

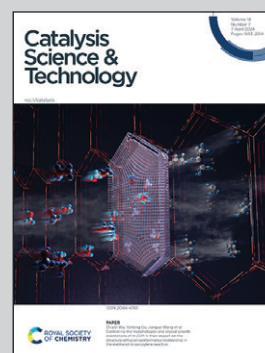
Showcasing research from Professor Dilushan R. Jayasundara's Materials Research Laboratory, Department of Physics, University of Colombo, Colombo, Sri Lanka.

Liberation of photogenerated radicals from a nano-titania surface at the solid-air interface

Research into new self-cleaning coatings has gained significant attention in the post-COVID era. However, the underlying efficacy of these coatings is measured at solid-liquid interfaces. This study, utilizing a Quartz Crystal Microbalance (QCM), demonstrates the photocatalytic activity in situ and in real-time at the solid-air interface, where most coatings are commonly used. The results show the liberation of photogenerated species from the surface, offering direct evidence of near-surface photocatalytic activity that also depends on relative humidity. This study provides a mechanism for validating the photocatalytic activity of self-cleaning coatings.

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