CERTIFICATE

It is certified that the work contained in the thesis titled "Catalytic Properties of Nanomaterials Based on Ag, Cu and Their Bimetallics" by "Alkadevi Verma" has been carried out under our supervision and this work has not been submitted elsewhere for a degree.

It is further certified that the student has fulfilled all the requirements of Comprehensive, Candidacy and SOTA.

> Dr. Indrajit Sinha (Supervisor)

Prof. R. K. Mandal (Co-Supervisor)

Department of Chemistry Indian Institute of Technology (Banaras Hindu University) Department of Metallurgical Engineering Indian Institute of Technology (Banaras Hindu University)

COPYRIGHT TRANSFER CERTIFICATE

Title of the Thesis: "Catalytic Properties of Nanomaterials Based on Ag, Cu and Their Bimetallics"

Name of the Student: Alkadevi Verma

COPYRIGHT TRANSFER

The undersigned hereby assigns to the Indian Institute of Technology (Banaras Hindu University)Varanasi all rights under copyright that may exist in and for the above thesis submittedfor the award of the "*PhD Degree*".

Date:

Place:

Alkadevi Verma

Note: However, the author may reproduce or authorize others to reproduce material extracted verbatim from the thesis or derivative of the thesis for author's personal use provided that the source and the Institute's copyright notice are indicated.