

Special Issue on  
**Solar Chimney Technology and Novel Applications**

# CALL FOR PAPERS

Solar chimney technology has attracted widespread attention and is recently the focus of increasing international attention, mainly because it realizes large scale energy conversion by integrating several simple technologies: greenhouse effect, low-cost heat storage technology, pressure-based wind turbine technology, and stack effect. This makes it extremely promising for energy production in sunny deserts such as the Gobi and in arid and semiarid regions all over the world.

No commercial solar chimney power plant (SCPP) has yet been built due to its relatively low energy conversion efficiency in comparison to the high initial investment cost. There is an urgent need to make breakthroughs in the key technologies required in order to make the SCPP system more competitive. Recently, a combination of the SCPP system with other technologies for the objectives of seawater desalination, freshwater generation, mitigation of urban pollution, and fighting global warming has gradually attracted many researchers' attention across the world.

This special issue focuses on various aspects of SCPP, including the design and optimization of each component of the SCPP system, its applications, its impact on the environment, its costs, and its life cycle assessment (LCA). Papers about traditional topics, such as using solar chimney (SC) for power generation and ventilation, are welcomed. New hybrid systems and innovative applications, such as negative emissions technology, will also be considered.

Potential topics include but are not limited to the following:

- ▶ SCPP with photocatalysis for pollutant removal
- ▶ SCPP with photocatalysis for fighting global warming
- ▶ Solar energy harvesting efficiency of SCPP
- ▶ Maximum power point tracking algorithms for applications in solar chimney technology
- ▶ Solar energy storage technology
- ▶ Solar chimney for ventilation
- ▶ Novel hybrid systems associated with solar chimney
- ▶ Innovative applications of solar chimney technology for negative emissions, desalination, freshwater generation, and so on
- ▶ Economic, environmental, and/or LCA aspects of solar chimney or SCPP use

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/ijp/ijpsc/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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