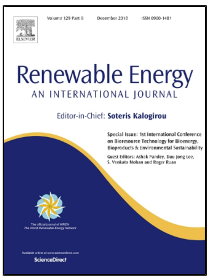
Accepted Manuscript



Analytical Considerations on Optimization of Cascaded Heat Transfer Process for Thermal Storage System with Principles of Thermodynamics

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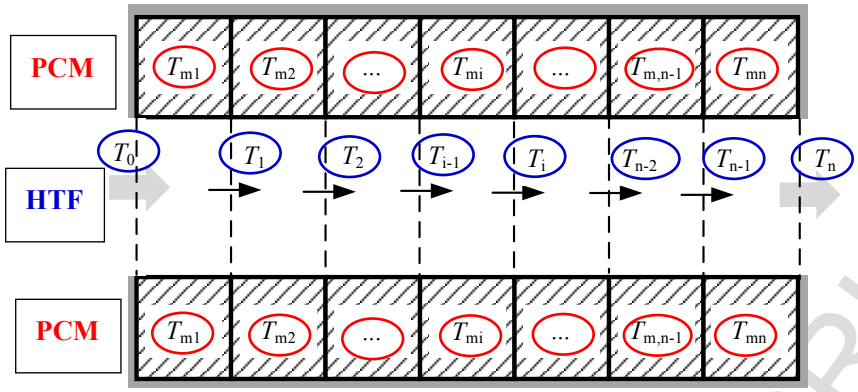
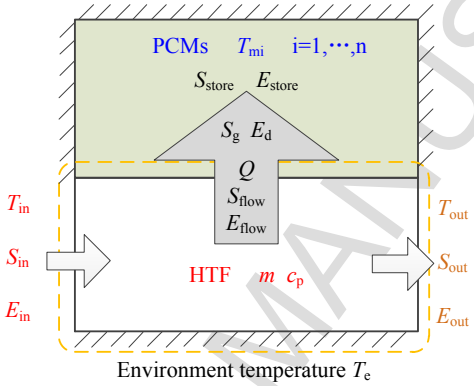
GRAPHICAL ABSTRACT

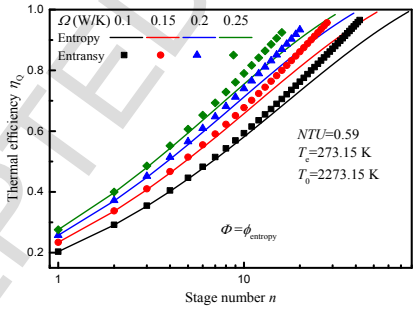
Cascaded heat transfer process analysis and optimization for a thermal energy storage system.



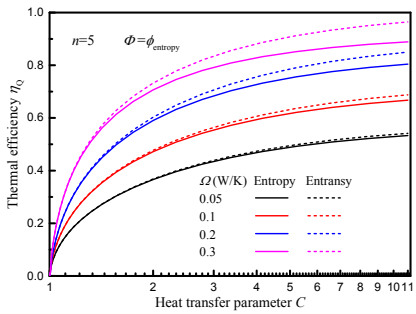
(a) Cascaded thermal storage system with constant inlet heat transfer fluid temperature



(b) transfer, storage and variation of thermodynamic irreversibility parameters



(c) effect of stage number on thermal efficiency



(d) effect of heat transfer on thermal efficiency