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Title: The dynamic behavior of quantum dots laser under the influence of external optical feedback from five external cavities

Abstract
In this paper, the dynamic behavior of quantum dots laser under the influence of a multiple optical feedback is described. The laser's structure consists of an active section and additional sections from which the optical feedback is returned consisting of two air gaps sections and three phase sections. Such a device is considered to be good for generating the chaotic emission. More details about lasers formed from multiple external cavities can be found in literature [1], [2]. The dynamic behavior is analyzed in terms of Bloch equation model [3]. The synchronization of two unidirectional coupled lasers and evolution in time of the output power of the laser is studied numerically. Finally, the optimal parameters of the systems was found for chaos generation.

References
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