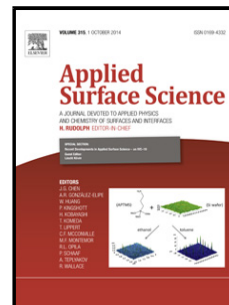


Accepted Manuscript

Title: Phosphorene nanoribbons: Passivation effect on bandgap and effective mass

Author: Li-Chun Xu Xian-Jiang Song Zhi Yang Ling Cao
Rui-Ping Liu Xiu-Yan Li



PII: S0169-4332(14)02432-5
DOI: <http://dx.doi.org/doi:10.1016/j.apsusc.2014.10.166>
Reference: APSUSC 29031

To appear in: *APSUSC*

Received date: 11-9-2014
Revised date: 22-10-2014
Accepted date: 26-10-2014

Please cite this article as: Li-Chun Xu, Xian-Jiang Song, Zhi Yang, Ling Cao, Rui-Ping Liu, Xiu-Yan Li, Phosphorene nanoribbons: Passivation effect on bandgap and effective mass, *Applied Surface Science* (2014), <http://dx.doi.org/10.1016/j.apsusc.2014.10.166>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

- Hydrogenation and fluorination can passivate the metallic edge states of zPNRs.
- The bandgap of each type of zPNRs decreases as the ribbon's width increases due to the quantum confinement effect.
- Two local configurations of passivated atoms can coexist in nanoribbons and affect the bandgap of narrow nanoribbons.
- New passivation configuration can effectively reduce the effective mass of electrons.

Accepted Manuscript

Download English Version:

<https://daneshyari.com/en/article/5349077>

Download Persian Version:

<https://daneshyari.com/article/5349077>

[Daneshyari.com](https://daneshyari.com)