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## **An explanation for the rise in $T_c$ in the Tl- and Bi-based high temperature superconductors**

**S.M. Bose**

Department of Physics and Atmospheric Science  
Drexel University, Philadelphia, Pennsylvania 19104

and

**P. Longe**

Institut de Physique, B5  
Universite' de Liege, Sart-Tilman, B-4000 Liege, Belgium

Using the plasmon exchange model for the high  $T_c$  superconductor, we show that the  $T_c$  rises with an increase in the number of CuO layers per unit cell, which is in agreement with recent observations in the Tl- and Bi-based compounds. Our calculation also suggests that the sample will become superconducting in successive stages and that there is a saturation effect, i.e. that  $T_c$  cannot be raised indefinitely by increasing the number of CuO layers.