



# Development of Antibacterial and Antiviral Materials for Face Masks

Presented by: GANG SUN, PH.D.

## Meeting Information

Friday, March 12<sup>th</sup>, 6:00pm

Virtual – Zoom

<https://zoom.us/j/https://zoom.us/j/85127052789>

Password: ACS1234

## Abstract

We have been working in the area of development personal protective materials for improved professional and public safety for many years. Regular biological protective materials are only barriers to microorganisms, and users still face relatively high risks to exposures of pathogens. The development of antibacterial and antiviral materials for personal protective equipment (PPE) could provide improved protections. This presentation will discuss two fabrics that were developed with daylight-induced biocidal functions, applicable for face masks.

## Presenter

GANG SUN, PH.D.

Department of Biological and Agricultural Engineering  
University of California, Davis, CA 95616, USA  
[gysun@ucdavis.edu](mailto:gysun@ucdavis.edu), 530-752-0840 (Phone) and 530-752-7584 (fax)



Gang Sun is a professor of Fiber and Polymer Sciences at University of California, Davis, and has been conducting research on materials, polymer/textile chemistry, and nanotechnologies since 1995. Most his research activities and efforts have been devoted on development of novel antibacterial polymers for biological protections, including medical, chemical, and military protective clothing and food safety products. His group has developed chlorine rechargeable and discovered daylight-induced photo-active biocidal materials for water disinfection, biological protective medical uniforms, and fresh produce disinfections. Some technologies have been commercialized in US and other countries. In addition, his group invented a high-throughput production process for thermoplastic nanofibers and membrane materials with chemical and biological protective functions. More recently, his group has been working on development of nanofibrous membrane based personal-use colorimetric and electrical sensors for pesticides and toxicants in consumer products. Dr. Sun is a recipient of CAREER award from National Science Foundation in 1997 and the Olney Medal in 2016, the highest science award from American Association of Textile Chemists and Colorists (AATCC), and is the Editor-in-Chief of AATCC Journal of Research. He has published over 280 peer-reviewed journal articles.