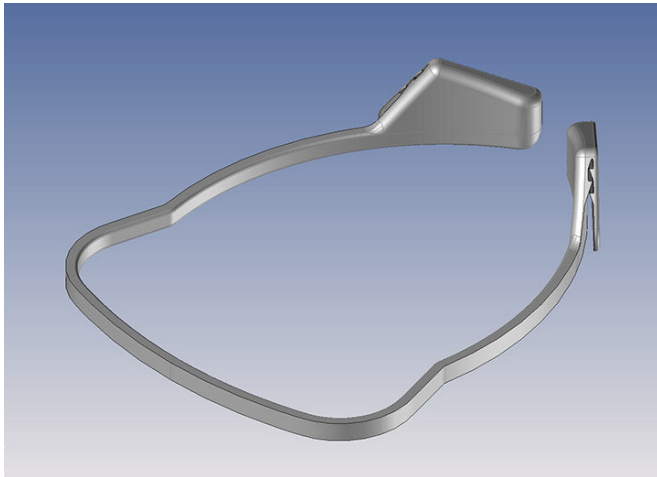


# Anti-coronavirus (COVID-19) face shield—Easy to make at low cost

9 April 2020



Credit: Osaka University

When dealing with coronavirus disease, it is essential for healthcare personnel to wear appropriate personal protective equipment. However, the unexpectedly rapid spread of the disease has led to a shortage of important components of personal protective equipment, including masks, face shields, and gowns. It has been reported that some healthcare professionals in New York are forced to provide treatment wearing garbage bags to cover their bodies.

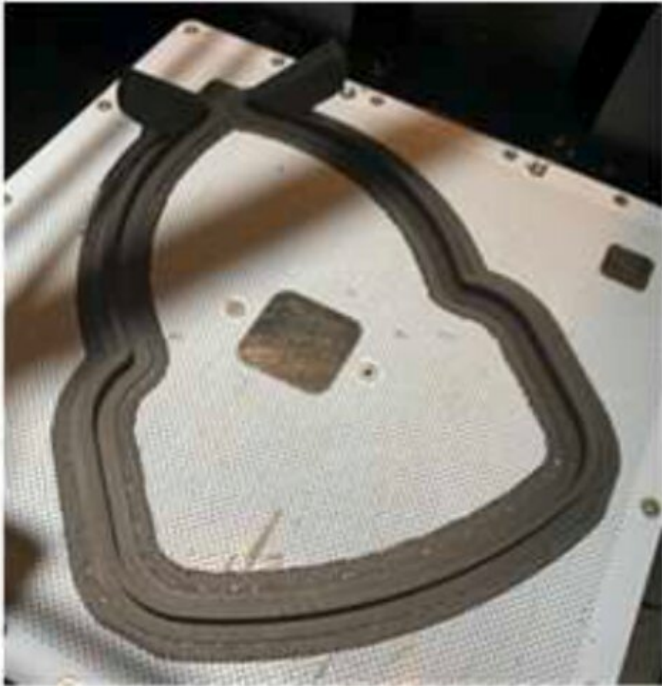
Now researchers at Osaka University, in collaboration with Charmant, a global manufacturer of eyeglass frames (Sabae, Fukui), developed an extremely cheap anti-coronavirus [face shield](#) made using a clear plastic file as the shield. The face shield was completed in only three days after they came up with the idea.

The 3-D data for the frame and the video showing how to assemble the face shield were made available free of charge at the following website, enabling the face shield to be made easily anywhere in the world: [www.project-engine.org/](http://www.project-engine.org/)

Usually, countries export personal protective equipment to affected countries as emergency supplies. However, in cases such as the current coronavirus pandemic, where outbreaks are occurring at an unprecedented, rapid pace in numerous locations around the world both in developed and emerging countries, conventional procurement methods such as emergency exports/imports are not feasible.

"The collaborative development project between our university and Charmant was based on the idea that it would become easier to locally procure and produce face shields if it were possible to create frames with 3-D printers, which have recently become more sophisticated and affordable, from locally-available, common materials," says Professor Nakajima who lead the project. This would, in turn, contribute to solving the global challenge at hand.

The face [shield](#) may be very useful in regions already facing a serious shortage of shields and masks, as well as African countries where there is a growing concern about the spread of the virus.



Provided by Osaka University

Producing a frame with a 3D printer. Credit: Osaka University



A shield equipped with a clear plastic file Credit: Osaka University

**More information:** Download Free 3-D Data For Face Shield: [www.project-engine.org/](http://www.project-engine.org/)

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