

Biodata



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Nationality : Indian
Date of Birth : 2nd October, 1965.
Marital Status : Married to Dr. Barnali Das Deka (Ph.D.) ,
One Daughter: Ms. Riddhi S.Deka
Doctoral Degree : Ph.D. in Energy, 2004, Tezpur University, Assam, India
Principal Investigator : Biomass Conversion Laboratory, Department of Energy,
Tezpur University, Assam, India.

Academic Position:

Professor, 29th July, 2011-till date : Department of Energy, Tezpur University
Associate Professor, 2006-2011 : Department of Energy, Tezpur University
Senior Lecturer, 2001-2006 : Department of Energy, Tezpur University
Lecturer, 1995-2001 : joined Tezpur University as Lecturer on 10.05.1995 in the
Centre for Non-conventional Energy Technology presently
Department of Energy, Tezpur University.
Training Organizer, 1993-1994 : Regional Biogas Development and Training Centre for
North Eastern Region at Assam Agricultural
University, Jorhat, Assam sponsored by Ministry of Non-
conventional Energy Sources, New Delhi. Imparting

training at Tripura, Sikkim, Arunachal Pradesh & entire Assam on Construction & Maintenance of Biogas Plants.

Subjects Teaching

Under graduate, Post graduate and Ph.D. level: Energy, Ecology and Environment, Biomass Energy Utilization, Fuel combustion and Technology, Energy Economics and Planning, Advanced Bio-Energy, Bio-energy and conversion systems, Energy and Environment, Energy, Environment and Sustainability, Waste to Energy.

Teaching and Research experience : 24 years

Research Area of Interest: Biofuel and Bioenergy systems, Development of Renewable catalyst, Catalytic transformation of biomass into biofuel and chemicals, Biomass valorization, Modern Biofuel and Bio-refinery

One of the challenges in the current technology generation in biofuel production is derived from their reliance on the use of hazardous and corrosive chemicals such as NaOH, KOH, HCl, H₂SO₄ etc. as catalysts or during purification steps. Owing to the advantages of heterogeneous catalysts in terms of separation and reusability over the traditionally used homogeneous catalyst, the research has now been focused on the use of heterogeneous catalysts in recent years. In order to make the process fully “green”, researchers are trying to prepare catalysts from renewable sources such as biomass. Within this concept, bio-based CaO and Carbon based catalysts were recently introduced. We have extensively worked with both types of catalysts for the last few years. Ba and Li were also doped with bio-based CaO derived from waste shells of *Turbonilla striatula* and egg shell derived CaO respectively. Biodiesel yield of 93.3% was achieved when transesterification was carried out at 65±5 °C by employing 3.0 wt.% of solid oxide catalyst derived from waste shell of *Turbonilla striatula* and 9:1 methanol to oil molar ratio. In an another experiment, Ba doped CaO derived from waste shells of *Turbonilla striatula* employed against transesterification of waste cooking oi. >98% conversion to bidoesl with 6:1 methanol to oil molar ratio, 3 h of reaction time, 1.0 wt% catalyst amount and 650C reaction time were acheved. A series of Li doped egg shell derived CaO was prepared for biodiesel production from Messura ferra oil . Maximum conversion of 94% was observed with 5% of catalyst amount and 2% of Li loading was observed to be optimum for better conversions.

In preparation of Carbon based solid acid catalyst, activated carbon produced from oil-cake waste was sulphonated by 4-Benzenediazoniumsulfonate to increase the acidity and the catalyst was employed against esterification/transesterification reactions for converting acid oils extracted from non-edible seeds to biodiesel. In another experiment, multifunctional mesoporous solid acids were prepared by the sulfonation of carbonized de-oiled seedwaste cake, a solid waste from biodiesel production. The catalyst was employed against two reactions of interest in biomass conversion: cellulose saccharification (glucose yield 35–53%) and fatty acid esterification (conversion upto 97%) outperforming H₂SO₄, conventional solid acids (zeolites, ion-exchange resins etc.) as well as sulfonated carbons reported earlier works. This led us to conclude that the applicability of the basic bio based-CaO is until so far restricted to trans-esterification only. The carbon based catalysts are more versatile in this

sense due to the following points; (i) they can be made from any carbon source (agro-industrial residues, post crop harvest residues etc.)(ii) Their physicochemical and structural properties can be easily tuned by altering and fine-tuning the preparation conditions and (ii) they can be easily modified with metals, acids or bases through impregnation or functionalization aiming for various catalytic applications.

With a view to value addition to glycerol produced as by-product during biodiesel production process, 100% triacetin selectivity was achieved in glycerol acetylation with acetic anhydride in 20–50 min in the presence of catalytic amounts of mesoporous sulfonated carbons and zeolite H-Y. Experimental results obtained over a range of solid acids with varying structure and acidic properties indicate that selectivity to triacetin was influenced mainly by the pore structure and catalyst surface acid site density. The catalytic potential of sulfonated carbons for production of high concentration monoglycerides was confirmed for producing commercially important monoglycerides with excellent selectivity (70–80 %), at fatty acid conversion levels of 80–95 %.

In an another experiment, biobased materials were investigated to use as additives for oxidative stability enhancement of biodiesel. Antioxidant activity of ginger extract was studied as a method to increase oxidation stability of Pongamia pinnata biodiesel. The results demonstrated that a minimum doping of 250 ppm of ginger extract in pongamia biodiesel has met both American (ASTM D-6751) and European(ENE14214) standard specifications for biodiesel oxidation stability and can be used as antioxidant for biodiesel.

Recently, we are working on biodiesel production from microalgae. Microalgae production, separation, drying etc consume lot of energy. To overcome this problem, a noble effort has been given in our laboratory, to use Robotic Algal harvest (RAH) systems to harvest the microalgae from water body using underwater robot. Moreover, process is under way to develop a Photo Bioreactor using low cost materials for rapid growth of microalgae biomass in a closed environment with short period of time. An integrated biorefinery approach is also under development from the algal biomass.

