WATERLESS URINALS THAT CAN CLEAN ITSELF

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When a liquid droplet contacts a solid surface, it will either remain as a droplet or spread out on the surface to form a thin liquid film. This physicochemical property is represented as surface wettability. The wetting behavior of solid surfaces against a liquid is of universal importance in many different areas as diverse as biology, microsystems engineering, and the painting of cars, ships, and buildings. In particular, water repellency is very useful for practical applications, such as dust-free coating, prevention of snow sticking, and others. Water repellency of solid surfaces is governed by the surface free energy and geometrical structures of the surface. In this study, we focused on creating nano/ sub-micron rougness on ceramic surface by using inorganic materials, followed by coating by a hydrophobic solution on the roughness surface. A coating of nano/sub-micron treatment of this coating with fluoro polymer resulted in self-cleaning effect without water.