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(54) **CONTROLLED GRAIN GROWTH FOR BONDING AND BONDED STRUCTURE WITH CONTROLLED GRAIN GROWTH**

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(57) **ABSTRACT**

Disclosed is an element including a conductive feature at a contact surface of the element and a nonconductive region at the contact surface in which the conductive feature is at least partially embedded. The contact feature includes a conductive material and an amount of impurities at a grain boundary of the conductive material. The impurities have a non-alloying material that does not form an alloy with the conductive material at a bonding temperature.