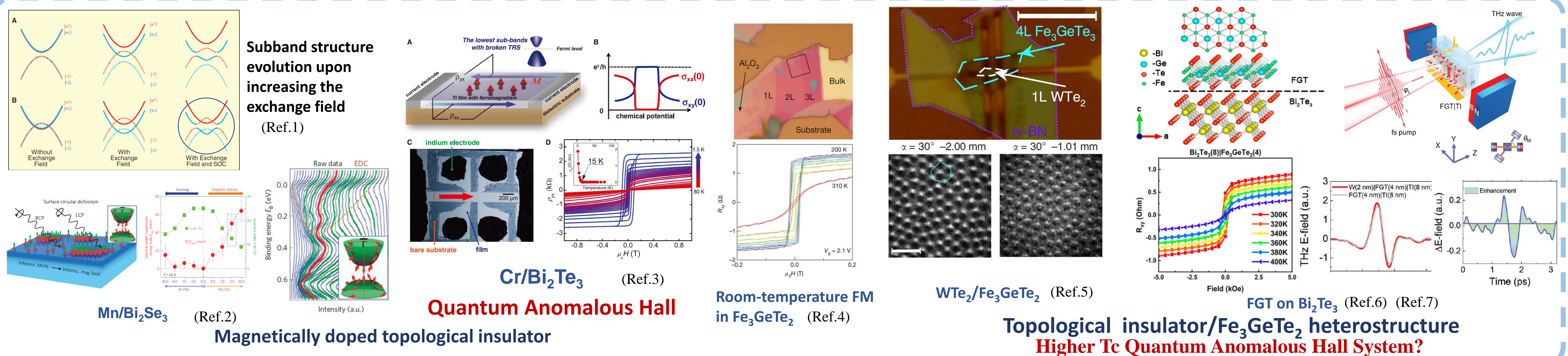
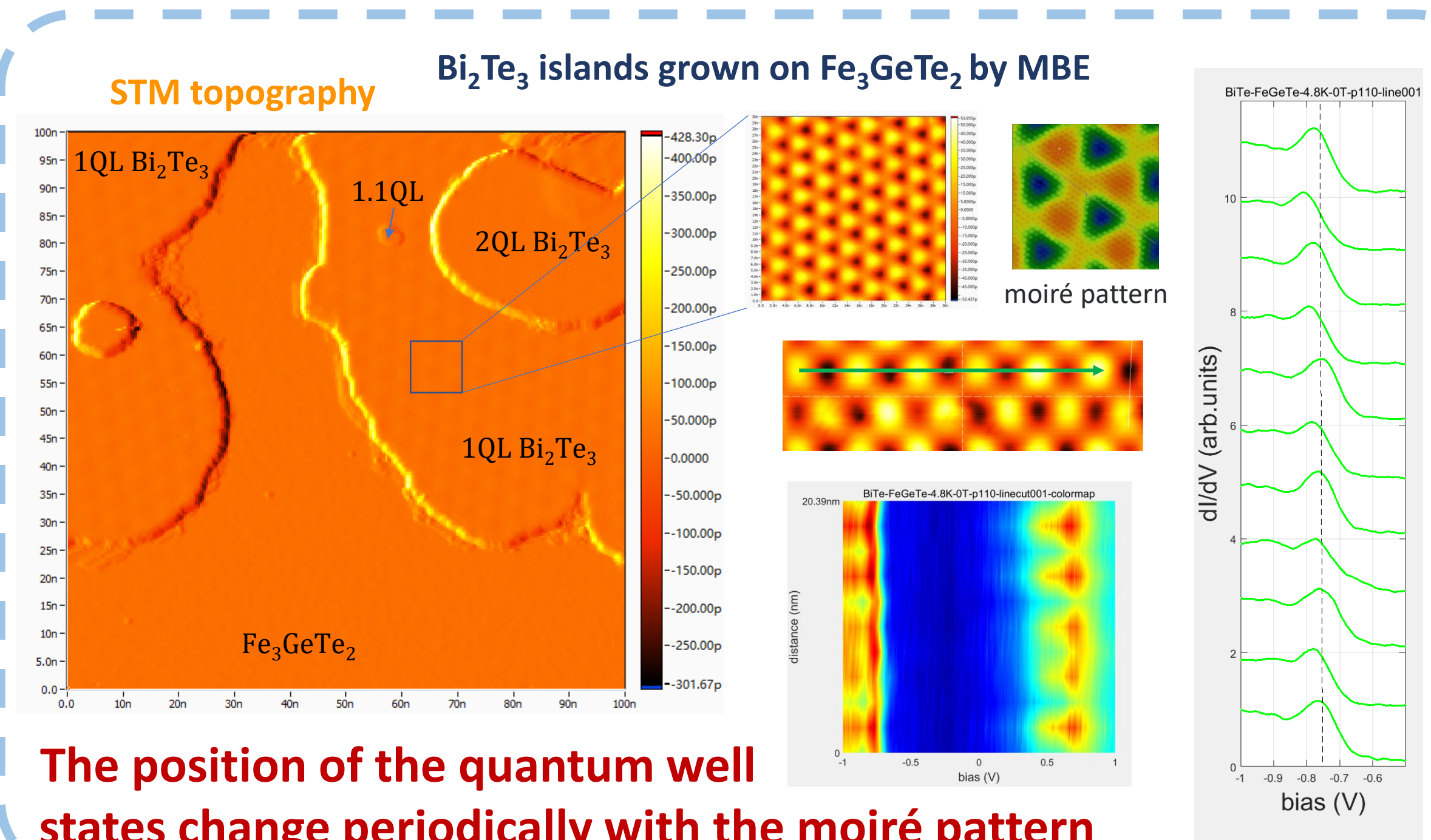


