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Experimental validation of the hot mirror system

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Solar receivers in solar trough installations are crucial components for transferring the incident solar radiation to a working fluid as heat, which can be used for industrial applications or electricity generation. Losses as thermal radiation dominate at high temperature and must be minimised in an efficient system. Conventionally, this is achieved via a selective coating on the absorber pipe, but a different approach used by us is to coat the glass sleeve with a heat mirror substance to quench radiation losses. Such a system can display numerous advantages. In this presentation, I will talk about the theory behind the heat mirror, how it is implemented in a simulation and how experimental results have validated this idea.

Apply to be considered for a student award (Yes / No)?

n/a

Level for award (Hons, MSc, PhD, N/A)?

n/a

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