

סמינר מיוחד בכימיה פיסיקלית ותאורטית

יום א' 26.03.2023 שעה 12:30

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נושא:

INTRODUCTION TO QUANTUM THERMODYNAMICS (TUTORIAL)

ההרצאה תתקיים בחדר סמינרים הפקולטי

Introduction to Quantum Thermodynamics (tutorial)

A brief derivation of Markovian Master Equation for a "small" quantum system interacting with a "large" stationary reservoir in the weak coupling regime is presented. The popular misconceptions concerning validity of Markovian approximation are discussed. Thermalization of a system interacting with a heat bath is discussed, as an example. The formalism is extended to slowly varying external conditions and many baths with different temperatures. The monotonicity of relative entropy with respect to completely positive maps is applied to derive First and Second Law of thermodynamics for such systems.

