# Grassmann Tensor Renormalization Group Study of Lattice QED with Theta Term in Two Dimensions

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We apply the Grassmann tensor renormalization group to two-dimensional lattice QED. The phase structure with one-flavor of the Wilson fermion, especially including a case with the $\theta$ term at $\theta = \pi$ is studied. We present numerical results of finite size scaling analyses.

## References

[1] Y. Shimizu and Y. Kuramashi, Phys. Rev. D **90** (2014) 014508.

[2] Y. Shimizu and Y. Kuramashi, Phys. Rev. D **90** (2014) 074503.

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