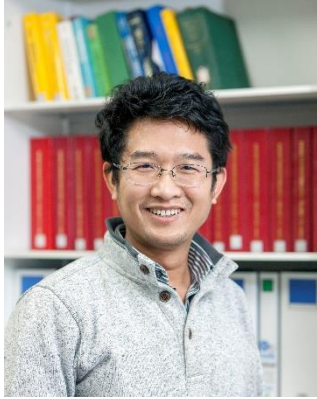


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(<https://www.scopus.com/authid/detail.uri?authorId=24315364500>). His current h-Index is 47 with the total citations of more than 6000 in Scopus, including a highly cited paper. He is the Executive Editor of the Evergreen - Joint Journal of Novel Carbon Resource Sciences & Green Asia Strategy (<https://www.tj.kyushu-u.ac.jp/evergreen/index.php>) and the editor of the International Journal of Air-Conditioning and Refrigeration (<https://link.springer.com/journal/44189/editors>).

Title

Dew point evaporative cooler (DPEC): Recent developments and applications

Abstract

Dew point evaporative coolers (DPEC) have two salient features. They are the ability to cool the air close to the dewpoint temperature and the saturation of the air with moisture. Thus, DPECs find several innovative applications for cooling, heating and the efficiency improvement of the power cycles. In this paper, we will discuss the fundamental aspects of DPEC including the thermodynamic model and simulation followed by recent developments such as irreversibility losses and hybridization. Some innovative applications of DPECs and its hybrids for the cooling of PV panels, desalination and power generation in the Inverted Brayton Cycle (IBC).