Title: Study of defect states in semiconductor nanostructures

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Semiconductor bandstructure engineering has led to development of defect free electronic devices for the electronic industry. Most of the optoelectronic devices in use are expected to be defect free for better performances. But sometimes dirt seems to make things more beautiful. In this chapter I will discuss about the presence of defects and how it has revolutionized the luminescence properties of many semiconductors. I will discuss the role of defects states and its impact on the optoelectronic properties of semiconductors.