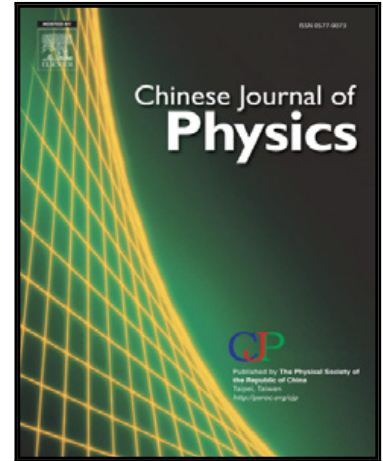


Accepted Manuscript

Fractal Analysis of Nanostructured Silver Film Surface

M. Nasehnejad , G. Nabiyouni , M. Gholipour Shahraki

PII: S0577-9073(17)31091-2
DOI: [10.1016/j.cjph.2017.10.015](https://doi.org/10.1016/j.cjph.2017.10.015)
Reference: CJPH 373



To appear in: *Chinese Journal of Physics*

Received date: 27 August 2017
Revised date: 23 October 2017
Accepted date: 25 October 2017

Please cite this article as: M. Nasehnejad , G. Nabiyouni , M. Gholipour Shahraki , Fractal Analysis of Nanostructured Silver Film Surface, *Chinese Journal of Physics* (2017), doi: [10.1016/j.cjph.2017.10.015](https://doi.org/10.1016/j.cjph.2017.10.015)

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

- In this work, electrodeposited silver thin films were characterized using X-ray diffraction and atomic force microscopy techniques.
- Calculation of standard deviation surface roughness indicated that the films grow as a power-law in time (thickness) with growth exponent of $\beta=0.67$.
- The average value of Hurst exponent is found to be 0.68 using rescaled range analyses.
- The results indicate that grain size and morphology of electrodeposited silver thin films can easily be controlled using different thickness.
- Fractal analysis revealed that the value of the fractal dimension of the samples increases as the film thickness increases.

Download English Version:

<https://daneshyari.com/en/article/8145266>

Download Persian Version:

<https://daneshyari.com/article/8145266>

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