

## Accepted Manuscript

Sliding and Rolling Behavior of Water Droplets on an Ordered Nanoball Matrix Fluorocarbon Polymer Layer under Simulated Weather Conditions

Xieqiang Jiang , Jie Wan , Haoxu Han , Yiping Wang , Kang Li ,  
Qingjun Wang

PII: S0039-6028(18)30222-X  
DOI: [10.1016/j.susc.2018.05.002](https://doi.org/10.1016/j.susc.2018.05.002)  
Reference: S USC 21251



To appear in: *Surface Science*

Received date: 7 March 2018  
Revised date: 29 April 2018  
Accepted date: 1 May 2018

Please cite this article as: Xieqiang Jiang , Jie Wan , Haoxu Han , Yiping Wang , Kang Li , Qingjun Wang , Sliding and Rolling Behavior of Water Droplets on an Ordered Nanoball Matrix Fluorocarbon Polymer Layer under Simulated Weather Conditions , *Surface Science* (2018), doi: [10.1016/j.susc.2018.05.002](https://doi.org/10.1016/j.susc.2018.05.002)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## Highlights

- The internal fluidity, characterized by the ratio of internal rolling and slipping was measured with the help of the image-capture system under the room temperature and humidity.
- With the growth of the porous diameter of the AAO substrates, the static contact angle increased while the sliding acceleration of the droplet decreased by 33% to 50% under room conditions (25°C, 30% RH).
- The hydrophobicity was weakened and the sliding acceleration underwent a 25% to 50% loss under extreme environment condition (5°C and 80%RH).

Download English Version:

<https://daneshyari.com/en/article/7844711>

Download Persian Version:

<https://daneshyari.com/article/7844711>

[Daneshyari.com](https://daneshyari.com)