

## **Pd registry on Ag (111): X-ray standing wave study**

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**Abstract :** Normal incidence x-ray standing wave (NIXSW) has been formed inside the Ag crystal normal to the Ag(111) planes by making x-rays of energy 2629.4 eV normally incident on the crystal surface. The standing wave field extends above the surface of the crystal with the periodicity of the <111> planes of the Ag crystal. Pd photoelectron signal detected with the standing wave field exhibits modulations depending on the adsorption site of the Pd on Ag(111) surface. From the coherent position of the Pd photoelectron yield, the Pd height above the crystal surface has been determined and was found to be three fold hollow site. The shape of the Pd signal exhibits drastic changes due to intermixing with energy when thickness is increased gradually.

**Keywords :** X-ray standing waves, Metallic alloys, Bragg Reflection

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