Chaos control and Synchronization in Quantum Dot Light Emitting Diodes

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Abstract- Theoretical and experimental studies on chaos synchronization between two Quantum Dot Light Emitting Diodes (QDLEDs) have been reported in this work. The delay coupling via optoelectronics feedback configurations originates the dynamics in each QDLED. The synchronization is achieved in unidirectional and bidirectional configurations. Depending on the coupling strength parameter, the system exhibits (non – partial - complete) synchronization. The synchronization is evaluated by means of the residual chaos and the coherence of the optimal coupling strength

***Index Terms— QDLED, optoelectronic feedback, parameters mismatch, chaos synchronization residue, control.***