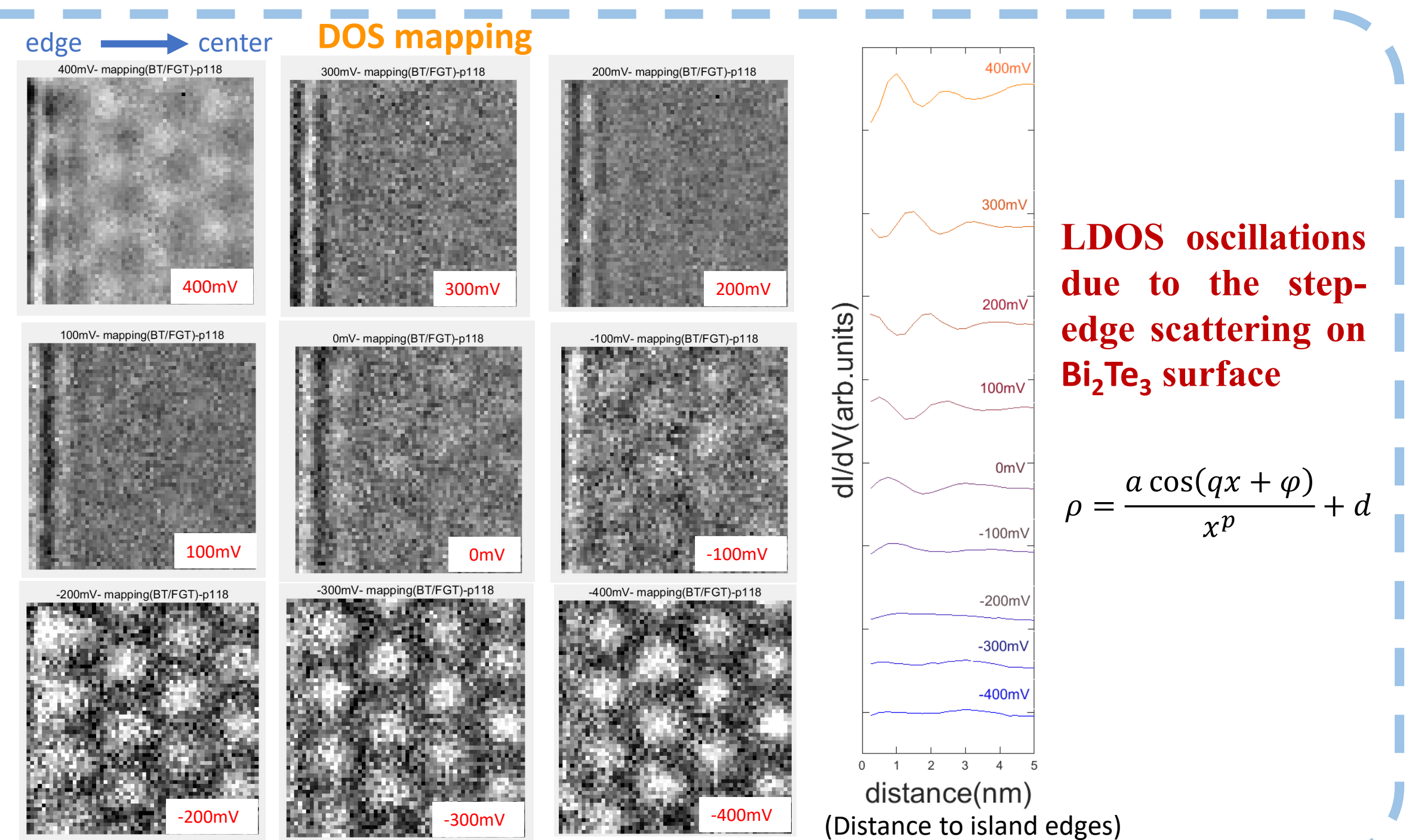
## Introduction: Why TI/FM



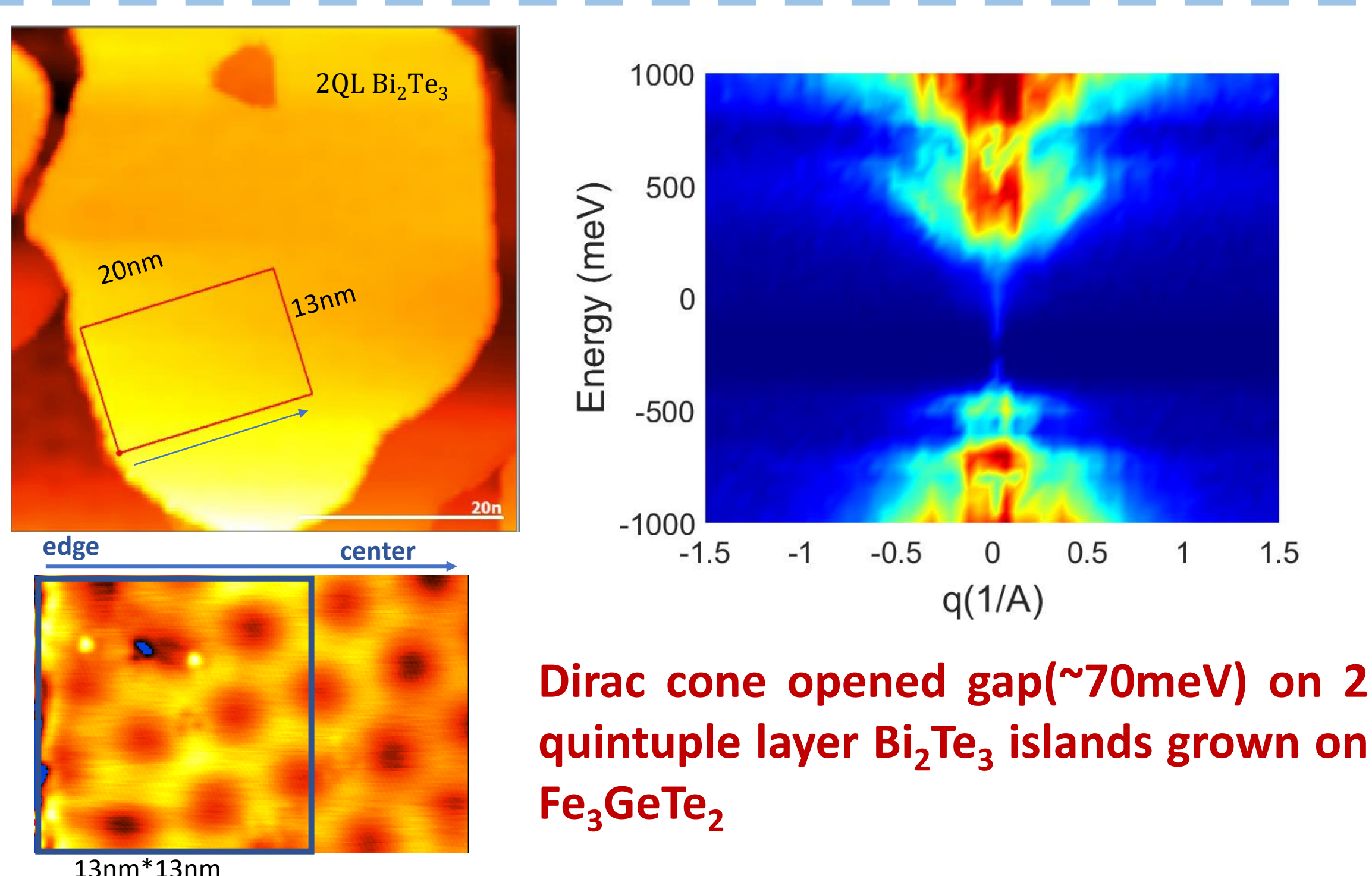
## moiré pattern of $\text{Bi}_2\text{Te}_3/\text{Fe}_3\text{GeTe}_2$



