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| **Title:** | A study on the microstructural evolution of copper/aluminum composite strips fabricated by micro flexible rolling | | |
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| **Published Journal Name:** | Materials Characterization | | |
| **Type of Publication:** | Journal | | |
| **Volume:** | 205 | Issue | 1 |
| **Publisher:** | Elsevier | | |
| **Publication Date:** | 9 September 2023 | | |
| **ISSN:** | 1873-4189 | | |
| **DOI:** | 10.1016/j.matchar.2023.113315 | | |
| **URL:** | https://www.sciencedirect.com/science/article/abs/pii/S1044580323006745 | | |
| **Other Related Info.:** | Page 113315 | | |
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| **Abstract:** |  |
| Copper/aluminum (Cu/Al) composites with multifunctional applications have been extensively applied in a variety of fields. Nevertheless, the formability of Cu/Al composite strips during micro flexible rolling (MFR) has not been fully investigated in the sub-millimetre range. In the present work, the microstructure, mechanical properties and formability of Cu/Al composite strips during MFR were studied. The microstructure of the annealed and rolled specimens were characterized using scanning electron microscope (SEM) and electron backscatter diffraction (EBSD), and the thickness of Cu/Al composite strips with varying thickness (CSVT) was measured by laser scanning microscope. The results show that Cu/Al composite strips annealed at 400 ◦C exhibit the best ductility, and the CSVT with the best forming quality is obtained when the Cu layer is contact with the upper work roll. In addition, the microstructural evolution in the downward transition zone, thinner zone, upward transition zone and thicker zone with different reduction was discussed. When the plastic strain continues to increase from thicker zone to thinner zone, the intermetallic compounds (IMCs) layer generated during annealing breaks up, and subdivision and further refinement of Al grains occurs during MFR. | |