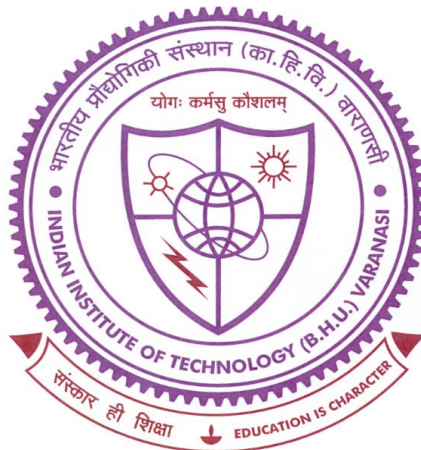


A Sustainable Nanomaterial Synthesis Approach for
Application in Dye Degradation and Bacterial Growth
Inhibition



**Thesis submitted in partial fulfillment
for the Award of Degree**

DOCTOR OF PHILOSOPHY

by

Ravi Saini

**DEPARTMENT OF CHEMICAL ENGINEERING &
TECHNOLOGY**

INDIAN INSTITUTE OF TECHNOLOGY

(BANARAS HINDU UNIVERSITY)

VARANASI-221005

Roll. No.: 19041018

Year: 2024