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Entanglement spectrum of Levin-Wen model for topological phases in two dimensions[1] YUTING HU, YONG-SHI WU, Univ of Utah — We obtain explicitly the entanglement spectrum of ground states and excited states of the doubled Fibonacci Levin-Wen model. The entanglement spectrum has the topological degeneracy. We show that they exhibit the fractional exclusion statistics of chiral anyons. Moreover, we show that the entanglement spectrum can be mapped to a grand canonical ensemble of 1d system of the chiral Fibonacci anyons on the boundary, at a finite temperature determined by the quantum dimension of Fibonacci anyons. Finally, we show how that the topological quantum numbers of the bulk states can be detected by the entanglement spectrum

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Yuting Hu
Univ of Utah

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