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Simulated scanning tunneling microscopy of few-layer phosphorus allotropes through hexagonal boron nitride PABLO RIVERO, CEDRIC HORVATH, Univ of Arkansas-Fayetteville, ZHEN ZHU, JIE GUAN, DAVID TOMANEK, Michigan State University, SALVADOR BARRAZA-LOPEZ, Univ of Arkansas-Fayetteville — Four stable layered phosphorus allotropes that are almost degenerated in their configuration energy have been recently discussed [1]. Due to their high reactivity under ambient conditions, their exposed surfaces must be protected [2]. Here, we address the influence of a capping monolayer of hexagonal boron nitride on the scanning tunneling microscopy images of few layered-phosphorus.

[1] J. Guan, and Z. Zhu, and D. Tomanek, *Phys. Rev. Lett.* **113**, 046804 (2014).
[2] A. Castellanos-Gomez, L. Vicarelli, E. Prada, J.O. Island, K.L. Narasimha-Acharya, S.I. Blanter, D.J, Groenendijk, M. Buscema, G.A. Steele, J.V. Alvarez, H.W. Zandbergen, J.J. Palacios, and H.S.J. van der Zant. *2D Materials* **1** 025001 (2014).

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