



तेजपुर विश्वविद्यालय

(केंद्रीय विश्वविद्यालय)

नपाम, तेजपुर - 784 028, असम, भारत

TEZPUR UNIVERSITY

(A Central University)


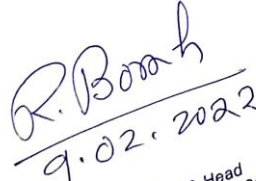
Napam, Tezpur - 784 028, Assam, India

Department of Chemical Sciences

A REPORT ON

Collaboration with CSIR-NEIST

1. Name of the Collaborative Activity: Collaborative work with Dr. M. R. Das, CSIR-NEIST Jorhat
2. Nature of Activity: R&D
3. Name of the Collaborating Agency/ Individual with affiliation, and contact details: Dr. M. R. Das, CSIR-NEIST and Tezpur University
4. Summary of collaboration: This work describes a practical methodology for C-C bond formation reactions with the aid of biogenic palladium nanoparticles, which are synthesized by using phytochemicals extracted from two common plant species. Comparative studies have been done on the activity of two plant species (*Ocimum sanctum* and *Aloe vera*) in generation of palladium nanoparticles via ex situ and in situ methods. The structural and morphological characteristics of the nanoparticles are examined by UV/visible spectroscopy, powder Xray diffraction, X-ray photoelectron spectroscopy, Fourier transform infrared spectroscopy, and transmission electron microscopy analyses. We have observed a significant influence of the substrates on the catalytic activity of the palladium nanoparticles in Sonogashira and Suzuki cross-coupling reactions.
Moreover synthesis Cu, Pd and Au base nano catalyst, their characterization and use in organic transformation reaction
5. List of year-wise activities under the collaboration:
Activity 2020-21
Development of Pd, Cu and Au based nano-catalyst for organic transformation reaction

Signature of Faculty	Signature and Seal of Head of Department/ Centre/ Cell
 Dr. Utpal Bora Associate Professor Department of Chemical Sciences Tezpur University, Napaam Dist - Sonitpur, Assam 784028 Name: Dr Utpal Bora Designation: Associate Professor	 Prof. & Head Department of Chemical Sciences TEZPUR UNIVERSITY Name: Professor Ruli Borah Designation: Professor & Head