Country visited with scientific purpose : Brazil, Hungary, Spain, Finland, USA , Sweden,

Country visited (Personal) : Austria (Vienna), Malaysia and Singapore, Dubai (UAE)

Country visited	Purpose of visit
Brazil	Visiting Scientist, Federal University of Rio De Janeiro, Brazil w.e.f. 6 th June, 2018-8 July,2018 under the project provision of International Collaborative project entitled “Integrated Biorefinery Approach towards production of sustainable fuel and chemicals from Algal biobased systems” sponsored by DBT , India and MCTI-CNPq-Brazil.
Hungary	Visiting Scientist, Institute of Materials and Environmental Chemistry, Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest, under DST sponsored Indo-Hungary Collaborative Research Project during June 12-20, 2017.
Spain	One of the speakers in the International Congress and Expo on Biofuels & Bioenergy held in Valencia, Spain during August 25-27,2015 and delivered a talk on “Bio-inspired heterogeneous catalyst for sustainable biofuel production”.

Finland	Visiting Scientist, Abo Akademi University, Finland during 8 th August-14 th August, 2011 under DST sponsored Indo-Finnish project on Green Chemistry.
USA	Participated in a Study Tour conducted by Ministry of Home Affairs, Govt. of India sponsored by USAID, USA that allowed for interactions between Government of India (GoI) officials and their U.S. Government counterparts. The Study Tour provided a professional and technical study of disaster management as practiced in the U.S. The Study Tour was conducted 1-14 October, 2006.
Sweden	Attended 'World Bioenergy Conference 2006' held in Jonkoping Sweden during 30 th May to 1 st June, 2006 organized by the Swedish Bioenergy Association & Elmia. 2006 and presented paper entitled "Biofuel-the present consumption and future need: the case for some North-East Indian Villages."

Scientific Collaboration (India and Abroad)

- Institute of Materials and Environmental Chemistry, Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest (Contact: Professor Valyon József).
- Department of Chemical Engineering, Federal University of Rio de Janeiro, Brazil (Contact: Prof. Donato Aranda).
- Process Chemistry Centre, Department of Chemical Engineering, Åbo Akademi University, Finland (Contact: Prof. Jyri-Pekka Mikkola, Dr. Päivi Mäki-Arvel, Dr. Narendra Kumar)
- Department of Chemical Engineering, Umeå University, Sweden (Contact: Prof. Jyri-Pekka Mikkola).
- Department of Chemical Engineering, Indian Institute of Technology Delhi, New Delhi, India (Contact: Prof. K K Pant)
- Department of Chemical Engineering , Indian Institute of Technology Guwahati, Assam, India (Contact: Prof. V.V. Goud)
- CSIR-North East Institute of Science and Technology, Jorhat, India (Contact; Dr. Dilip Datta)
- Department of Biotechnology, Gauhati University, Guwahati. (Contact; Prof. M C Kalita)

Research Supervision:

Ph.D	M. Tech.
Degree awarded-5 , Thesis submitted -01 Ongoing- 7	Completed-33, Ongoing-4

Research Grants:

- **International Joint Collaborative** Research Project of the Department of Science and Technology, Govt. of India and Hungary Academy of Science, Budapest on Biochemical and Biofuel production using Green Catalytic Processes. **Funding Agency:** DST, INDIA, **Sanctioned Amount:** Rs. 34.42 lakh, for 3 years (2016-19). **(PI)**
- **International Joint Collaborative** Research Project of the Department of Biotechnology and MCTI-CNPq, Brazil under Indo-Brazil Collaboration on Integrated Biorefinery Approach towards production of sustainable fuel and chemicals from Algal biobased systems. . **Funding Agency:** DBT, INDIA, **Sanctioned Amount:** Rs. 100.46 lakh, for 4 years (2016-19). **(PI)**
- **International Joint Collaborative** Research Project of the Department of Science & Technology, Govt. of India and Academy of Finland on Synthesis of platform bio-fuels from

Renewable sources using acid modified supported ionic liquid catalysts. **Funding Agency:** DST, INDIA, **Sanctioned Amount:** Rs. 34.61 lakh, for 3 years (2011-14). **(PI)**

- **University Grants Commission of India (UGC)** sponsored Major Research Project entitled Assessment and Analysis of the Plant oil feedstock available in North-East India for bio-diesel production. **Funding Agency:** UGC, INDIA **Sanctioned Amount:** Rs. 9.25 lakh, for 3 years (2011-14). **(PI)**.
- **Department of Science & Technology, Govt. of India** sponsored research project on Synthesis and characterization of some indigenous Tree seed based bio-diesel (ITSBD) available in Assam, North East India. **Funding Agency:** DST, INDIA **Sanctioned Amount:** Rs33.6 lakh for 2years (2013-15). **(Co-PI)**
- **PHE Department, Govt of Assam, sponsored Project** on ‘Quantity and type of wastes generated in a remote village of Sonitpur District of Assam – A micro level case study.’ **Funding Agency:** Govt. of Assam **Sanctioned Amount:** Rs. 0.05 lakh, for 1998-99. **(PI)**.
- **University Grants Commission of India (UGC)** sponsored Minor Research Project on *Study of the Fuelwood Characteristics of some Indigenous Fuelwood species of Assam.* **Funding Agency:** UGC, INDIA **Sanctioned Amount:** Rs. 1.5 lakh, for 1998-99. **(PI)**.

Publications (Referred Journal)

2020

1. Gohain M, Laskar K, Phukon H, Bora U, Kalita D and Deka D. Towards sustainable biodiesel and chemical production: Multifunctional use of heterogeneous catalyst from littered *Tectona grandis* leaves. Waste Management, 102,212–221(2020).
2. Gohain M, Laskar K, Paul A, Daimary Niran, Maharana M, Goswami I K , Hazarika Anil , Bora U and **Deka D.** Carica papaya stem: A source of versatile heterogeneous catalyst for biodiesel production and C--C bond formation. Renewable Energy, 147, 541-555 (2020).

