Special Issue

Intermetallic Compounds and Applications in Solder Joints, Photovoltaic Modules and Electronics Packaging

Message from the Guest Editors

The related advanced packaging technology is widely used in the production of high-performance chips. However, the packaging process still faces many challenges, such as solder jointing, heat dissipation and reliability. Solder is currently the most mainstream material for joints. The miniaturization of solder makes it easier to form intermetallic compounds (IMCs), necking and holes during reflow process, resulting in a deterioration in the yield, conductivity and reliability of joints. Silicon solar cells are usually connected in series with photovoltaic ribbon. The interfacial reaction plays a very important role in the reliability of solar cell modules under the influences of dynamic current and static heat. The interfacial reaction of various solar materials and the evolution of the reliability of solar cell modules are extremely important basic research for academic and industry. Suitable topics include: The relationship between new solder materials and interfacial reaction. Growth mechanism of intermetallic compounds in related optoelectronic devices.
The influences of intermetallic compounds on the reliability and performance of optoelectronic devices.

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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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