

# Curriculum Vitae

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**DR. DIGANTA BARUAH, M.Sc., Ph. D.**

Assistant Professor

Department of Chemistry

Pandit Deendayal Upadhyaya Adarsha Mahavidyalaya

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## Personal Information

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Marital Status: Single

Nationality : Indian

Born : October 1, 1987

Place of Birth : Gohpur, Sonitpur, Assam, India

## Academic Qualifications

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- ✚ **2010:** B.Sc. in Chemistry, Biswanath College, Gauhati University, Guwahati, Assam
- ✚ **2012:** M.Sc. with specialization in Organic Chemistry, Gauhati University, Guwahati, Assam
- ✚ **2017:** Ph. D. in Chemistry, Gauhati University, Guwahati, Assam.

## Other Qualification

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- ✚ Qualified CSIR-NET Examination in Chemical Sciences in December 2012, (All India Rank-40)

## Previous Appointments:

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- ✚ Assistant Professor (Contractual) in Chemistry at Biswanath College, Biswanath Chariali, Sonitpur District, Assam, India.
- ✚ Guest/part time faculty of Chemistry Department in Barak Valley engineering College (BVEC), 5<sup>th</sup> Govt. Engineering College of Assam, Karimganj District.
- ✚ Project Fellow in Synthetic Organic Chemistry, CSIR-NEIST, Jorhat, Assam.

## Research Area:

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- ✚ Synthetic Organic chemistry
- ✚ Nanochemistry & Nanotechnology
- ✚ Catalysis
- ✚ Drugs, Lubricants and Natural Products
- ✚ Green chemistry

## Publications

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### Articles in International Journals having ISSN No. (09 nos.)

1. "Deprotection of oximes, imines, and azines to the corresponding carbonyls using Cu-nanoparticles on cellulose template as green reusable catalyst" **D. Baruah**, U. P. Saikia, P. Pahari\*, D. K. Dutta and D. Konwar\*; *RSC Advances*, **2014**, 4, 59338. (IF: 3.8)
2. "Cu-nanoparticles on cellulose/H<sub>2</sub>O-CH<sub>3</sub>CN/microwave: a green system for the selective oxidation of alcohols to aldehydes" **D. Baruah\***, U. P. Saikia, P. Pahari and D. Konwar\*; *Tetrahedron Letters*, **2015**, 56, 254. (IF: 2.379)
3. "Synthesis of (E)-nitroolefins and substituted nitrobenzenes via decarboxylative nitration using cellulose supported copper nanoparticles" **D. Baruah\***, P. Pahari and D. Konwar\*; *Tetrahedron Letters*, **2015**, 56, 2418. (IF: 2.379)
4. "Cellulose supported copper nanoparticles as a versatile and efficient catalyst for the protodecarboxylation and oxidative decarboxylation of aromatic acids under microwave heating" **D. Baruah** and D. Konwar\*; *Catalysis Communications*, **2015**, 69, 68. (IF: 3.699)
5. "Biogenic synthesis of cellulose supported Pd(0) nanoparticles using hearth wood extract of Artocarpus lakoocha Roxb - A green, efficient and versatile catalyst for Suzuki and Heck coupling in water under microwave heating" **D. Baruah**, R. N. Das, S. Hazarika and D. Konwar\*; *Catalysis Communications*, **2015**, 72, 73. (IF: 3.699)
6. "Facile green synthesis of 16-Dehydropregnenolone acetate (16-DPA) from diosgenin" **D. Baruah**, R. N. Das and D. Konwar\*; *Synthetic Communications*, **2016**, VOL. 46, NO. 1, 79. (IF: 1.065)
7. "Bi (NO<sub>3</sub>)<sub>3</sub>.5H<sub>2</sub>O and cellulose mediated Cu-NPs- A highly efficient and novel catalytic system for aerobic oxidation of alcohols to carbonyls and synthesis of DFF from HMF" **Diganta Baruah\***, F. L. Hussain, M. Suri, U. P. Saikia, P. Sengupta, D. K. Dutta and D. Konwar\*, *Catalysis Communications*, **2016**, 77, 9. (IF: 3.699)
8. "A facile microwave assisted synthesis of spiro-1, 3-oxazines from N-(2-(cyclohex-1-en-1-yl)ethyl)amides" U. P. Saikia, **D. Baruah**, P. Pahari\*, M. J. Borah, A. Goswami and D. Konwar\*, *Tetrahedron Letters*, **2014**, 55, 4328. (IF: 2.379)
9. Green Organocatalytic Process for Production of Methyl Ricinoleate from Castor Oil (*Revision in Sustainable Production and Consumption*), **D. Baruah\***, R. N. Das, A. Goswami and D. Konwar\*

### Poster Presentations in National/International Seminars/Conferences (07 nos.)

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1. Copper nano particles on cellulose template: An efficient catalyst for the ligand free decarboxylation of aromatic carboxylic acids, **Diganta Baruah**, Dilip Konwar,

