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Critical Conditions of Dislocation Generation in Core-Shell Nanowires: A Review

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Abstract. Dislocation-free core-shell nanowires are a promising material for quantum communication devices. The synthesis of such nanowires is associated with many expensive experiments. This review is devoted to analytical models aimed at predicting the critical conditions for the dislocation nucleation in core-shell nanowires and could be of interest to researchers dealing with elaboration and characterization of these nanowires.

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