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#### Full Length Article

The Development of Estimated Methodology for Interfacial Adhesion of Semiconductor Coatings Having an Enormous Mismatch Extent

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# **ACCEPTED MANUSCRIPT**

### The Development of Estimated Methodology for Interfacial

#### Adhesion of Semiconductor Coatings Having an Enormous

**Mismatch Extent** 

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#### Abstract

The long-term reliability of multi-stacked coatings suffering the bending or rolling load was a severe challenge to extend the lifespan of foregoing structure. In addition, the adhesive strength of dissimilar materials was regarded as the major mechanical reliability concerns among multi-stacked films. However, the significant scale-mismatch from several nano-meter to micro-meter among the multi-stacked coatings causing the numerical accuracy and converged capability issues on fracture-based simulation approach. For those reasons, this study proposed the FEA-based multi-level submodeling and multi-point constraint (MPC) technique to

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