Accepted Manuscript

Title: Interactions of Superhydrophobic Carbon Soot Coatings with Short Alkyl chain Alcohols and Fluorocarbon Solutions

Authors: Karekin D. Esmeryan, Carlos E. Castano, Reza

Mohammadi

PII: S0927-7757(17)30629-5

DOI: http://dx.doi.org/doi:10.1016/j.colsurfa.2017.06.067

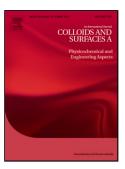
Reference: COLSUA 21754

To appear in: Colloids and Surfaces A: Physicochem. Eng. Aspects

Received date: 6-4-2017 Revised date: 26-5-2017 Accepted date: 23-6-2017

Please cite this article as: Karekin D.Esmeryan, Carlos E.Castano, Reza Mohammadi, Interactions of Superhydrophobic Carbon Soot Coatings with Short Alkyl chain Alcohols and Fluorocarbon Solutions, Colloids and Surfaces A: Physicochemical and Engineering Aspectshttp://dx.doi.org/10.1016/j.colsurfa.2017.06.067

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.



ACCEPTED MANUSCRIPT

Interactions of Superhydrophobic Carbon Soot Coatings with Short Alkyl chain Alcohols and Fluorocarbon Solutions

Karekin D. Esmeryan^{a, b}, Carlos E. Castano^a, Reza Mohammadi^a*

^aDepartment of Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond VA, 23284, USA

^bGeorgi Nadjakov Institute of Solid State Physics, 72, Tzarigradsko Chaussee Blvd., 1784 Sofia, Bulgaria

*Corresponding author: tel. +1 804 827 3997; e-mail: rmohammadi@vcu.edu

Highlights

- We study the influence of alcohols on the physicochemical features of soot coatings.
- The oxygen groups and point defects in the soot govern the alcohol interactions.
- The thickness of the soot changes depending on the alkyl chain length of alcohols.
- A thin fluoropolymer film is formed on the soot upon treatment with fluorocarbon.

Download English Version:

https://daneshyari.com/en/article/4981960

Download Persian Version:

https://daneshyari.com/article/4981960

Daneshyari.com