

IIT Hyderabad developing waterproof material using industrial waste

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NEW DELHI: Researchers at the Indian Institute of Technology (IIT) Hyderabad are using fly ash, an industrial waste product, to develop water repellent structures. Such 'super hydrophobic' or super water repellent structures can be used as anti-fouling paints, antisticking surfaces for antennae, self-cleaning coatings for automobiles, stain-resistant textiles and anti-soiling architectural coatings. These water repellent structures have the characteristics of lotus leaves and rose petals. This research has been jointly done by Mudrika Khandelwal and Atul Suresh Deshpande of department of materials science and metallurgical engineering at the IIT. "Mimicking natural structures for engineering applications was not easy. In order to artificially replicate a natural phenomenon, scientists must understand the relationship between the natural structure and the purpose it serves," Khandelwal said. Khandelwal highlighted the difference in the water repellent natures of lotus leaf and rose petal-the surface of the rose petal consists of microstructures that have larger spacing and a smaller density of nanostructures than the Surface of lotus leaf.

Source: Economic Times

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