1106-81-2768 **Yuting Hu*** (yuting@physics.utah.edu), **Brendan G. Pankovich** (ren.pankovich@utah.edu) and **Yong-Shi Wu** (wu@physics.utah.edu). *Entanglement Spectra in Levin-Wen models for Topological Phases in Two Dimensions.*

We obtain explicitly the entanglement spectrum of ground states and excited states of the doubled Fibonacci Levin-Wen model. We show that the entanglement spectrum has the topological degeneracy, which coincides with that of a 1d chiral Fibonacci anyon system. Then we establish a correspondence between the entanglement entropy of the bulk bipartition and the entropy of a grand canonical ensemble of 1d chiral Fibonacci anyon system on the boundary, at a finite temperature determined by the quantum dimension of Fibonacci anyons. Finally, we discuss how the topological quantum numbers of a bulk subsystem can be detected by the entanglement spectrum. (Received September 16, 2014)