

# Table Lists

## Chapter 1

Table 1-1 Comparison between vacuum microelectronics and solid-state electronics.

## Chapter 2

Table 2-1 work functions and surface energies for (a) monovalent, divalent, and trivalent nontransition metals, (b) 3d metals,(c) 4d metals, (d) 5d metals.[45]

## Chapter 3

Table 3-1 Field emission characteristics in Exp.A (**Effect of interlayer**)

Table 3-2 Field emission characteristics in Exp.A (**Effect of interlayer**)

Table 3-3 Field emission characteristics in Exp.B (Effect of heat from formation carbide)

Table 3-4 Field emission characteristics in Exp.B (Effect of heat from formation carbide)

Table 3-5 (a) Heat of Formation Carbides, (b) Heat of Formation Carbides

Table 3-6 Surface Energy vs. Formation Heat

Table 3-7 Field emission characteristics in Exp.D ( Effect of Growth Temperature)

Table 3-8 Stress test at 550°C in Exp. E (a) Ti 20 A, Ti 30 A, and Ti 50 A (b) Cr 20 A, Cr 30 A, and Cr 50 A

Table 3-9 Stress test at 500°C in Exp. E (a) Ti 20 A, Ti 30 A, and Ti 50 A (b) Cr 20 A, Cr 30 A, and Cr 50 A

Table 3-10 Stress test in 10 Hours with Ti 30 A and Cr 30 A

Table 3-11 Stress test at 550°C in Exp. F. by each in 30 min , 45 min, and 60 min (a) Ti 30 A(b) Cr 30 A

Table 3-12 Stress test at 500°C in Exp. F. by each in 30 min , 45 min, and 60 min (a) Ti 30  
A(b) Cr 30 A

Table 3-13 Stress test in Exp. G , (a) Ti 30 A, and Cr 30 A at 550°C (b) Cr Ti 30 A, and Cr  
30 A at 500°C.

## Chapter 4

Table 4-1 Comparison with other recently research.[59-68]

