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 2.3.1 QD nucleation and growth  
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 4.3.2 The emitter: a single semiconductor quantum dot

## Sommario/riassunto

In 1969, Leo Esaki (1973 Nobel Laureate) and Ray Tsu from IBM, USA, proposed research on "man-made crystals? using a semiconductor superlattice (a semiconductor structure comprising several alternating ultra-thin layers of semiconductor materials with different properties). This invention was perhaps the first proposal to advocate the engineering of a new semiconductor material, and triggered a wide spectrum of experimental and theoretical investigations. However, the study of what are now called low dimensional structures (LDS) began in the late 1970's when sufficiently thin epitaxial layers