

## 분무열분해 공정에 의해 합성된 글래스 분말이 알루미늄 전극 형성에 미치는 영향

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Thick Al films are widely used as backside contact in single-crystalline or polycrystalline Si solar cells. Al electrodes are commonly formed by firing a printed layer formed by the screen printing method; the electrodes are formed by using Al paste containing Al powder, glass frits, and a resin binder. Glass frits, which are used as an inorganic binder for Al electrodes, are generally formed by the melting the reactants. The powders of the reactants are mixed, ball-milled, and melted in a platinum crucible at a high temperature. Molten glasses are quenched to form glass flakes. The glass flakes are ground by different milling processes to obtain glass frits. Glass frits formed by the conventional melting process have irregular morphology and rough surfaces.

In this study, the glass frit with spherical shape and submicron size for Al paste was prepared by spray pyrolysis. The characteristics of Al conducting films formed from the Al paste containing glass frit with spherical shape and fine size were investigated.