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## Full Length Article

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PII: S0169-4332(18)30100-4  
DOI: <https://doi.org/10.1016/j.apsusc.2018.01.089>  
Reference: APSUSC 38228

To appear in: *Applied Surface Science*

Received Date: 10 October 2017  
Revised Date: 15 December 2017  
Accepted Date: 9 January 2018

Please cite this article as: Y. Cai, D. Li, J. Sun, M. Chen, Y. Li, Z. Zou, H. Zhang, H. Xu, D. Xia, Synthesis of BiOCl nanosheets with oxygen vacancies for the improved photocatalytic properties, *Applied Surface Science* (2018), doi: <https://doi.org/10.1016/j.apsusc.2018.01.089>

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# Synthesis of BiOCl nanosheets with oxygen vacancies for the improved photocatalytic properties

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## Highlights

- The square-sharped BiOCl nanosheets with oxygen vacancies were successfully synthesized via a facile hydrothermal route using xylitol as surfactant, 98% RhB can be removed after 20 min irradiation.
- As a surfactant, xylitol can impact on crystal structure and concentration of oxygen vacancies as well as the photocatalytic activity.
- A possible photocatalytic mechanism of as-prepared samples is the synergetic effects of polycrystalline structure, grain boundary and oxygen vacancies.

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