

# Scientists create windows that trap air pollutants



## SMART AND FLEXIBLE

BEIJING: Scientists have developed flexible smart windows that can trap air pollutants, and keep the indoor environment free of harmful particulate matter.

Tuning the light intensity and reducing the concentration of atmospheric particulate matter (PM) in commercial buildings are both crucial to keep indoor people comfortable and healthy.

Smart windows fabricated on the flexible and transpar-

ent silver (Ag)-nylon electrodes can tune the light intensity entering commercial buildings to maintain thermal comfort.

However, fabricating a large-scale transparent smart window for high efficiency PM2.5 capture has been a significant challenge, until now, researchers said.

Scientists led by YU Shuhong from the University of Science and Technology of China (USTC) developed a simple solution based process to fabricate large-area flexible,

transparent windows for that can efficiently capture PM2.5.

"It takes only about \$15.03 and 20 minutes to fabricate 7.5 square metre Ag-nylon flexible transparent windows," researchers said.

The obtained mesh, coated with thermochromic dye, serves not only to tune the light intensity but also to purify indoor air.

The performance of the smart window remained stable even after 10,000 cycles of bending test and 1,000 cycles of stretching deformation.