

Linking surface with bulk in layered transition metal oxides

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In this talk I will describe the first results from a collaborative programme of research between my group and those of ZX Shen at Stanford and A. Damascelli at the University of British Columbia. We contend that the remarkable improvements in resolution of modern angle resolved photoemission spectroscopy (ARPES) now enables a joint programme of research on layered many-body metals in which bulk measurements such as quantum oscillations are compared, directly and quantitatively, with ARPES on cleaved off-cuts of the same crystals. I will illustrate the progress that has been made with results from La-doped Sr_2RuO_4 , $\text{Ca}_3\text{Ru}_2\text{O}_7$ and Sr_2RhO_4 . Co-authors and collaborators of each sub-project will be referenced during the talk.