

Abstract Submitted
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High- T_c superconductivity originates in BaO or similar planes, not in cuprate-planes. JOHN D. DOW, Arizona State University — CuO_2 planes are not needed for high- T_c superconductivity, as demonstrated by Sr_2YRuO_6 and Ba_2YRuO_6 , weakly doped on Ru sites with Cu but having *no cuprate-planes*. These materials have onsets of superconductivity at 49K and 93K, respectively. We have shown that the related Cu-Ru materials $\text{Gd}_{2-z}\text{Ce}_z\text{Sr}_2\text{Cu}_2\text{RuO}_{10}$ 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 $T_c \approx 45\text{K}$) [1]. The claims that the cuprate-planes superconduct are based on a one-point unconfirmed jump in the Bell Labs data that was supposedly confirmed by Jorgensen [2], although *Jorgensen's data actually contradict the Bell datum*. In all the materials we have studied, and even in $\text{YBa}_2\text{Cu}_3\text{O}_7$, the superconductivity occurs in the bulk in layers that do not contain Cu, namely *in BaO layers of $\text{YBa}_2\text{Cu}_3\text{O}_7$* , which have *s-wave* character, not *d-wave* character [3].

[1] J. D. Dow *et al.*, J. Vac. Sci. Technol. **B 24**, 1977 (2006).

[2] J. D. Jorgensen, Phys. Today, 34 (**June**, 1991).

[3] D. R. Harshman *et al.*, Phys. Rev. **B 69**, 174505 (2004).

John D. Dow
Arizona State University

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