Special Issue

Reliability Evaluation, Simulation and Mechanical Analysis of Materials for Advanced Electronic Packaging

Message from the Guest Editor

To overcome the limited operational speed for nano-scaled transistors, scaling electronic devices to small and thin packaging and high-density arrangements has become the technological mainstream in designing versatile packaging architectures. Among these, a promising candidate is the advanced electronic package due to its excellent capability of heterogeneous integration. However, sequential reliability is a troublesome concern given the complex packaging structure. To address this issue, advanced concepts and approaches of packaging reliability evaluation and mechanical analysis are developed to combine chips with different sizes, process nodes, and technologies. To achieve a high operating performance, reduced cost, reliable thermal management, and mechanical stability, assessment approaches to structural design, process flow, and material characteristics with regard to related reliability problems need to be developed through experimental/numerical and theoretical work. For more information, please click here:
https://www.mdpi.com/journal/materials/special_issues/KOY6928I17

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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