

Open Absorption Cycle for Combined Dehumidification, Water Heating, and Evaporative Cooling

Disclosure Number

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Technology Summary

The invention relates to heat pump technologies and more specifically to a novel "open" absorption refrigeration or heat pump cycle. This invention depends greatly on thin film absorption technology. Instead of closing the cycle between the condenser outlet and the evaporator inlet, the absorber is able to directly extract the water vapor from ambient air to continue to cycle. The system can recycle the condensed liquid water by spraying it on the absorber thin film or drain it to provide a dual effect of dehumidification and refrigeration or heat pumping.

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