

Connection of micro-pad array by nano-plating technique

Application of the failure in electroless plating process to nano-fabrication technique

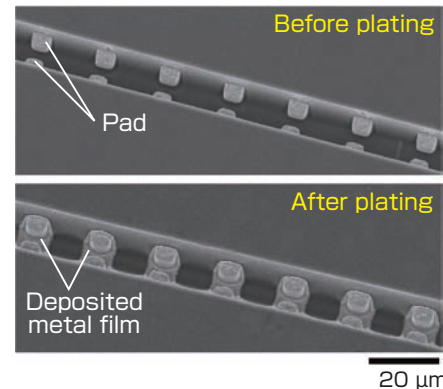
We have developed a method of connecting micro-pad electrodes by nano-plating technique. Chip-to-substrate connection is a very important technology for developing high performance electronic instruments. We have investigated a method of pad-connection using electroless plating. Generally, it is known that electroless plating, especially electroless NiB deposition, can occur not only on metal surface but also on resist surface. The phenomenon of "bridge" formation by the so-called "extraneous deposition" was utilized as a novel technique to perform selective deposition on organic resist. The behavior of extraneous deposition was controlled by adjusting deposition conditions. Thus, we developed connection of the facing pads to form the metal films deposited on the area between the pads. This method was applied successfully to interconnecting the 5 μm -width pads forming an array with a pitch of 20 μm . This method is a candidate as high-density chip-to-substrate connection for high performance electronic instruments in the field of electronic packaging.

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AIST TODAY Vol.8, No.12 p.21 (2008)



Realized connection of micro-pad electrodes using this technique

An efficient browsing system for multi-media meeting recordings

A simple and efficient way of searching topics in meeting recordings

We have developed MArc, a system for browsing multi-media recordings of small-party meetings. In this system, meetings are recorded by an input device consisting of an omni-directional camera and a microphone array. By applying audio signal processing and automatic speech recognition to the recordings, speakers are automatically identified and the keywords in their speech are detected. Using the obtained information as tags for speech events, a topic of interest can easily be searched by users. The newly developed browser visualizes the outline of recordings based on the tag information.



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AIST TODAY Vol.8, No.12 p.22 (2008)

Browser which shows the contents of meeting recordings