{Ag}^M$ ,  $\Delta H_{Pd}^M$ ,  $\Delta G_{Ag}^M$ ,  $\Delta G_{Pd}^M$ ,  $\Delta S_{Ag}^M$  and  $\Delta S_{Pd}^M$  shall be  $\Delta\bar{H}_{Ag}^M$ ,  $\Delta\bar{H}_{Pd}^M$ ,  $\Delta\bar{G}_{Ag}^M$ ,  $\Delta\bar{G}_{Pd}^M$ ,  $\Delta\bar{S}_{Ag}^M$  and  $\Delta\bar{S}_{Pd}^M$  in equations (18-22).
- Table 4 has been modified as following,