# Green hydrogen production by *Rhodobacter sphaeroides*

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Description
The photo-fermentative biohydrogen production using photosynthetic purple non-sulfur and non-oxygenic bacteria *Rhodobacter sphaeroides* is a very promising green technology. In this paper, several strategies conducted in the literature to make the bioprocess more economical, less expensive and more efficient have been reviewed. The used of co-cultures and genetic modification strategies increased the yield and the rate of hydrogen production. Also, the biohydrogen production using organic wastes as a substrate, an environmentally friendly process, in several reactors designs with immobilized and suspension cultures have been employed to achieve a high conversion efficiency of the substrate and light energy. At the optimized conditions, the hydrogen production enhances and becomes more economic.