




Quick Search All fields  Author   
 search tips Journal/book title  Volume  Issue  Page  [Clear](#) [Go](#) [Advanced Search](#)

**Physics Letters A**

Volume 130, Issue 3, 4 July 1988, Pages 171-176

 Font Size:  
**Abstract**

doi:10.1016/0375-9601(88)90423-9

 [Cite or Link Using DOI](#)

Copyright © 1988 Published by Elsevier Science B.V. All rights reserved.

**The relationship between the crystallographic order and electronic structure of mercury thin films**

 M. Onellion  <sup>1</sup>

P. A. Dowden

J. L. Erskine

Department of Physics, University of Wisconsin, Madison, WI 53706, USA

Department of Physics, Syracuse University, Syracuse, NY 13244-1130, USA

Department of Physics, University of Texas, Austin, TX 78712, USA

Received 23 October 1987; revised 1 March 1988; accepted 3 May 1988 Communicated by J.I. Budnick Available online 16 September 2002.

**Abstract**

Thin (1–7 monolayer) well ordered, disordered, and liquid Hg overlayers on Ag (100) have been investigated with angle resolved photoemission and low energy electron diffraction. The well ordered overlayers exhibit new electronic states as a result of the strained, cubic, overlayer crystallographic structure. The photoemission cross section of the electronic states depends on the overlayer long range crystallographic order and cannot be explained by photoelectron diffraction. The new electronic states depend upon the long range crystallographic order of the overlayer not simply the local crystallographic symmetry, a heretofore unreported result.

**Article Outline**

## • References

<sup>1</sup> NSF Presidential Young Investigator, affiliated with the University of Texas for portions of this work.


Correspondence should be sent to this author.

**Article Toolbox**

- |  |  |
|--|--|
|  E-mail Article         |  Export Citation        |
|  Cited By               |  Add to my Quick Links  |
|  Save as Citation Alert |  Permissions & Reprints |
|  Citation Feed          |  Cited By in Scopus (4) |

**Related Articles in ScienceDirect**

- [Electronic structure of ordered Cs and K overlayers on ...  
\*Solid State Communications\*](#)
- [Spin polarization of vanadium overlayers on a semi-infi...  
\*Surface Science\*](#)
- [Electronic structure of Fe overlayers on Si\(1 1 1\)  
\*Solid State Communications\*](#)
- [The valence and structure of overlayers of Sm on Al\(001...  
\*Journal of Magnetism and Magnetic Materials\*](#)
- [Theoretical study of thin Fe films deposited on a Cr\( 0...  
\*Journal of Magnetism and Magnetic Materials\*](#)

[View More Related Articles](#)

[View Record in Scopus](#)
**Physics Letters A**

Volume 130, Issue 3, 4 July 1988, Pages 171-176

