

## ABSTRACT

### METHOD FOR LOW TEMPERATURE LAMINATION OF METALS TO POLYIMIDES

The present invention is directed to a method for the lamination of metals, and  
5 especially copper, to the surface of polyimides and derivatives of polyimides at  
temperatures substantially below the curing temperature of the imide polymers. More  
specifically, the invention is directed to a method for surface modification of polyimides  
and derivatives of polyimides by thermal graft copolymerization and interfacial  
polymerization with concurrent lamination of the metal of interest in the presence of an  
10 appropriate functional monomer. The process can be carried out under atmospheric  
conditions and either in the presence or the complete absence of an added polymerization  
initiator. The so laminated polyimide-metal interfaces exhibit T-peel adhesion strengths in  
excess of 16 N/cm. The adhesion strength also exceeds the fracture strength of polyimide  
films with a thickness of 75  $\mu\text{m}$ .