

## Accepted Manuscript

Title: Effects of the geometrical and operational parameters and alternative outer cover materials on the performance of solar chimney used for natural ventilation

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PII: S0378-7788(16)31882-5  
DOI: <http://dx.doi.org/doi:10.1016/j.enbuild.2016.12.041>  
Reference: ENB 7220

To appear in: *ENB*

Received date: 21-6-2016  
Revised date: 22-10-2016  
Accepted date: 13-12-2016

Please cite this article as: M.A.Hosien, S.M.Selim, Effects of the geometrical and operational parameters and alternative outer cover materials on the performance of solar chimney used for natural ventilation, Energy and Buildings <http://dx.doi.org/10.1016/j.enbuild.2016.12.041>

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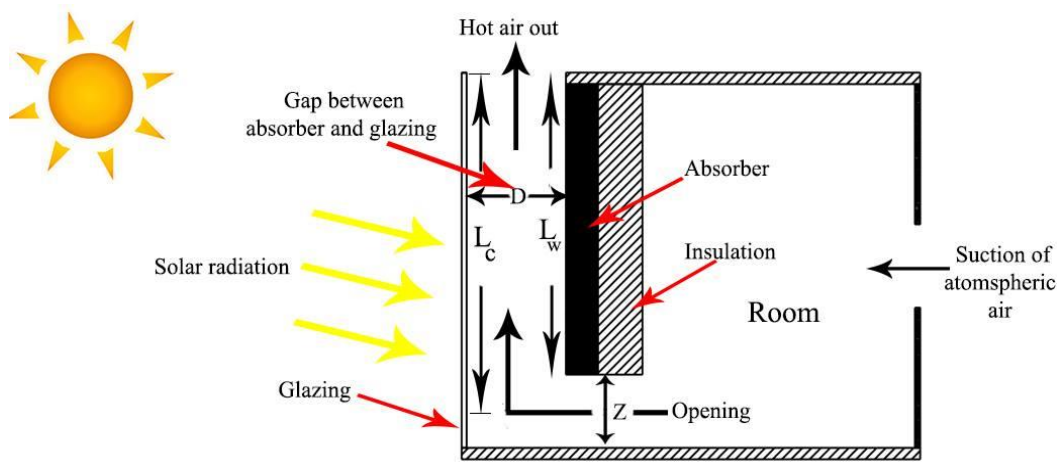
## Effects of the geometrical and operational parameters and alternative outer cover materials on the performance of solar chimney used for natural ventilation

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### Graphical abstract



### Solar chimney configurations

#### Highlights

- The performance of a solar chimney under meteorological conditions of Cairo is studied.
- A mathematical model simulating the performance of solar chimney was developed.
- The geometrical and operational parameters were analyzed.
- Different chimney cover materials were examined.
- The results showed that the airflow rate was significantly depended on the wind speed as well as the dimensions of chimney

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