2019

1. Laskar K, Bhattacharjee P, i Gohain M, **Deka D** and Bora U. Application of bio-based green heterogeneous catalyst for the synthesis of arylidinemalononitriles. Sustainable Chemistry and Pharmacy, 14 (100181), 1-5 (2019).
2. Devi A, Das V K, Das V and **Deka D.** A green approach for enhancing oxidation stability including long storage periods of biodiesel via Thuja oreantalis L. as an antioxidant additive. Fuel, 253, 1264–1273 (2019).
3. Borah, M. J., Devi, A., Borah, R., and **Deka, D.** Synthesis and application of Co doped ZnO as heterogeneous nanocatalyst for biodiesel production from non-edible oil. Renewable Energy, 133, 512-519 (2019),
4. Borah, M.J. , Das, A. , Das, V., Bhuyan, N. and **Deka, D.** Transesterification of waste cooking oil for biodiesel production catalyzed by Zn substituted waste egg shell derived CaO nanocatalyst. Fuel, 242, 345-354. (2019).
5. Novodárszki, G., Valyon, J. , Illés, Á., Dóbbé, S., **Deka, D.** , Hancsók, J.and Mihályi, M.R. Heterogeneous hydroconversion of levulinic acid over silica-supported Ni catalyst. Reaction Kinetics, Mechanisms and Catalysis, 126 (2), 795-810 (2019).
6. Gohain, M. and **Deka, D.** Water Hyacinth Derived Mixed-Oxide Heterogeneous Catalyst for Biodiesel Production. (2019) 2nd International Conference on Energy, Power and Environment: Towards Smart Technology, ICEPE 2018, art. no. 8658926.

- Novodárszki, G. , Solt, H.E. , Valyon, J. , Lónyi, F. , Hancsók, J., **Deka, D.**, Tuba, R. and Mihályi, M.R. Selective hydroconversion of levulinic acid to γ -valerolactone or 2-methyltetrahydrofuran over silica-supported cobalt catalysts. *Catalysis Science and Technology*, 9 (9), 2291-2304 (2019).
- Bardhan, P., Gohain, M., Daimary, N. , Kishor, S., Chattopadhyay, P., Gupta, K., Chaliha, C. , Kalita, E., **Deka, D.** and Mandal, M. Microbial lipids from cellulolytic oleaginous fungus *Penicillium citrinum* PKB20 as a potential feedstock for biodiesel production. *Annals of Microbiology* (2019), Article in Press.

2018

- Borah, M. J., Devi, A., Saikia, R. A., and Deka, D. Biodiesel production from waste cooking oil catalyzed by in-situ decorated TiO₂ on reduced graphene oxide nanocomposite. *Energy*, 158, 881-889 (2018).
- Devi A, Das V K, Das V and **Deka D.** Fuel Quality Assessment of Biodiesels Produced through Alcoholysis from *Pongamia glabra*, *Mesua ferrea* and their blend: A novel yet cinch approach. *Materials Today: Proceedings*, 5, 23076–23082 (2018).
- Devi A, Das V K and **Deka D.** Evaluation of the effectiveness of potato peel extract as a natural antioxidant on biodiesel oxidation stability. *Industrial Crops & Products*, 123, 454–460(2018).
- Konwar, L.J., Boro, J. and **Deka, D.** Activated Carbon Supported CaO from Waste Shells as a Catalyst for Biodiesel Production. *Energy Sources, Part A: Recovery, Utilization and Environmental Effects*, 40 (6), 601-607 (2018).

2017

- Gohain M., Devi A. and **Deka D.** Musa balbisiana Colla peel as highly effective renewable heterogeneous base catalyst for biodiesel production. *Industrial Crops & Products*, 109, 8–18 (2017).
- Borah S, Bhattacharyya B, Deka J, Borah A, Devi A., **Deka D.**, Mishra S., Raidongia K. and Gogoi N. Enhanced catalytic activity and near room temperature gas sensing properties of SnO₂ nanoclusters@mesoporous Sn(IV) organophosphonate composite. *Dalton Trans.*, 46, 8664-8672 (2017).
- Novodárszki G., Onyestyák, G., Barthos, R., Wellisch, A. F., Thakur, A. J., **Deka, D.** & Valyon J. Guerbet alkylation of acetone by ethanol and reduction of product alkylate to alkane over tandem nickel/Mg, Al-hydrotalcite and nickel molybdate/c-alumina catalyst systems. *Reac Kinet Mech Cat*, 121, 69–81 (2017).
- Onyestyak G, Novodárszki G, Wellisch A F, Valyon J, Thakur A J and **Deka D.** Co and Ni catalysts loaded on typical well-ordered micro- and mesoporous supports for acetic acid reduction. *Reac. Kinet Mech Cat.*, 121 (1), 109–119 (2017).
- Onyestyak G, Novodárszki G, Wellisch A F, Valyon J, Thakur A J and **Deka D.** Guerbet self-coupling for ethanol valorization over activated carbon supported catalysts. *Reac Kinet Mech Cat.*, 121 (1), 31–41 (2017).
- Devi A, Das V K and **Deka D.** Ginger extract as a nature based robust additive and its influence on the oxidation stability of biodiesel synthesized from non-edible oil. *Fuel*, 187, 306–314 (2017).
- Chutia, S., Kakoty, N.M. and Deka, D. A review of underwater robotics, navigation, sensing techniques and applications. *ACM International Conference Proceeding Series*, Part F132085, art. no. 8, (2017).

2016

- Konwar L J, Mañki-Arvel P., Kumar N, Mikkola J-P, Sarma A K and **Deka D.** Selective esterification of fatty acids with glycerol to monoglycerides over –SO₃H functionalized carbon catalysts. *Reac Kinet Mech Cat* ,19, 121–138 (2016).
- Devi A, Das V and **Deka D.** Catalytic Transformation of Four Non-Edible Vegetable Oils into Biodiesel using Egg Shell (Cao) as A Catalyst and Assessment of Their Fuel Properties. *International Journal of Recent Development in Engineering and Technology*, 5 (8), 16-19 (2016).

- Sedai P, Kalita D and **Deka D**. Assessment of the fuel wood of India: A case study based on fuel characteristics of some indigenous species of Arunachal Pradesh. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 38 (7), 891-897 (2016).
- Bora P, Konwar LJ and **Deka D**. Microemulsion based hybrid biofuels using glycerol monooleate. *Energy Conversion and Management* 117, 185–192 (2016).
- Bora, P., Boro, J., Konwar, L.J. and **Deka, D**. A comparative study of *Mesua ferrea* L. based hybrid fuel with diesel fuel and biodiesel. *Energy Sources, Part A: Recovery, Utilization and Environmental Effects*, 38 (9), 1279-1285 (2016).

