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Thermodynamics of open quantum systems

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Abstract content
 (Max 300 words)
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In this work we study methods of the non-equilibrium thermodynamics. A modification of the methods allows to apply them to open quantum systems. The main feature of these methods is the connection thermodynamical properties and dynamical properties of an open system. The indicated connection is an internal characteristic of the methods and does not depend on details of the dynamical evolution of the system. Thus, the methods allow to study the thermodynamics of an open quantum system with non-markovian evolution. The main ideas of the new approach are illustrated on two open quantum systems, namely, the damped oscillator and the driven two-level system.

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No

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Yes

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