

凸型マイクロバンプの形状制御—第2報 薄膜レジスト

近藤 和夫*, 前田 淳平*

Shape Evolution of Electrodeposited Center Humped Bumps—2. Thin Photo Resist

Kazuo KONDO* and Junpei MAEDA*

*岡山大学工学部物質応用化学科 (〒700-0082 岡山県岡山市津島中3-1-1)

*Dept. Applied Chem., Okayama University (3-1-1 Tsushimanaka, Okayama-shi, Okayama 700-0082)

Abstract

We have succeeded in forming high aspect ratio nickel bumps. The high aspect ratio of 0.66 nickel bumps have been obtained with additive of Coumarin in Watt-type bath and with $0.5\mu\text{m}$ thin photo resist. This 0.66 aspect ratio is more than twice as high as previous results. The outer surrounding diffusion of Coumarin inhibits the outer surroundings of bump forming cathodes and forms hump at the center. This inhibition effect depends on the thickness of photo resist. The thinner the photo resist the higher the aspect ratio of bumps. The obtained high aspect ratio bump is suited for flip chip interconnection and also for probers.

Key Words: *High Aspect Ratio Nickel Bumps, Coumarin, Outer Surrounding Diffusion, Thickness of Photo Resist*