2015

- Bora P, Boro J, Konwar LJ and **Deka D**. Formulation of microemulsion based hybrid biofuel from waste cooking oil – A comparative study with biodiesel. *Journal of the Energy Institute*, Available online 30 July 2015, doi:10.1016/j.joei.2015.07.001.
- Gohain M, Das B and **Deka D**. A Green Technology Based production of biolubricant for future, cleaner environment from Non-edible oils of North-East India-A Review. *Journal of Biofuel and Bioenergy*, 1(2), 121-134 (2015).
- Devi A, Das VK and **Deka D**. Designer Biodiesel: Preparation of Biodiesel Blends by Mixing Several Vegetable Oils at Different Volumetric Ratios and their Corresponding Fuel Quality Enhancement. *Research Journal of Chemical Sciences*, 5(9), 60-65 (2015).
- Konwar LJ, Maki-Arvela P, Begum P, Kumar N, Thakur AJ, Mikkola J-P, Deka R and **Deka D**. Shape selectivity and acidity effects in glycerol acetylation with acetic anhydride: Selective synthesis of triacetin over Y-zeolite and sulfonated mesoporous carbons. *Journal of Catalysis*, 329, 237-247(2015).
- Bora P, Konwar LJ, Phukan M M, **Deka D** and Konwar BK. Microemulsion based hybrid biofuels from *Thevetia peruviana* seed oil: Structural and dynamic investigations. *Fuel*, 157, 208-218 (2015).
- Konwar LJ, Maki-Arvela P, Salminen E, Kumar N, Thakur AJ, Mikkola J-P and **Deka D**. Towards carbon efficient biorefining: Multifunctional mesoporous solid acids obtained from biodiesel production wastes for biomass conversion. *Applied Catalysis B: Environmental*, 176, 20-35 (2015).

2014

- Bora P, Konwar LJ, Boro J, Phukan M M, **Deka D** and Konwar BK. Hybrid biofuels from non-edible oils: A comparative standpoint with corresponding biodiesel. *Applied Energy* 135,450-460 (2014).
- Boro J, Konwar LJ, Thakur AJ and **Deka D**. Ba doped CaO derived from waste shells of *T. striatula* (TS-CaO) as heterogeneous catalyst for biodiesel production. *Fuel*, 129, 182-187, 2014.
- Boro J, Konwar LJ and **Deka D**. Transesterification of non-edible feedstock with lithium incorporated egg shell derived CaO for biodiesel production. *Fuel Processing Technology*, 122, 72-78, 2014.
- Konwar LJ, Das R, Thakur AJ, Salminen E, Maki-Arvela P, Kumar N, Mikkola J-P and **Deka D**. Biodiesel production from acid oils using sulfonated carbon catalyst derived from oil-cake waste. *Journal of Molecular Catalysis A: Chemical*, 388-389, 167-176, 2014.
- Konwar LJ, Boro J and **Deka D**. Review on latest developments in biodiesel production using carbon-based catalysts. *Renewable and Sustainable Energy Reviews*, 29, 546-564, 2014.
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- Deka, D.**, Sedai, P. and Chutia, R.S. Investigating woods and barks of some indigenous tree species in north-East India for fuel value analysis. *Energy Sources, Part A: Recovery, Utilization and Environmental Effects*, 36 (17), 1913-1920 (2014).

2013

- Purkayastha MD, Das S, Manhar AK, **Deka D**, Mandal M and Mahanta CL. Removing Antinutrients from Rapeseed Press-Cake and Their Benevolent Role in Waste Cooking Oil-Derived Biodiesel: Conjoining the Valorization of Two Disparate Industrial Wastes. *J. Agric. Food Chem.*, 61, 10746–10756 (2013).

2. Hazarik B. and **Deka D.** Modern Use of Biomass Fuel in Domestic Energy Sector: A Household Level Case Study in the Chirang District of Assam. *Energy Sources, Part A: Recovery, Utilization and Environmental Effects*, 35, 1328-1337 (2013).
3. Bora P, Boro J and **Deka D.** A study on the development of Mesua ferrea l. seed oil based microemulsified fuel system. *International Journal of Emerging Technology and Advanced Engineering*, 3(3), 47-51 (2013).
4. Boro J, Konwar LJ and **Deka D.** Vigna radiata (mung bean) ash as heterogeneous base catalyst for biodiesel production. *Journal of Bioprocess Engineering and Biorefinery* 2(1), 1-7. DOI: <http://dx.doi.org/10.1166/jbeb.2013.1033>, 2013.

2012

1. Konwar LJ, Chutia RS, Boro J, Kataki R and **Deka D.** Biochar supported Cao as heterogeneous catalyst for biodiesel production. *International Journal of Innovative Research and Development*, 1(7), 186-195, 2012.
2. Boro, J. and Deka, D. A review on Biodiesel. *Journal of biobased materials and bioenergy*, 6, (2) 125-141, 2012.
3. Boro J, Thakur A J and **Deka D.** A review on solid oxide derived from waste shells as catalyst for biodiesel production, *Renewable and Sustainable Energy Reviews*, 16, 904-910, 2012.
4. Boro J and **Deka D.** Doped waste shell as heterogeneous catalysts in the transesterification of waste cooking oil for biodiesel production. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 2012,(Accepted).
5. Konwar LJ, Boro J and **Deka D.** Activated carbon supported CaO prepared from waste mollusk shells as heterogeneous catalyst for biodiesel production, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 2012, (Accepted).
6. Boro J, Konwar, LJ, Das S and **Deka D.** Comparative study of CaO derived from waste shells of turbonilla striatula and commercial CaO for biodiesel synthesis, *JASS*, 53(1), 2012.

2011

1. Boro J, Thakur AJ and **Deka D.** Solid oxide derived from waste shells of *Turbonilla striatula* as a renewable catalyst for biodiesel production. *Fuel Processing Technology*, 92, 2061-2067, 2011.
2. Baruah PK , **Deka D.** and Dixit US. Mathematical Modelling of Change of Temperature in Pulsating Heat Pipes with Single Loops. *International Journal of Energy, Information and Communications*, 2(1), 33-52, 2011.

