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On April 13, high temperature superconductors were produced by the Physics Department at The Chinese University of Hong Kong. The chemical formula of this single phase oxide is $YBa_2Cu_3O_x$. The midpoint transition temperature was measured to be about 97K (on absolute temperature scale) or equivalently -176°C. Below this temperature, the material is in the superconducting state with zero electrical resistance and repelling magnetic field. These samples are of good quality equivalent to the best in the world.

These superconductors have transition temperature higher than the boiling point of liquid nitrogen (about 77K). Liquid nitrogen can be handled easily and is much cheaper than liquid helium which is a must for conventional superconductors. Because of these outstanding features, the high temperature superconductors will receive wide range of applications such as the magnetic levitation of high speed train and the reduction of unnecessary loss in the power transmission lines. The Physics Department at Chinese University will continue to keep up with the development.

To increase the onset transition temperature, multiphase oxides are now being studied at the Physics Department. These multiphase Y-Ba-Cu-O high temperature superconductors were produced by scientists in the United States and People's Republic of China at the end of February. After that, many new superconductors of similar composition containing rare-earth oxides have also been found using almost the same method. The Physics Department at Chinese University has now mastered the technique.

This work was done by Dr Hong-Kuen Wong and graduate students Mr Chung-Wo Ong and Yuk-Cheung Fung.

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