



Contribution ID: 20

Type: **Talk**

【204】 Nanovoids in hexagonal boron nitride monolayer

Tuesday 27 August 2019 18:00 (15 minutes)

The hexagonal boron nitride (h-BN) nanomesh that forms on Rh(111) has a corrugated honeycomb structure with 3.2 nm periodicity, which consists of “pore” and “wire” regions [1, 2]. In the present study, we demonstrate that 2 nm voids can be fabricated at the pore sites in the h-BN monolayer with unique two-step process in vacuum [3, 4], and can be further delaminated from a Rh substrate with electrochemical method onto arbitrary substrates outside of vacuum as nanoporous membranes [5]. Results from photoemission, scanning tunneling microscopy and density functional theory will be reported.

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Session Classification: Surfaces, Interfaces and Thin Films

Track Classification: Surfaces, Interfaces and Thin Films