

Edge states and domain walls in prospect topological matters

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In this talk, we discuss results of local conductivity investigation on edge states and domain walls in a number of topological materials: i) unusual metallic domain walls in magnetic insulator Nd₂Ir₂O₇[1]; ii) quantum phase transitions in quantum anomalous system of delta doped Cr/(Bi,Sb)₂Te₃[2]; and iii) quantum spin Hall state in 1T' WTe₂[3]. Measurements from microwave impedance microscopy [4-6], angle-resolved photoemission and scanning tunneling spectroscopy will be discussed.

References

- [1] E.Y. Ma et al., Science 350, 538-541 (2015)
- [2] M. Allen et al., submitted
- [3] S.J. Tang et al., Nature Physics (2017)
- [4] K. Lai et al., Science 329, 190 (2010)
- [5] K. Lai et al., Phys. Rev. Lett., 107, 176809 (2011)
- [6] E. Y. Ma et al., Nature Comm., 6, 7252 (2015)