

## Accepted Manuscript

Title: Novel mechanisms of selenate and selenite reduction in the obligate aerobic bacterium *Comamonas testosteroni* S44

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PII: S0304-3894(18)30525-9  
DOI: <https://doi.org/10.1016/j.jhazmat.2018.07.014>  
Reference: HAZMAT 19522

To appear in: *Journal of Hazardous Materials*

Received date: 26-2-2018  
Revised date: 2-7-2018  
Accepted date: 3-7-2018

Please cite this article as: Tan Y, Wang Y, Wang Y, Xu D, Huang Y, Wang D, Wang G, Rensing C, Zheng S, Novel mechanisms of selenate and selenite reduction in the obligate aerobic bacterium *Comamonas testosteroni* S44, *Journal of Hazardous Materials* (2018), <https://doi.org/10.1016/j.jhazmat.2018.07.014>

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# Novel mechanisms of selenate and selenite reduction in the obligate aerobic bacterium *Comamonas testosteroni* S44

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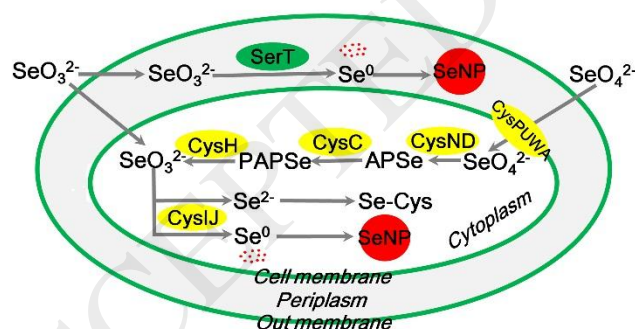
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Graphical Abstract



**HIGHLIGHTS**· Se(VI) reduction was catalyzed by enzymes of the sulfate reducing pathway.

- Enzyme SerT is a novel selenite reductase in the periplasm.
- Se(IV) reduction can be generated through at least two pathways in strain S44.
- The aerobic bacteria and enzymes have a potential for bioremediation of Se

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