

This time it's teflon!!

# We have revolutionized the common sense of plating.

New technology of direct  
plating on teflon materials  
with no etching.

Plating on pure teflon (PTFE)!? - honestly, we are the ones who were surprised the most. Furthermore, when we implemented copper plating on PTFE composite circuit boards -we were able to achieve the strength at a practical level of **10 N/cm and more!!!!**

The new  
plating technology!  
[MARBS]

**Industry's  
first!**

Patent pending  
in 2019

No need for surface roughening!  
It is possible to plate on pure teflon  
which is slippery and smooth!



**H S**  
HOKOSHA

<http://marbs.pro>

The new plating technology "MARBS" is a next-generation PCB wiring technology combining two patented technologies: the "molecular bonding technology" invented by Sulfur Chemical Laboratory Co., Ltd. and PCB technology of Hokosha Co., Ltd.

# With the new plating technology "MARBS" plating can be realized on special materials which are difficult to work with using existing technologies and on those with insufficient strength!

## List of materials with which practical levels of strength have been achieved

### PTFE resin board

※ Tetrafluoroethylene propylene: teflon

### RF-60A resin board●

※ PTFE + glass fiber cloth + ceramics

### CER-10 resin board●

※ PTFE + glass fiber cloth + ceramics

### TLY-5A resin board●

※ PTFE + glass fiber cloth

● High frequency application materials with excellent dielectric properties and low water absorption

## Special resin materials

### Super engineering plastics

PPS (polyphenylene sulfide)

LCP (liquid crystal polymer)

PI (polyimide sheet) Kapton ®

### Engineering plastics

PC (polycarbonate)

PPA (polyphthalamide)

### General purpose plastics

PP (polypropylene)

PVC (Polyvinyl chloride)

UP (unsaturated polyester)

Good adhesion with other resin materials

## Soda-lime glass

White plate glass (high grade white glass)

Blue plate glass (low grade general soda-lime glass)

B270®i (The ultra white glass by the German company Schott)  
and others

## Borosilicate glass (heat-resistant glass)

TEMPAX (Low alkali borosilicate glass by the German company Schott)

## Quartz glass

Synthetic quartz

## Why do not we challenge ourselves towards the future together?

We are looking for partner companies.

※ Please make inquiries using the contact information at the bottom of the page.

## MARBS is a Supporting Industry Certification Project.

The project for "development of LED ring lighting using curved wiring technology to improve the inspection accuracy of visual inspection equipment" received certification as a 2017 Strategic Basic Technology Advancement Support Project (Supporting Industry).



LED ring lighting with a PCB-less structure which excels at heat dissipation (three-dimensional wiring, three-dimensional mounting)

## Introducing the molecular bonding project "Hibikino Research Center"



Official website of Hokosha [www.hohkohsya.co.jp](http://www.hohkohsya.co.jp)

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MARBS Official Website ▶ <http://marbs.pro> ※Written in Japanese