

### عنوان مقاله:

Electron states in a sinusoidally deformed cylindrical quantum wire

### محل انتشار:

فصلنامه فیزیک تئوری و کاربردی، دوره 11، شماره 2 (سال: 1396)

تعداد صفحات اصل مقاله: 5

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### خلاصه مقاله:

Electron states in a sinusoidally deformed cylindrical nanowire are probed within the effective mass approximation. The nanowire is immersed in a homogeneous magnetic field applied parallel to the axis of the wire. The sinusoidal deformity affects quantum properties of electrons considerably. The deformity introduces energy dependence on the axial position, enhancing (decreasing) confinement energies in regions where the radius is narrower (wider). Analysis shows that the magnetic field attenuates these sinusoidal deformity-induced distortions on electron quantum properties

### کلمات کلیدی:

Electron states Nanowire Magnetic field Electron confinement

### لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/763676>

