

Abstract Submitted  
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**High- $T_c$  superconductivity does not originate in cuprate-planes.**<sup>1</sup>

JOHN D. DOW, Arizona State U. —  $\text{CuO}_2$  planes are not needed for high- $T_c$  superconductivity, as demonstrated by  $\text{Sr}_2\text{YRuO}_6$  and  $\text{Ba}_2\text{YRuO}_6$ , weakly doped on Ru sites with Cu, with onset  $T_c$ 's of 49K and 93K, but no cuprate-planes.  $\text{Gd}_{2-z}\text{Ce}_z\text{Sr}_2\text{Cu}_2\text{RuO}_{10}$  and  $\text{GdSr}_2\text{Cu}_2\text{RuO}_8$  do not superconduct in their cuprate-planes, which are magnetic, but in their SrO layers (with onset  $T_c \approx 45\text{K}$ ). High-temperature superconductivity resides in SrO, BaO, or interstitial oxygen regions, not in cuprate-planes. In  $\text{YBa}_2\text{Cu}_3\text{O}_7$ , Harshman *et al.* [1], using muon spectroscopy, found *s*-wave character, not *d*-wave character (to better than one percent) which measures the *superconducting* layers. This contradicts scanning tunneling microscopy and photoemission, which claim *d*-wave behavior after measuring *near-surface* layers (which often do not superconduct). High-temperature superconductivity originates in the BaO, SrO, or interstitial oxygen regions, not in the cuprate planes. [1] D. R. Harshman, *et al.*, Phys. Rev. **B 69**, 174505 (2004).

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