Till 2010

1. **Deka D,** Sedai P and Chutia RS. Investigating woods and barks of some indigenous tree species in North East. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 2010 (Accepted). doi = 10.1080/15567036.2010.538802
2. Baruah PK., **Deka D** and Dixit US. Mathematical Modelling of Change of Temperature in a Pulsating Heat Pipe with Multiple Turns. *International Journal of Energy, Information and Communications* , 1(1), 94-107, 2010.
3. Baruah PK and **Deka D.** Electricity Generation from Biowaste Based Microbial Fuel Cells. *International Journal of Energy, Information and Communications*, 1(1), 77-92, 2010.
4. Kakati B and **Deka D.** Effect of Resin matrix precursor on the properties of Graphite Composite Bipolar Plate for PEM Fuel Cell. *Energy and Fuel*, 21, 1681-1687, 2007.
5. Kakati B and **Deka D.** Differences in physico-mechanical behaviors of resol(e) and novolac type phenolic resin based composite bipolar plate for proton exchange membrane (PEM) fuel cell. *Electrochimica Acta*, 52, 7330-7336, 2007.
6. **Deka D,** Saikia P and Konwer D. Ranking of fuelwood species by Fuel value Index. *Energy Sources, Part A: Recovery, Utilization and Environmental Effects*, 29, 1499-1506, 2007.
7. Konwer D, Kataki R and **Deka D.** Fuel-wood characteristics of some indigenous tree species of North-east India. *Indian Journal of Forestry*, 24 (3), 316-319, 2001.

Conference proceedings as full papers

1. Gohain, M. and Deka, D. Water hyacinth derived mixed-oxide heterogeneous catalyst for biodiesel production. In the proceedings International Conference on International Conference On Energy Power and Environment (ICEPE 2018), NIT Meghalaya, June 2018.
2. Chutia, S., Deka, D and Kakoty, N.M. A Review of Underwater Robotics, Navigation, Sensing Techniques and Applications. In the proceedings International Conference on Advances in Robotics (AIR 2017), IIT Delhi, July 2017
3. Borah, M., devi, A. Das,V and Deka, D. Catalytic Conversion Of Thevetia Peruviana Oil into Biodiesel By Tio₂-Zno Nanocatalyst. In the proceedings International Conference on International Conference on Emerging Trends in Nanomaterials Science and Technology (ICETNMST-2017), NIT Nagaland, May 2017.
4. Chutia, S., Gohain, M., Deka, D. and Kakoty, N.M. A Review on the Harvesting Techniques of Algae for Algal Based Biofuel Production. In the proceedings International Conference on GREENTECH 2017, JNU Delhi, March 2017.
5. Gohain,M., Chutia, S and Deka, D. Microalgal Biomass Production and Oil Extraction for Algae Biodiesel Production – A Review. In the proceedings International Conference on GREENTECH 2017, JNU Delhi, March 2017.
6. Devi, A., Das, V., and Deka, D. Renewable vs. Non-renewable antioxidants: Comparison between antioxidant activity of ginger extract and TBHQ for protecting biodiesel. In the proceedings International Conference on JNU Delhi, 5th March 2017.
7. Das,V., Devi, A., Borah, M.J. and Dhanapati Deka. Lipid enhancement of microalgae *Scenedesmus* sp and catalytic transformation of lipid to biodiesel using CaO as a catalyst. In the proceedings International Conference on International conference on GREENTECH 2017, JNU Delhi, March 2017
8. Das V, Devi A and **Deka D**. A study on the different strains of microalgae *Chlorella* as potential feedstock for biodiesel production. In the proceedings CHEMCON 2015 - INDIAN CHEMICAL ENGINEERING CONGRESS 2015 (68th Annual Session of Indian Institute of Chemical Engineers), December 27-30, 2015.
9. Devi A, Das V K, Das V and **Deka D**. Fuel Quality Assessment of Biodiesels Produced through Alcoholysis from *Pongamia glabra*, *Mesua Ferrea* and their blend: A novel yet cinch approach. In the proceedings of the 5th International Conference of Advances in Energy Research (ICAER-2015), IIT Bombay, December 15-17, 2015.
10. Das V, Devi A , Das V K and **Deka D**. Microalgae *Chlorella*: A Potential Feedstock For Biodiesel Production - A Review. In the proceedings of the 5th International Conference of Advances in Energy Research (ICAER-2015), IIT Bombay, December 15-17, 2015.
11. Narzary A, Phukan SJ and **Deka D**. Electricity generation from Bio-waste based Microbial Fuel Cells. In the proceedings of the 12th International Congress on Renewable Energy (ICORE-2014) on Renewables for Development of Rural Areas held in New Delhi during 8-9 December, 2014. Pp. 26-31.
12. Das S, Thakur AJ, and **Deka D**. Esterification of oleic acid with methanol using a new imidazolium based bronsted acidic ionic liquid catalyst for biodiesel synthesis. *In the proceedings of the International conference on Green Energy & Smart materials through Science, Technology and Management* held on 21-23 January, 2014 at Gauhati University jointly organized by Gauhati University, Guwahati, Assam, India and University of South Africa, Florida, South Africa in association with SECONE.
13. Das S, Thakur AJ, and Deka D. Biodiesel production by esterification of oleic acid over a Bronsted acidic ionic liquid catalyst. In the proceedings of the International conference on Harnessing natural Resources for Sustainable Development- Global Trend held on January 29-31, 2014 in Cotton College, Guwahati, Assam, 781 001, India
14. Bora P, Konwar LJ. and **Deka D**. A study on reduction of waste cooking oil viscosity by microemulsion technique. *In the Proceedings of Fifth National Conference on Advances in Energy Conversion Technologies (AECT 2012)* held on 04 February 2012 at MIT, Manipal, Karnataka, India. pp. 149-151.

