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A review of solar photovoltaic-thermoelectric hybrid system for electricity generation

Guiqiang Li, Samson Shittu, Thierno M.O. Diallo, Min Yu, Xudong Zhao, Jie Ji

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# A review of solar photovoltaic-thermoelectric hybrid

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4 Guiqiang Li<sup>1\*</sup>, Samson Shittu<sup>1</sup>, Thierno M.O. Diallo<sup>1</sup>, Min Yu<sup>1</sup>, Xudong Zhao<sup>1\*</sup>, Jie

 $Ji^2$ 

6 School of Engineering, University of Hull, Hull HU6 7RX, UK

<sup>2</sup> Department of Thermal Science and Energy Engineering, University of Science and

Technology of China, 96 Jinzhai Road, Hefei City, 230026, China;

#### **Abstract**

Solar energy application in a wider spectrum has the potential for high efficiency energy conversion. However, solar cells can only absorb photon energy of the solar spectrum near the solar cell band-gap energy, and the remaining energy will be converted into thermal energy. The thermoelectric generator is a good choice to utilize this thermal energy. This paper analyses the feasibility of photovoltaic-thermoelectric (PV-TE), and reviews the current types and performance of PV-TE. Furthermore, it presents the optimization and development of PV-TE. In addition, this paper presents the challenge and efficient improvement of PV-TE in actual application. Therefore, this paper would provide a valuable reference for further research into the field of PV-TE and its applications.

22 Keywords: PV-TE, Wide solar spectrum, Electricity generation, Hybrid solar system

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