

## Low-cost anti-heat coating for buildings with zero electricity consumption

Professor Dai Jian-Guo, Associate Head (Academic Development), Department of Civil and Environmental Engineering of PolyU, together with his research team, have invented a method to make advanced coating materials for "smart" sub-ambient radiative cooling (SSRC) to cool buildings off while consuming zero electricity.



PolyU's SSRC coating, called "UmiCool", is a multifunctional aqueous polymer coating that can be painted on the exterior surface of buildings and infrastructure. It works by scattering sunlight, converting absorbed UV light to fluorescence emissions and re-emitting infrared radiation.

The PolyU invention is able to reduce the temperature of buildings by 3-5°C below the ambient temperature under direct sunlight and by 1-2°C without electricity consumption.



# Smart Anti-Heat Coating for Buildings

Thailand, Hongkong

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Innovating aqueous p

Radiative and evapor

Energy efficiency

Clima neutralisation

9 INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



11 SUSTAINABLE CITIES  
AND COMMUNITIES



13 CLIMATE  
ACTION

