Investigation of the Oxygen Adsorption on Iron Covered W(110) Surface by LEED and STM

Kibria, Mohammad Tawheed
Dept. of Molecular and Material Sciences, Kyushu University

Shimasaki, Masafumi
Dept. of Molecular and Material Sciences, Kyushu University

Nakagawa, Takeshi
Dept. of Molecular and Material Sciences, Kyushu University

https://doi.org/10.15017/1809233

出版情報：Proceedings of International Exchange and Innovation Conference on Engineering & Sciences (IEICES). 2, pp.1-, 2016-10-14. Interdisciplinary Graduate School of Engineering Sciences, Kyushu University
バージョン：

Investigation of the Oxygen Adsorption on Iron Covered W(110) Surface by LEED and STM

Mohammad Tawheed Kibria*, Masafumi Shimasaki, Takeshi Nakagawa, Seigi Mizuno
Dept. of Molecular and Material Sciences, Kyushu University, 6-1 Kasuga Koen, Kasuga, Fukuoka 816 8580, Japan
*Corresponding author email: kibria.tawheed@kyudai.jp

Abstract: *Adsorption of oxygen on the epitaxial growth of iron thin film on tungsten (110) surface was intensively studied considering several Langmuir(L) exposure range. Typical surface characterization approaches were considered, such as low energy electron diffraction, and scanning tunneling microscopy (STM) to analyze the O/1psML Fe/W(110) surface. Certain oxygen adsorption structures on one pseudomorphic monolayer (psML) of Fe on W(110) surface is reported in this literature and compared with previous study. Previously reported the (3 × 2) structure of the oxygen on the iron pseudomorphic monolayer (psML)/W(110) surface was recognized at less than 4L of oxygen exposure. Finally, STM analysis determined the surface morphology of the iron oxide (FeO) layer on W(110) surface.*

Keywords: Adsorption; Oxygen; LEED; STM.