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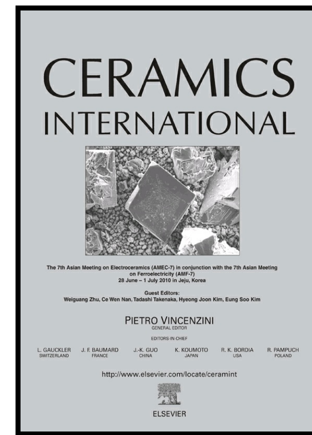

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Investigate the Influence of Bonding Temperature in Transient Liquid Phase Bonding of SiC and Copper

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ABSTRACT

Joining of ceramics to metals provide timeless challenges in nuclear engineering industries. There is a pressing need for developing a suitable technique for joining silicon carbide (absorber) to copper radio frequency structures in Compact Linear Collider. Transient liquid phase bonding is a promising candidate that could be employed for joining of dissimilar materials with high re-melt temperature. In the present work, experiments were carried out on Transient Liquid phase bonding of silicon carbide and copper using metal interlayer. Lead which has high wettability is selected as an interlayer in the Transient Liquid Phase (TLP) bonding process. Experimental results of mechanical testing reveal the strength

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