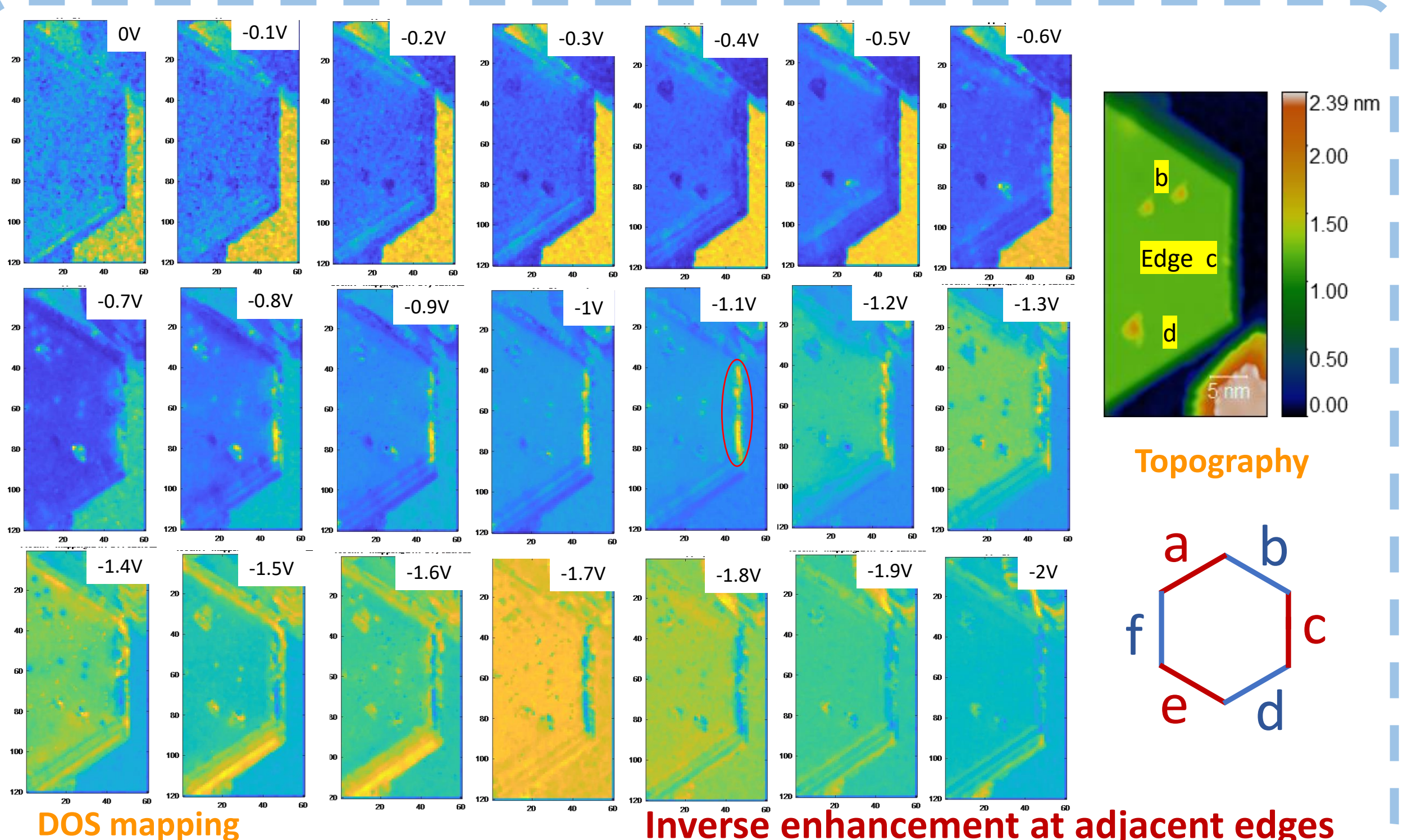
## Standing waves by $\text{Bi}_2\text{Te}_3$ step edge



## Surface states on $\text{Bi}_2\text{Te}_3/\text{Fe}_3\text{GeTe}_2$



## DOS enhancement at $\text{Bi}_2\text{Te}_3$ edges



## Summary

1. Moiré pattern of  $\text{Bi}_2\text{Te}_3/\text{Fe}_3\text{GeTe}_2$  modulated the quantum well state of topological insulator;
2. Dirac cone of 2 QL  $\text{Bi}_2\text{Te}_3$  islands which was grown on 2D van der Waals Ferromagnet  $\text{Fe}_3\text{GeTe}_2$  opened gap;
3. The edge states of  $\text{Bi}_2\text{Te}_3$  islands on  $\text{Fe}_3\text{GeTe}_2$  was inverse-phase enhanced at the adjacent edge.

## References

1. *Science*, 329, 61(2010)
2. *Nature Physics*, 8(8), 616(2012)
3. *Science*, 340, 6129(2013)
4. *Nature*, 563, 7729(2018)
5. *Nature Communications*, 11, 3860 (2020)
6. *ACS Nano*, 14, 10045(2020)
7. *Advanced Materials*, 34, 2106172(2022)