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| **Abstract:** |  |
| The effect of annealing temperature on the microstructure and tensile properties of copper/aluminum (Cu/Al) composite thin strips was studied to improve the mechanical properties of materials. The change of interface layer, the diffusion of interface elements, and the microstructural evolution of each matrix of Cu and Al were observed and analyzed using scanning electron microscope (SEM), energy dispersive spectroscopy (EDS) and electron back-scatter diffraction (EBSD) techniques. The tensile properties of the Cu/Al composite thin strip were studied by static uniaxial tensile tests. The results show that recrystallization occurs in the Cu/Al matrix during annealing process, and the grains of the Al matrix grow into coarse grains after annealing at 400 °C. The thickness of diffusion layer increases with the increase of annealing temperature, and the thickness of the diffusion layer reaches 12 μm after annealing at 500 °C. The original typical rolling texture is transformed into the typical annealing texture components {001}〈100〉 and {001}〈110〉 after annealing treatment. In general, the annealing treatment reduces the tensile strength and improves the overall plasticity of the material, and the diffusion layer plays a significant role in transmitting tensile stress. | |