

Accepted Manuscript

Title: Bio-inspired Micro-nano Structured Surface with Structural Color and Anisotropic Wettability on Cu substrate

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PII: S0169-4332(16)30736-X
DOI: <http://dx.doi.org/doi:10.1016/j.apsusc.2016.03.234>
Reference: APSUSC 33000

To appear in: *APSUSC*

Received date: 30-12-2015
Revised date: 27-3-2016
Accepted date: 31-3-2016

Please cite this article as: Yan Liu, Shuyi Li, Shichao Niu, Xiaowen Cao, Zhiwu Han, Luquan Ren, Bio-inspired Micro-nano Structured Surface with Structural Color and Anisotropic Wettability on Cu substrate, Applied Surface Science <http://dx.doi.org/10.1016/j.apsusc.2016.03.234>

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Bio-inspired Micro-nano Structured Surface with Structural Color and Anisotropic Wettability on Cu substrate

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Graphical Abstract

Highlights

We have prepared a biomimetic hydrophobic surface on copper substrate by one-step femtosecond laser technique.

The hydrophobicity mechanism relies on morphology and chemical component on surface.

The hydrophobic surfaces exhibit different structural colors and a anisotropic wettability.

Abstract

Inspired by the unique creatures in the nature, the femtosecond laser technology has been usually used to fabricate the periodic microstructures due to its advantages of rapidness, simplicity, ease of large-area fabrication, and simultaneously offering dual micro/nano-scale structures simply via one-step process for a wide variety of materials. By changing

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