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On The Decoration of Layer-By-Layer Films for the X-Ray Reflectivity Study at the Solid-Liquid Interface

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Abstract

© 2015, Springer Science+Business Media New York. X-ray reflectivity is a powerful method allowing to determine a structure of thin layers on solid supports. However, it has a limited application for studying organic films at the solid-liquid interfaces due to the low contrast in the electron density. The mentioned limitation can be effectively overcome by the decoration of the organic layers with heavy metal ions. In the present work we make a comparison of the X-ray reflectivity data obtained on the undecorated film at the air-solid interface and decorated film at the solid-liquid interface. In addition, we have demonstrated that the measurements at the solid-liquid interface do not result in any damage of the layer structure.

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Keywords

Layer-by-layer technique, Synchrotron, X-ray reflectivity