Title:	Efficiency at optimal performance:
Other Titles:	A unified perspective based on coupled autonomous thermal machines
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Abstract:	We show that coupled autonomous thermal machines, in the presence of three heat reservoirs and following a global linear-irreversible description, can have efficiency at maximum power (EMP) which is analogous in form to the EMP of models with two (hot and cold) reservoirs. In particular, the temperature dependence of EMP in the coupled model is via only the ratio of hot and cold temperatures if the intermediate reservoir temperature is expressed as an algebraic mean of these temperatures. Many popular expressions of EMP in the literature can be recovered by making a choice of some standard mean. Further, the universal properties of EMP near equilibrium can be explained in terms of the properties of symmetric means. For the case of broken time-reversal symmetry, a universal second-order coefficient of 6/49 is predicted in the series expansion of EMP, analogous to the 1/8 coefficient in the time-reversal symmetric case.
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