A COVID-19 Virucidal Graphene-based Composite Ink for More Effective PPE

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Zen Graphene Solutions announced that it has launched an international collaboration with Graphene Composites to fight the COVID-19 pandemic by developing a potential virucidal graphene-based composite ink for face masks.

ZEN Graphene Solutions Ltd. (ZEN) has announced an international collaboration with UK-based Graphene Composites Ltd (GC) to fight COVID-19 by developing a potential virucidal graphene-based composite ink that can be applied to fabrics including N95 face masks and other personal protective equipment (PPE) for significantly increased protection. Once the development, testing, and confirmation of the graphene ink's virucidal ability have been completed, the ink will then be incorporated into fabrics used for PPE.

Francis Dubé, CEO of ZEN commented, "We are pleased to be collaborating with GC and be at the forefront of a new innovative technology that could contribute to combating the deadly COVID-19 virus. The development of this potential COVID-19 virucidal graphene ink is coming at a crucial time to provide effective PPE supplies for the safety of frontline workers and hospital staff." Dr. Dubé continued, "The current N95 masks trap the virus but don't kill it. Our testing will demonstrate if the graphene ink is an effective virucide which would kill the virus as this could make a big difference to people's safety. We have been very impressed by the Graphene Composites team and look forward to continued collaborations."

Sandy Chen, CEO of GC stated, "Combining the deep nanomaterials expertise of GC and ZEN with a truly collaborative approach has enabled us to do a year's worth of R&D in a matter of weeks. Quickly developing and deploying our virucidal/germicidal ink would make a significant difference in slowing the rate of infection – thus saving many lives."

Under the collaboration, ZEN has synthesized silver nanoparticles functionalized graphene oxide ink at their lab in Guelph, Ontario that has been documented by previous researchers to kill earlier versions of coronavirus. Once testing is completed, the ZEN/GC graphene ink

would then be incorporated into a fabric to be included in masks and filters designed by GC.

Efficacy testing of the silver-graphene oxide-based ink to kill the COVID 19 virus (SARS-CoV-2) will be conducted at Western University's ImPaKT Facility Biosafety Level 3 lab in Ontario. In addition, the graphene ink will be tested to kill influenza A and B viruses at Biosafety Level 2 labs in the UK and US.

Read the original article on ZEN Graphene Solutions.