15. Bora P. and **Deka D.** An overview on hybrid fuel production by microemulsification technique. *In the Proceedings of National Seminar on New and renewable Sources of Energy (Challenges for Renewable Energy Programme Implementation)* organized by Environmental Watch and Management Institute on 21st and 22nd March, 2012, Guwahati, Assam, India.
16. Boro J. Sedai P and **Deka D.** Transesterification of mustard oil using Mollusca shells as catalyst. *In the proceedings of the International Conference on Renewable Energy (ICRE-2011)* held at Jaipur, India from 17-21 January, 2011 organized by Centre for Non-conventional Energy Resources, University of Rajasthan, Jaipur-302055.
17. Shyam B, Konwar L.J., Boro J and **Deka D.** Biodiesel production from mixture of non-edible vegetable oil of North-east India. *In the proceedings of International Congress on Renewable Energy (ICORE)* held at Tezpur University jointly organized by Solar Energy Society of India and Tezpur University during 2-4 November, 2011. pp. 88-93.
18. Boro J, Konwar L J., **Deka D** and Thakur A J. Review on Carbon Based Catalysts for Biodiesel Production via Transesterification. *In the proceedings of International Congress on Renewable Energy (ICORE)* held at Tezpur University jointly organized by Solar Energy Society of India and Tezpur University during 2-4 November, 2011. pp. 63-70
19. Hazarika C, Boro J and **Deka D.** Biomass gasification based power generation systems installed in remote villages of Assam for village electrification-A case study. *In the proceeding of the International Congress on Renewable Energy (ICORE-2010)* held at Chandigarh, India from 1-3 December, 2010 organized by Solar Energy Society of India, New Delhi.
20. Hazarika B and **Deka D.** Modern use of biomass fuel in domestic energy sector: A household level case study in Chirang District of Assam. *In the proceeding of the International Congress on Renewable Energy (ICORE-2009)* held at New Delhi, India from 6-7 October, 2009 organized by Solar Energy Society of India, New Delhi.
21. Katak R, Chuti RS. and **Deka D.** A study on the fuel characteristics of some solid biofuels produced from some indigenous tree species of north-east India. *In the proceedings of the 8th International oil & Gas Conference & Exhibition (Petrotech 2009)*, New Delhi, India
22. Boro J and **Deka D.** Hydrogen production by photocatalytic degradation of water: an alternative source of energy. *In the proceedings of the National Conference on Emerging trends and recent advances in electrical engineering and renewable energy* held at Sikkim Manipal Institute of Technology, Sikkim during 22-24 December, 2008.
23. **Deka D.** 2006. Biofuel-the present consumption and future need: the case for some North-East Indian Villages. *In the proceedings of World Bioenergy Conference 2006* held in Jonkoping Sweden, 30 May-1 June 2006, organized by the Swedish Bioenergy Association & Elmia.
24. Ghosh S, Mahapatra S and **Deka D.** Techno-economic Analysis of Biomass briquetting Technology for Rural Entrepreneurship: A case study. *In the Proceedings of the International conferences of Renewable Energy for Rural development*, 19-21 January, 2002, Dhaka, Bangladesh.
25. **Deka D.** Trouble Shooting and remedial measures of Biogas Plant. *In the Proceedings of the Short-Term Training on Renewable Energy Applications In North Eastern Region* organized by Dept. of Mechanical Engineering, IIT Guwahati sponsored by MNES, New Delhi held during October 21-26, 59-64 (2002).
26. **Deka D.** "Energy consumption pattern in rural areas of Assam. A comparative study on three different categories of villages in Sonitpur District" *In the proceedings of National Renewable Energy Convention 2000*, IIT Bombay, Nov 30 -Dec 2 (2000).
27. **Deka D.** Energy Recovery from Road side Hotel Wastes- a case study. *In the proceedings of The 23rd National Renewable Energy Convention-99*, held at Devi Ahilya Vishwavidyalay, Indore from December 20 - 22 , 369-371(1999).
28. **Deka D**, Mahapatra S and Konwer D. Rural Energy in a typical village of Assam - A micro level case study. *In the proceedings of the Renewable Energy Congress*, held on January 14- 16, 1999 at the University of Kalyani, West Bengal, India.
29. **Deka et al.** 1998. Biogas Production from some Aquatic plants. *In the proceedings of The Workshop in conservation of Hydrocarbon and use of Non-conventional Energy Source*-organised by Oil India Limited , Duliajan on 10th February, 1998, pp 104.

Book:

1. Devi A, Das V K and Deka D. Zinjiber officinale: A nature based antioxidant for biodiesel. Published by Lap Lambert Academic Publishing, Germany. ISBN: 978-3-330-03736-6.

Book Chapters

1. Devi A, Barman R and Deka D. Designer Biodiesel: An Optimization of Fuel Quality by Blending Multiple Oils. Proceedings of the First International Conference on Recent Advances in Bioenergy Research, Springer Proceedings in Energy, pp 131-148, DOI 10.1007/978-81-322-2773-1_10, © Springer India 2016. ISBN: 978-81-322-2771-7 (Print), 978-81-322-2773-1 (Online), 2016.
2. Das S, Thakur A J and Deka D. Influence of free fatty acids content in catalytic activities of [BSMIM] Cl ionic liquid for biodiesel production from non-edible acidic oils. In: *Recent Advances in Bio-energy Research, Vol. III* CHAPTER 33. Editors: Sachin Kumar, A. K. Sarma, S. K. Tyagi, Y. K. Yadav. ISBN 978-81-927097-2-7, Sardar Swaran Singh National Institute of Renewable Energy, Kapurthala-144601 (Punjab), Electronic version published by SSS-NIRE-2014, Kapurthala, India, PP 449-356.
3. Bora P, Boro J and **Deka D.** Formulation and Characterization of Non-edible oil based micro-emulsified fuel. In: Suresh and Sudhakar (eds.). BSP Books Pvt. Ltd., Hyderabad (ISBN: 978-81-7800-286-6), 2013. pp. 247-251.
4. **Deka D.** Biofuel resource availability, production and utilization in the case for north east India. In: *Biodiversity and Environmental Biotechnology*. eds. Dwivedi P., Dwivedi S. and Kalita M., Scientific Publishers, Jodhpur, India. (ISBN: 81-7233-467-2) pp.463-480.
5. **Deka D.** APARAMPARA SAKTHI ARU PARIBESH. In: Bikalpa Saktir Utsay, P. Sarma(ed.), a book in Assamese, Society for Chemical Education, Dept. of Chemistry, Guwahati university, Assam, pp 44 - 49.

