The Dirac cone, where the occupied band contacts with the unoccupied band at a point, is known to induce exotic transport properties. The linear dispersion around the contact point realizes “massless Dirac fermions”. Although the Dirac cone is observed in graphene and edge states of topological insulators, the number of the Dirac system in bulk crystals is quite limited. Single-component molecular conductors belong to a multi-band system where both HOMO and LUMO bands contribute to the formation of conduction bands. In most single-component molecular crystals, these two bands are separated from each other at ambient pressure, which leads to insulating properties. Application of high pressure can widen the band width for both bands and their overlap induces the conducting behavior including metallization[1] and superconductivity[2]. In the process of resistivity measurements and the first principles DFT calculations for single-component molecular crystals under high pressure, we noticed a possibility that the (tilted) Dirac cones are formed in a crystal of dithiolene complex [Pd(dddt)₂] (dddt = 1,4-dithin-2,3-dithiolate) which shows temperature-independent resistivity (zero-gap behavior) at 12.6 GPa. The Dirac cone formation in [Pd(dddt)₂] can be understood by a simplified two-dimensional tight-binding model where the HOMO band is convex upward and the LUMO band is convex downward. An overlap of these two bands provides a closed intersection at the Fermi level (Fermi line) in the k-space, if there is no HOMO-LUMO interaction. An introduction of the HOMO-LUMO interactions removes the degeneracy on the Fermi line and results in a gap formation. However, if there is a line on which the HOMO-LUMO interaction is zero, the two bands contact at the points where the line intersects with the Fermi line, leading to the formation of the Dirac cones.