

Fluxless Soldering Method Eliminates Expensive, Environmentally Hazardous Cleaning

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In most soldering methods, the first step involves pre-cleaning and deoxidation of surface oxides, usually involving a liquid flux material. While this method gets the job done, fusing of traditional lead-tin solders leaves flux residue that has to be removed, often by an expensive, environmentally hazardous cleaning method.

But Stephen M. Bobbio, Ph.D., and his research team at the University of North Carolina, Charlotte, invented a soldering method that doesn't require the use of pre-soldering flux nor the once necessary cleanup associated with flux bonding deposits.

“ The technology, developed at the university in 1997, uses strong bonding fluorine that contains gas such as hydrogen fluoride, which allows for the solder to be reflowed on the surface for as long as two weeks.

The efficient and cost effective fluxless soldering can be used to bond together two parts or as a preparation technique to join together one or two parts for soldering.

Funding for the original research came from the U.S. Army Research Lab. The patented technology was first licensed in May 1998.

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