

## Accepted Manuscript

Enhanced electroosmotic flow in a nano-channel patterned with curved hydrophobic strips

S. Bhattacharyya, S.K. Pal

PII: S0307-904X(17)30630-3  
DOI: [10.1016/j.apm.2017.10.013](https://doi.org/10.1016/j.apm.2017.10.013)  
Reference: APM 12014



To appear in: *Applied Mathematical Modelling*

Received date: 6 June 2017  
Revised date: 3 October 2017  
Accepted date: 10 October 2017

Please cite this article as: S. Bhattacharyya, S.K. Pal, Enhanced electroosmotic flow in a nano-channel patterned with curved hydrophobic strips, *Applied Mathematical Modelling* (2017), doi: [10.1016/j.apm.2017.10.013](https://doi.org/10.1016/j.apm.2017.10.013)

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**

- Enhanced electroosmotic flow in a nano-channel with uncharged hydrophobic patches
- A trigonometric shape of the hydrophobic patches is considered
- A large enhancement occurs when Debye length is in the order of the channel height
- Higher bulk ionic concentration creates a hindrance on flow enhancement
- Increase in penetration depth of the interface reinforces the average EOF

ACCEPTED MANUSCRIPT

Download English Version:

<https://daneshyari.com/en/article/8052128>

Download Persian Version:

<https://daneshyari.com/article/8052128>

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