Appendix:

Thermodynamic Data and Sources Used in Calculations:

[1]S^0_{298} (J/deg mole)		ΔH_{fusion} (kJ/deg mole),	$T\Delta S_{fusion}$ (J/deg mole)
As(*s*)	35.7	[1]*Ga* 5.6, 303K	*Ga* 18.5
Ga(*s*)	41.0	[2]*As* 27.7, 1090K	*As* 25.4
GaAs (*s*)	64.2		

[3] Sublimation *As* 887K [2]$\Delta H_{sub}As$ 31.9 kJ/mole $\Delta S_{sub}As$ 36.0 J/deg mole

[1] C_p(J/deg mole[*]) = $a+10^{-3}bT + 10^5cT^{-2}$

As(*s*)	$C_p = 23.2 + 5.5\text{x}10^{-3}T$ (298 – 887K)
[2]*As*(*g*)	$C_p = 20.8$ (887K)
Ga(*s*)	$C_p = 26.1$ (298 – 303K)
Ga(*l*)	$C_p = 26.4 + 1.3\text{x}10^5T^{-2}$ (303 – 1200K)
GaAs(*s*)	$C_p = 45.2 + 6.1\text{x}10^{-3}T$ (298 – 1238K)

[*] Units given in (cal/deg mole) in Appendix.

[1] O. Kubaschewski and C.B. Alcock, Metallurgical Thermochemistry, 5th Ed., Materials Science and Technology, Vol. 24, 1979, Pergamon Press, Toronto.
[2] Qivx Inc. Integral Periodic Table: Properties of Arsenic (www.qivx.com).
[3] As-Ga Phase Diagram: ASM Handbook, Vol. 3, Alloy Phase Diagrams, 1992, Materials Park, Ohio.