

Particle incorporation process in electrocodeposition using the level set method

이재성*

LG Micron

(jaesung@lgmicron.com*)

The current distributions for various limiting conditions for particle incorporation during electrodeposition of a metal film were numerically investigated. The evolution of a metallic interface is governed by the local current density that is affected by the presence of a non-conducting particle. This study focused on the shape evolution during entrapment of a particle by the growing metal film by mathematical modeling and simulation of the process. The level set method was used to track the moving interface as it grew around the particle, and the governing equation was solved by a finite element method.