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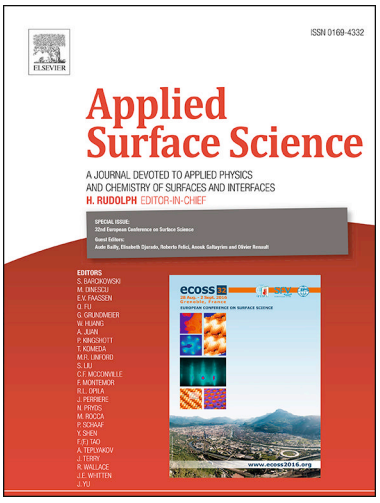

Full Length Article

De-bondable SiC-SiC wafer bonding via an intermediate Ni nano-film

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Highlights

A de-bondable SiC-SiC wafer bonding, compatible with the RTA at ~1273 K, has been accomplished via an intermediate ~30 nm Ni film for the first time.
The SiC-SiC bonding by Ni nano-film achieved at room temperature without any pressure is seamless and robust.
The interfacial precipitation of layered carbon material parallel to the SiC surfaces is assumed to be the reason of the interface weakening and de-bonding.