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Optimization of Dimethyl Ether Production Process Based on Sustainability Criteria Using a Homotopy Continuation Method

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Highlights:

- An efficient methodology for sustainable optimization of chemical processes is presented.
- A global multi-objective optimization algorithm using homotopy continuation is conducted.
- Economic, environmental, and social objective functions are considered.
- The optimized process has an insignificant economical reduction while environmental and social aspects are improved.

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