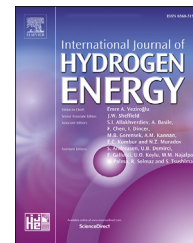


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Review Article

A review of advanced optimization strategies for fermentative biohydrogen production processes

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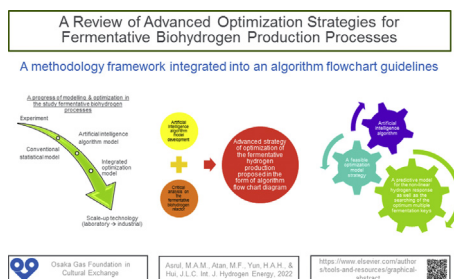
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HIGHLIGHTS

- The bioreactor analysis of hydrogen fermentative is a highly non-linear and complex.
- Artificial intelligence algorithm for predicting and optimizing.
- A methodological framework from the past studies reviewed in chronology.
- Proposed guideline for the advanced modeling and optimization implementation.
- The feasibility of the model strategy for the macroscopic operational data.

GRAPHICAL ABSTRACT



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ABSTRACT

The inability of statistical optimization to represent the dynamic interaction of the biohydrogen process, which is highly non-linear and complicated, has been identified. However, incorporating a data-driven black-box model could overcome the limitations of conventional methods to provide correct responses rapidly and cost-effective modeling. Despite significant reports on the optimization of hydrogen production from fermentation, fewer studies have been made for the case using artificial intelligence algorithms. As a

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