

Figure 1. Current-voltage characteristics of Au-Ti-ZrO $_2$:Al $_2$ O $_3$ -TiN structures. The ZrO $_2$:Al $_2$ O $_3$ films with Al:Zr atomic ratios of 0.044-0.050 (upper panel) and 0.28-0.35 (lower panel) were deposited using ZrO $_2$: Al $_2$ O $_3$ cycle ratios of 24:1 and 4:1, respectively.