



INSTITUTE COLLOQUIUM

INDIAN INSTITUTE OF SCIENCE
BANGALORE

PROFESSOR AKHIL R CHAKRAVARTY
DEPARTMENT OF INORGANIC & PHYSICAL CHEMISTRY

will deliver a lecture

on

COPPER-DIOXYGEN CHEMISTRY AND CATALYSIS

on Tuesday, the 30th January 2001

at 4.00 PM in the Faculty Hall

The Director

will preside.

All are cordially invited.

Coffee : 5.00 PM
Reception Hall

Prof. S S KRISHNAMURTHY
Convener

ABSTRACT

Copper ions play an important role in enzymatic catalysis. The various ways in which copper is bound to the copper-binding centers in proteins or enzymes are manifested in their diverse chemical reactivity. Probe into the role of copper in the activation of dioxygen molecule has led to the development of the chemistry of low molecular-weight copper complexes that are "models" for the active sites of copper containing metalloproteins. Copper ions also play an important role in nephrolithiasis (kidney stone formation). Some of these redox-active copper complexes show nuclease activity through the formation of activated oxygen species. Such complexes are useful towards probing both structural and functional aspects of nucleic acid chemistry. The talk will focus on current developments in this area.