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- 8<sup>th</sup> Mid-Year CRSI National Symposium in Chemistry**, 10-12 July 2014 in CSIR-North East Institute of Science and Technology, Jorhat, Assam, India.
2. Cellulose supported copper nanoparticles: A single catalytic system for various organic transformation, **Diganta Baruah\***, Pallab Pahari and Dilip Konwar, **13<sup>th</sup> EURASIA Conference on Chemical sciences**, 14-18 December 2014 in Indian institute of Science, Bangalore, India.
  3. Fabrication of metal nanoparticles (NPs) on cellulose template and their catalytic activity towards Heck-Suzuki coupling and *Ips*o-Nitration of cinnamic acids, **Diganta Baruah\***, Dipak Kumar Dutta and Dilip Konwar\*, **New Frontiers in Chemistry –From Fundamental to Applications (NFCFA- 2015)** at BITS Pilani, Goa Campus, Goa, India during 18-19<sup>th</sup> December 2015.
  4. Green Organocatalytic Process for Production of Methyl Ricinoleate from Castor Oil, **Diganta Baruah**, Ram Nath Das, Amrit Goswami and Dilip Konwar\*, **MRSI North East Symposium on Advanced Materials for Sustainable Applications**, 18-20 February 2016 in CSIR-North East Institute of Science and Technology, Jorhat, Assam, India.
  5. Biogenic Synthesis of Pd (0) NPs @Cellulose and Their Efficient Catalytic Activity Towards Heck, Suzuki and Sonogashira Coupling in Water, **Diganta Baruah** and Dilip Konwar, **Natural Products: Prospects & Perspectives, NPPP-2016**, 21-22 March, 2016 in CSIR-North East Institute of Science and Technology, Jorhat, Assam, India.
  6. Preparation of value added products from renewable resources, M. J. Borah, U. P. Saikia, **D. Baruah**, P. Pahari,\* R. N. Das, A. Goswami\* and D. Konwar, **8<sup>th</sup> Mid-Year CRSI National Symposium in Chemistry**, 10-12<sup>th</sup> July 2014, CSIR-North East Institute of Science and Technology, Jorhat, Assam, India.
  7. A facile microwave assisted synthesis of spiro-1, 3-oxazines from N-(2-(cyclohex-1-en-1-yl) ethyl) amides, U. P. Saikia, **D. Baruah**, P. Pahari,\* M. J. Borah, R. N. Das, A. Goswami\* and D. Konwar\*, **8<sup>th</sup> Mid-Year CRSI National Symposium in Chemistry**, 10-12<sup>th</sup> July 2014, CSIR-North East Institute of Science and Technology, Jorhat, Assam, India.

### Oral Presentations (05 nos.)

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- 1) Presented on the topic entitled “Metal Nanoparticles Anchored on Cellulose Template: A Green Catalyst in Organic Synthesis” in the 2<sup>nd</sup> one day lecture series, held in Dr. J.N. Baruah Auditorium, CSIR-NEIST, Jorhat, Assam, India on dated 26<sup>th</sup> June 2015.
- 2) Presented on the topic entitled “Cellulose Supported Metal Nanoparticles as a Green Heterogeneous Catalyst in Organic Synthesis” in the National Seminar on Chemistry in Interdisciplinary Research (NSCIR-2017) during 16-17<sup>th</sup> March 2017 in Department of Chemistry, Nagaland University, Lumami – 798627. **Awarded Best oral presentation.**

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- 3) Presented on the topic entitled "Isolation and Characterization of Oxyresveratrol-A Potent therapeutic agent in human health from hearth wood extract of *Artocarpus lakoocha* Roxb" in the UGC sponsored state level conference on Herbal Medicine-A Rational Approach in Health Care System with Special Reference to North East India on 19<sup>th</sup> June 2017 organized by Department of Botany, Dhing College, Nagaon, assam.
- 4) Presented on the topic entitled "Impact of Castor oil (*Ricinus communis*) in industrial production of different value added products" in the UGC sponsored state level conference on Prospects of Applied Ethnobotany in North Eastern Region of India on 20<sup>th</sup> June 2017 organized by Department of Botany, Dhing College, Nagaon, assam.
- 5) Presented on the topic entitled "Xenobiotics: The Synthetic Colour Additives used in Food Industry" in the UGC sponsored national seminar on Harmony with Nature in the context of Chemistry, Environmental Issues and Challenges on 22-23 September 2017 organized by Department of Chemistry, Pub Kamrup College, Baihata Chariali, assam.

### Book Chapter in Research Book having ISBN No:

- ❖ Name of the Book: **Basics of Nanochemistry**, Ashok Publication, Panbazar, Guwahati-781001, ISBN No: 978-93-84095-73-4

### Professional Skill

- ) Basic computer applications, MS-word, Power Point, Excel, ability to write scientific papers/patents, laboratory reports etc.

### Instruments Handling & Laboratory Experiences

- ✚ I have acquired lots of knowledge on how to operate different modern spectroscopic instruments and techniques like NMR, MASS-Spectrometer, UV-VISIBLE Spectrometer, FT-IR Spectrometer, Fluorescence Spectrometer, Microwave, Polarimeter, AAS, XRD, TEM, SEM, Chromatography, HPTLC etc. for qualitative and quantitative analysis of organic compounds and metal nanoparticles.
- ✚ I am well versed with different chemicals, disposals and other related things required for working in chemistry laboratory.

### Languages Known

- ) English (Read, Write and Speak)
- ) Hindi (Read, Write and Speak)
- ) Assamese (Read, Write and Speak)

I hereby declare that all the above mentioned details are true.



Date: 27-12-2017

(Diganta Baruah)