Resource Person in Seminar/Workshops

1. Delivered a lecture on "Selective Biobased materials: potential as catalyst and additive for production of quality biofuel" as visiting scientist in Federal University of Rio De Janeiro, Brazil on 25-06-2018.
2. Delivered a lecture on "Renewable heterogenous catalyst for biofuel production" as visiting scientist in Institute of Materials and Environmental Chemistry, Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest 1117 on 16-06-2017.
3. Delivered a lecture on "Towards Selective Biobased Materials : Potential as catalyst and Additive for production of quality Biofuel" as Invited Speaker in Bioprocessing India 2017 held on 9-11 December, 2017 organized by IIT Guwahati, Assam. India.
4. Delivered a popular lecture as "Appointed Speaker" in the Open session of the Golden Jubilee Celebration of the Udalguri Girls' H.S. School held on 12.11.2016 at Udalguri, Assam.
5. Delivered a talk on Bio-inspired heterogeneous catalyst for sustainable biofuel production as one of the speakers in the International Congress and Expo on Biofuels & Bioenergy held in Valencia, Spain during August 25-27,2015.
6. Delivered an invited talk in the topic Towards production of biofuel and chemicals - a reference to North-East India on 20th June, 2015 in the National Conference on the theme Challenges and Opportunities for the energy Sector in North East under the present Scenario organized by SECONE (Synergy for Energy Challenges & Opportunities in North East India), Guwahati.
7. Delivered an Invited talk in the topic Prospects of Alternate and Renewable Energy in North-East India on 5th February,2015 at 7th Seminar on Hydrocarbon industry growth - prospect and challenges in North-east India, held during February 5-6, 2015 at Numaligarh Refinery, Dist-Golaghat jointly organized by PETROTECH and Numaligarh Refinery Ltd.
8. Chaired a technical session (Theme- Energy and Electric Drives) on 10th January, 2015 in the First Conference on Power, Dielectric and Energy Management at North Eastern Regional Institute of Science and Technology (NERIST), a Deem University under the Ministry of Human Resources Development, Govt. of India jointly organized by the Department of Electrical Engineering and IEEE, Kolkata Section , IEE PES and DEIS, Kolkata Chapter during 10-11 January, 2015.

9. Delivered a talk as resource person on the topic Recent advances in Bioenergy Research- A route to conversion of biomass to fuel and chemicals. on 18 December, 2014 in the Faculty Development Program (FDP) on Current Approaches in Teaching and Research in Science and Technology Organized by School of Engineering, Tezpur University during 15th Dec -27th Dec, 2014 under AICTE-NEQIP project.
10. Participated as stake holder of Renewable Energy education from North-Easter States of India in the workshop on Developing strategy for education and vocational training for the renewable energy sector in India held in New Delhi on August 22, 2014 organized by IIT Roorkee sponsored by MNRE, Govt. of India.
11. Resource person in CEP programme on Biomass : Technology Intervention for sustainable Management and delivered invited lecture on 11th November,2010 in the topic Biogas: raw material, production, upgrading and different use sectors organized by Deference Research laboratory, Tezpur.
12. Delivered invited lecture on Bioenergy Resources in N E India: Prospects and utilization in Assam in the National Symposium on Biodiversity of Assam: Status, Development and Conservation organized by Assam Science Society on 5 December, 2010 sponsored by : DST & CSIR, Govt. of India, New Delhi held at Khanapara, Guwahati.
13. Delivered invited lecture in the National Seminar on New and innovative renewable energy and energy efficiency Organized by Environmental Watch and Management Institute sponsored by Ministry of New and Renewable Energy, Government of India held at Regional Science Centre, Khanapara, Guwahati-781022 during 10-11 July, 2010.
14. Participated as Resources person in the Short term training programme meant for officers and field level technical staff (RET) under the Forest Department of Assam on organized by Biogas development and training centre, Centre for Energy, IIT Guwahati sponsored by MNRE, New Delhi during 21-22 August,2009 and presented paper on Operation and maintenance of biogas digesters.
15. Lecture delivered as Guest faculty in PGDNRM courses conducted by Nowgong Girls College, Nagaon, Assam during February,2009 in the paper Energy Resources and Energy Planning.
16. Lecture delivered on 21st June, 08 in the topic of Biofuels in the Short Term training programme on Energy Crisis, Wastage and new Sources conducted by Dibrugarh Polytechnic, Lahowal, Dibrugarh-786010 from 18th June, 08 to 22nd June,2008.
17. Lecture delivered in the Training-cum-Workshop on Integrated Rural Energy Planning held from 24th February to 26th February, 2005 organised jointly by Nagaland Renewable Development Agency and Meghalaya Non-conventional and Renewable Energy Sources, Shillong sponsored by MNES, New Delhi.
18. Lecture delivered in the Training-cum-Workshop on Integrated Rural Energy Planning held from 28th January to 30th January,2005 organised jointly by Department of Energy, Tezpur University and Meghalaya Non-conventional and Renewable Energy Sources, Shillong sponsored by MNES, New Delhi.
19. Delivered lectures on Community participation on Disaster Mitigation in the training programme conducted in four different places of Sonitpur and Nowgaon districts of Assam during March-september,2005 by Disaster management Cell of Tezpur University.

Dissemination and general articles

1. A popular article Green Business for Sustainable Energy Future was contributed to the Souvenir Sampark 2010 - the interface organized by Department of Business Administration , School of Management Sciences, Tezpur University on January 22,2010.
2. A popular article on Biofuel based rural energy-the issues and the challenges. was contributed to online newsletter of North East Research Forum *NE Quest*, vol.1(1),8-11, 2007.
3. A popular article on Biofuel was contributed to the Souvenir on the occasion of the seminar on Gender and Energy Use organized by Department of Energy, Tezpur University on November 11,2005
4. A popular article in vernacular language (Assamese) on APARAMPARA SAKTHI ARU PARIBESH was contributed to a book in Assamese BIKALPA SAKTI UTSAV edited by P. Sarma and published by Society for Chemical Education, Dept. of Chemistry, Guahati university, Assam, pp 44-49,2000.

