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Creation and mobility of self-trapped electronic states in nonlinear chains

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**Highlights**

- The phase diagram reveals a rich phenomenology, with five regimes related to electronic states mobility;
- Self-trapped electronic states can exhibit an unidirectional branch migrating to the left or the right side of chain;
- In a strong electron-phonon regime, the wave-packet describes a self-trapped regime in which remains fully localized at initial site;
- The proper tuning of electric field for the management of the creation and mobility of selftrapped electronic states through the lattice.

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