

Development of Techniques for Measuring the Efficacy of a Range of Antimicrobial Materials

Self-cleaning surfaces are employed in spaces (such as airports and hotels) in which many humans potentially spread bacteria and viruses. These materials oxidize organic matter that comes into contact with the surface when ambient light strikes the surface. These surfaces are typically replaced every few months when they begin to appear worn. However, little to no information is known about the actual oxidation capacity of the surfaces at the time of replacement. Our goal is to use common spectroscopic (light-based) techniques to determine how the performance of commercial and lab-synthesized materials changes over time. We hope to gain insight into when self-cleaning surfaces ought to be replaced, thus avoiding waste while maximizing sterilization.



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