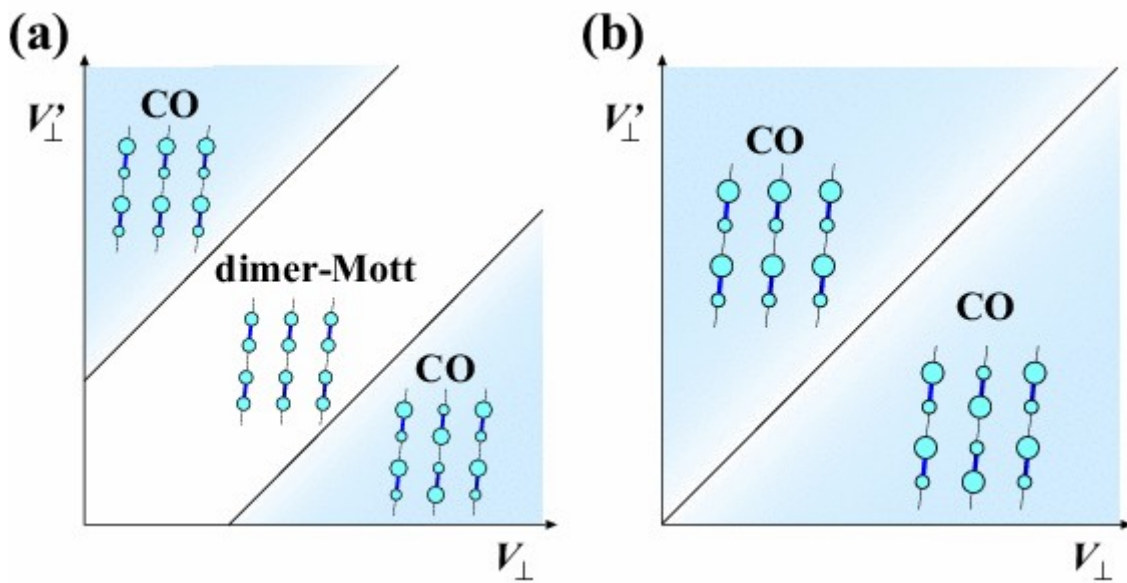


Theoretical study on low-dimensional electron systems

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Schematic phase diagram of quasi-one-dimensional molecular conductors

Molecular conductors are typical examples of low-dimensional electron systems. In the low-dimensional electron systems, the strong quantum fluctuation and the strong electronic correlation play the essential roles, and the remarkable electronic states, which are different from the usual three-dimensional case, emerge. For example, so-called Tomonaga-Luttinger liquid state is realized in the normal state of the quasi-one-dimensional molecular conductors. I investigate the electronic states of the low-dimensional electron systems by combining several theoretical methods.

Keywords : molecular conductors, Tomonaga-Luttinger Liquid, Hubbard model