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【621】A Different Route to Unconventional Superconductivity: New Spectroscopy on Bismuth Oxides

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Like parent compounds of other unconventional and/or high-T_c superconductor families, $BaBiO_3$ is an unexpected insulator that becomes superconducting (> 30 K) when doped. But bismuth oxides also offer an interesting contrast to other HTSCs, as they have no magnetic order and very weak electron correlations. I will summarize our efforts to revisit these decades-old materials with modern x-ray spectroscopies, ARPES and RIXS, performed *in situ* on thin films. The investigations give new insights into the nature of the parent state, as well as how the electronic structure and bosonic coupling evolve with doping. We also demonstrate tuning the atomic structure by thin film engineering, which opens new paths for exploration.

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