

STUDY OF BEHAVIOUR AND NATURE OF DOPING HOLES IN UNDER DOPED AND OVERDOPED REGIMES CUPRATE PEROVSKITES

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ABSTRACT

After more than 15 years of intense research since the discovery of high-temperature superconductivity [1], many interesting physical phenomena unique to the cuprate superconductors are better understood, and various applications have been realized. However, the underlying mechanism for high-temperature superconductivity remains elusive, largely due to the complication of numerous competing orders in the ground state of the cuprates. We review some of the most important physics issues and recent experimental developments associated with these strongly correlated electronic systems, and discuss current understanding and possible future research direction.

KEYWORDS: Cuprate Superconductors, High, Temperature Superconductivity