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OOYOO Co., Ltd.  
Keio University  
Kopernik

## **Building an International Cooperation Framework to Alleviate the Shortage of Materials for Manufacturing Masks in Indonesia**

OOYOO Co., Ltd. (Kyoto City, Kyoto Prefecture, President: Daisuke Yamaguchi) and Professor Tomoaki Okuda of the Faculty of Science and Technology Department of Applied Chemistry, Keio University, have teamed up with Kopernik, an Indonesian NGO, to establish an international cooperation system to alleviate the shortage of materials for manufacturing masks in Indonesia. Among Southeast Asian countries, Indonesia is the most severely affected by the new coronavirus infection. Not only is the quantity of masks limited but there is also a shortage of materials for their manufacture in Indonesia. OOOO Co., Ltd. and Keio University have jointly developed a filter material that can be obtained and manufactured locally in Indonesia in addition to establishing a system for the production and supply of masks through Kopernik. OOOO and Keio University will continue to develop filter materials with high levels of particle collection performance and air breathability, and will work to strengthen the supply system for masks in Indonesia and Southeast Asia, where supplies of materials remain limited.

The cumulative death toll for new coronavirus infections in Indonesia has exceeded 8,000, making it the most severely affected country in Southeast Asia. Locally, there is a lack of personal protective equipment for health care workers who are at a high risk of infection working on the front lines to combat the pandemic. Not only in Indonesia but in many other countries and regions in Southeast Asia there is a weak supply system for personal protective equipment, and the filter materials used to make masks are still difficult to obtain.

Kopernik is an NGO headquartered in Bali, Indonesia that focuses on research and development to find innovative and potential solutions that address social and environmental challenges. They approached OOOO Co., Ltd. and Professor Okuda to develop and supply a filter material that could be produced locally and has high particle collection performance. The filter material that OOOO and Professor Okuda jointly developed for Kopernik collects a similar amount of particles as high-performance masks even without using the same meltblown nonwoven fabric.

Although the material is still technically under development, priority has been given to establishing a mass production system in Indonesia in response to the recent spread of new coronavirus infections. The developed filter material currently captures more than 90% of particles larger than 0.5 μm; however, OOOYOO and Prof. Okuda will continue to work on improving the efficiency of the material's particle collection performance, and by the end of fiscal year 2020, their team aims to develop a filter material with the same or better performance than commercially available high-performance nonwoven masks.

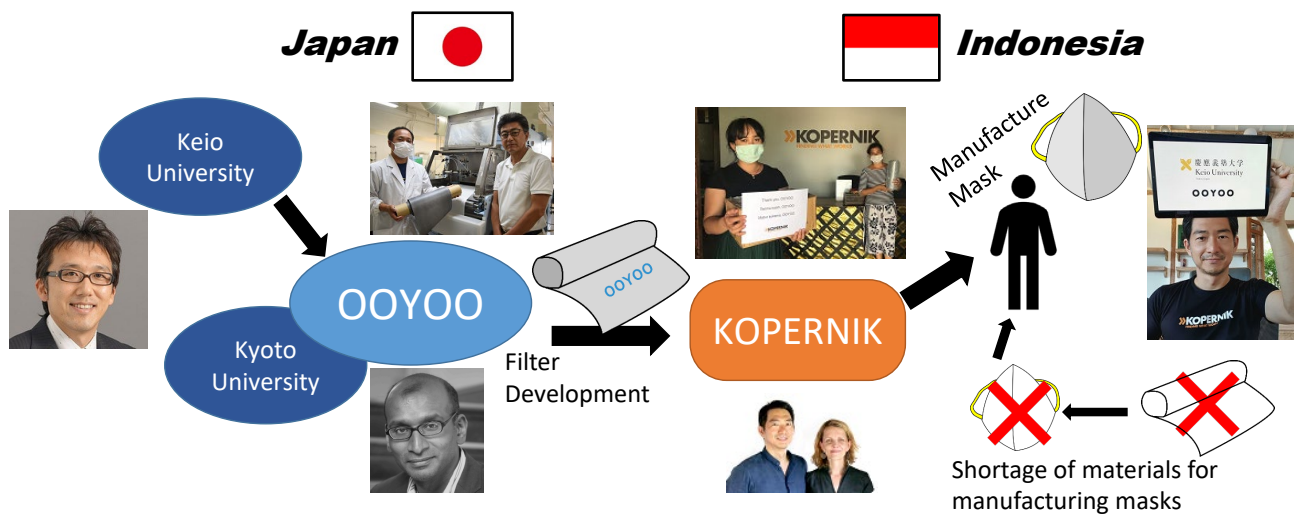


Figure: Collaboration flowchart depicting the roles of OOOYOO, Keio University, and Kopernik.

※Please direct any requests or inquiries to the contact information provided below.

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