

Introduction

electron-doped cuprates. Different crystal structure than hole-doped and all need annealing. (give examples, NCCO prototype)

effect of annealing? introduce chemistry papers about annealing.

hole-doped: magnetism crucial relation SC. But effect of annealing on magnetism lacking. Based on PLCCO Some question remain regarding spin gap / resonance etc.

Thus, here we directly probe. Same template.

Experimental

Synthesis + annealing

Susceptibility

AN₂O + ref to SM

Results

fig 1: crystal structure + susceptibility

fig 2: S vs ω AG/SC \rightarrow Ansto + raw in SM

fig 3: S vs T AG/SC \rightarrow Ansto + raw in SM

fig 4: "resonance" (spectral weight gain)

Discussion

1) Sample quality statement. Comparing our sample homogeneity. Comparing AN₂O with IN₂O. Comparing to literature NCCO. goal: proof correctness of study, AG sample looks fine.

2) Put our study in context with PLCCO. PLCCO and NCCO are not as different as previously thought. Both close gap, it just happens to be zero in PLCCO.

3) Explanation / proposition: removing impurities by annealing reduces suppression of low-energy spectral weight, allowing for spin-pairing and hence SC. Connect to chemistry and

4) Comment on the resonance (keep it gentle) SrCuO_2 similar.

Conclusion

Summary