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AS THIN AS PAPER: Professor Seeram Ramakrishna holding the newly-spun nanofibre.

Nanofibre technology coming your way

IT LOOKS like simple piece of paper, but this small but powerful membrane is the prototype to a lighter gas mask used by health-care or military workers in the future.

Created by a group of National University of Singapore (NUS) researchers, it is one of the many useful applications in the current hotspot in research and development – nanotechnology.

Made from nanofibres – fibres which are a hundred times smaller than a strand of human hair – the material is not only light, it can also neutralise chemical agents into non-toxic ones.

The \$200,000 two-year project, which is funded by the Defence Science and Technology Agency, also paves the way for lighter

and more comfortable protective suits and gas masks used during chemical attacks.

Traditional gear is heavy, uncomfortable, non-porous and need to be specially disposed of.

Professor Seeram Ramakrishna, Dean, NUS Faculty of Engineering, said: “We have tested it in the past one year and we find that it’s 10 times better in terms of deactivation of chemical warfare agents, stimulants ... it not only absorbs the chemical agents but actually detoxifies them.”

The nanofibre technology has already been used in NUS’ other labs to create scaffolds for growing stem cells. There are also plans to use it in water and air purification treatment. — CHEOW XIN YI