Title:	An introductory review on resource theories of generalized nonclassical light.
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Abstract:	Quantum resource theory is perhaps the most revolutionary framework that quantum physics has ever experienced. It plays vigorous roles in unifying the quantification methods of a requisite quantum effect as wells as in identifying protocols that optimize its usefulness in a given application in areas ranging from quantum information to computation. Moreover, the resource theories have transmuted radical quantum phenomena like coherence, nonclassicality and entanglement from being just intriguing to being helpful in executing realistic thoughts. A general quantum resource theoretical framework relies on the method of categorization of all possible quantum states into two sets, namely, the free set and the resource set. Associated with the set of free states there is a number of free quantum operations emerging from the natural constraints attributed to the corresponding physical system. Then, the task of quantum resource theory is to discover possible aspects arising from the restricted set of operations as resources. Along with the rapid growth of various resource theories corresponding to standard harmonic oscillator quantum optical states, significant advancement has been expedited along the same direction for generalized quantum optical states. Generalized quantum optical framework strives to bring in several prosperous contemporary ideas including nonlinearity, PT -symmetric non-Hermitian theories, q-deformed bosonic systems, etc., to accomplish similar but elevated objectives of the standard quantum optics and information theories. In this article, we review the developments of nonclassical resource theories of different generalized quantum optical states and their usefulness in the context of quantum information theories.
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