

## Accepted Manuscript

Title: Controlled hydrophilic/hydrophobic property of silica films by manipulating the hydrolysis and condensation of tetraethoxysilane

Author: Xin Yang Liqun Zhu Yichi Chen Baiqing Bao  
Jinlong Xu Weiwei Zhou



PII: S0169-4332(16)30237-9  
DOI: <http://dx.doi.org/doi:10.1016/j.apsusc.2016.02.068>  
Reference: APSUSC 32586

To appear in: *APSUSC*

Received date: 24-11-2015  
Revised date: 5-2-2016  
Accepted date: 5-2-2016

Please cite this article as: X. Yang, L. Zhu, Y. Chen, B. Bao, J. Xu, W. Zhou, Controlled hydrophilic/hydrophobic property of silica films by manipulating the hydrolysis and condensation of tetraethoxysilane, *Applied Surface Science* (2016), <http://dx.doi.org/10.1016/j.apsusc.2016.02.068>

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.

**Controlled hydrophilic/hydrophobic property of silica films by  
manipulating the hydrolysis and condensation of tetraethoxysilane**

Xin Yang<sup>a</sup>, Liqun Zhu<sup>a,\*</sup>, Yichi Chen<sup>b</sup>, Baiqing Bao<sup>c</sup>, Jinlong Xu<sup>c</sup>, Weiwei Zhou<sup>c</sup>

a. Key Laboratory of Aerospace Advanced Materials and Performance (Ministry of Education), School of Material Science & Engineering, Beihang University, Beijing 100191, China.

b. Key Laboratory of Bio-Inspired Smart Interfacial Science and Technology of Ministry of Education, School of Chemistry & Environment, Beihang University, Beijing 100191, China

c. Jiangsu Baihe Coatings Co., Ltd, Long Cheng Road No.2900, Xinbei District, Changzhou, Jiangsu 213136, China

\*Corresponding author: Liqun Zhu; Email: zhulq@buaa.edu.cn; Tel: +86 1082317113

**Highlights**

1. The silica films exhibiting controllable and wide range wettability are prepared.
2. Hydrophilic and hydrophobic groups on particles are controlled by one step method.
3. The wettability of films can be changed from hydrophobicity to hydrophilicity.
4. The change trend of contact angle is indicated by an equation.
5. The silica film is useful for the wettability change of different materials surface.

Download English Version:

<https://daneshyari.com/en/article/5347796>

Download Persian Version:

<https://daneshyari.com/article/5347796>

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