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論文題目 ：

Boundary Condition Analysis in Topological Weyl Semimetals
（トポロジカルワイル半金属における境界条件の解析）

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論文要旨:

In this thesis, I take a particle theory approach for studying topological related Weyl semimetals, especially for the study of energy dispersion relations and of edge states: based on basic assumptions such as symmetry, topology and dimension, write down Lagrangian, solve equation of motion and boundary conditions, get energy dispersion relations and give explanation to relation between physical quantities. I call it boundary condition analysis. Fruitful results come out: the bulk states, edge states are shown to be determined by conserved momenta and boundary condition parameters, new exotic states localized at the intersection of boundaries are predicted and dispersions determined.