5. A project report on Quantity and type of wastes generated in a remote village of Sonitpur District of Assam - A micro level case study was submitted to Additional Chief Engineer, Public health Engineering, North Assam Zone, Tezpur Assam during 1998.
6. As Co-ordinator , Posters and stickers on awareness campaign for efficient energy use and save energy were prepared and distributed to different academic and administrative building of Tezpur University by the students of Department of Energy during Rajiv Gandhi Akshay Urja Diwas, 2009 held on 20-8-2009.
7. As Co-ordinator of the Training Programme, Disaster Management Cell of Tezpur University, training programme on disaster management was conducted under the scheme of Ministry of Home Affairs, Govt. of India in four different places of Sonitpur and Nowgaon districts of Assam specially on Flood and Earthquake Hazards during arch-September,2005. Govt. officials, University and College teachers participated in the training programme.
8. A popular article in vernacular language (Assamese) on JAIBIK GASJANTRAR ABASHISTA: SASWAR UTAM KHAR was published in the esteemed vernacular daily THE DAINIK JANAMBHUMI on May 10,1996.

Membership of Associations

1. American Chemical Society-Annual Member 2017-18
2. Life member Solar Energy Society of India.
3. Life member –Assam Science Society, India.
4. Primary member-Tezpur University Teachers' Association.
5. Honorary Adviser, Renewable Energy Resources, Institute of Integrative Omics and Applied Biotechnology, Nonakuri, Purba Medinipur, West Bengale-721172, India.

Editorial Board Member

- (i) Journal of Advanced Engineering Research, (ISSN 2393-8447), Indtech Publisher. Website: www.jaeronline.com
- (ii) South Asia Journal Of Multidisciplinary Studies, (ISSN No. 2395-1079), Jabalpur Management Association. Website: <http://www.gjms.co.in>

Member of the Board of Advisors,

- Institute of Integrative Omics and Applied Biotechnology (IIOAB), West Bengal-721172; India.

Important MoUs formulated for academic collaborations

S. No.	MoUs formulated	Name of Agencies/Departments involved	Year of MoU
1.	To affirm a joint commitment to introduce Skill based Training programmes as part of B.voc. programme at the Tezpur University	National Skill Development Corporation, New Delhi and Tezpur University, tezpur, Assam , India (Co-ordinated as Head of the Department of Energy, and Chairman, B.Voc. programme committee, Tezpur University).	2015
2.	To strengthen ties between the two MoU signing institutions, specifically in the area of bio-energy research, which	Sardra Swaran Singh National Institute of Renewable Energy, Kapurthala-144601 (Punjab), India and Tezpur University, Tezpur, Assam	2014

	might lead to the establishment of one or more partnership agreement for exchange purpose or academic co-operation in future.	(Coordinated as Head, Department of Energy, Tezpur University).	
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Involvement with formulation of academic programmes

Sl. No.	Nomenclature of Innovative Academic Programmes formulated	Date of approval by Academic Council	Year of Introduction
1.	Course Curriculum of B.Voc. in Renewable Energy Management (Coordinated as Head of the Department of Energy, and Chairman, B.Voc. programme committee, Tezpur University).	04/06/2015 (Approved by 24 th Meeting of Academic Council as per resolution no. AC.24/2015/1/2.3) dtd. 4 th June, 2015.	July, 2015
2.	Revised Course Curriculum of M.Tech. in Energy Technology programme (Coordinated as Head, Department of Energy, Tezpur University) .	13/05/2016 (Approved by 26 th Meeting of Academic Council as per resolution no. AC.26/2016/1/2.8 dtd. 13 th May, 2016).	July, 2016

Achievements/Distinctions/Awards

- INSA-Visiting Fellowship:** INSA-visiting fellowship under Indian National Science Academy INSA-Visiting Fellowship scheme for selected scientists was awarded by Indian National Science Academy and collaborative research work on *Firewood characteristics by lignin structure study with Fourier Transformer Infrared Spectroscopy (FTIR)* was carried out at Wood Energy Division, Institute of Wood Science & Technology, Bangalore from 2.8.2001 to 31.8.2001
- University merit scholarship:** University merit scholarship from Assam Agricultural University, Jorhat during master and degree level.
- National scholarship:** National Merit Scholarship Holder (Ministry of Human Resource Development, Govt. of India) during pre-university level.
- Distinction:** B.Sc.(Agri) from Assam Agricultural University in 1990 qualified in 1st class with distinction and M. Sc. (Agri) from Assam Agricultural University in 1992 with 1st Class.

Administrative Responsibility

- Dean, Students Welfare, Tezpur University since 1st February, 2017 continuing
- Former Dean, Students Welfare, Tezpur University, October, 2011-September, 2013
- Former Head, Department of Energy, Tezpur University, 2013-2016.
- Warden, Nilachal Men's Hostel, Tezpur University, during July, 2008-2011.

Other Administrative responsibilities.

- Chairman (ex-officio), Departmental Advisory Committee during September, 2013 -- September, 2016.
- Chairman (Ex-Officio), Departmental Board of Studies during September, 2013 -- September, 2016.

3. Chairman (Ex-Officio), Departmental Research Committee during September, 2013 -- September, 2016.
4. Chairman (Ex-Officio), Departmental Purchase Committee during September, 2013 -- September, 2016.
5. Member Secretary, Advisory Committee for B.Voc. programme, Tezpur University –continuing. since August, 2016- continuing.
6. Nodal Officer of Tezpur University–EK Bharat –Shreshtha Bharat a Programme of MHRD, Govt. of India during 2017 and continuing.
7. Nodal Officer for the B.Voc. Programme in Renewable Energy w.e.f. 14.08.2015 and continuing
8. Coordinator of the Committee for working out a plan for waste management of the University constituted during November, 2012.
9. Convener of the Committee constituted to examine the proposal for procurement and installation of Biomethanation plant in the University campus as a mean of management of decomposed wastes during 2012.
10. Chairman, Tezpur University Entrance Examination, 2012.
11. Chairperson of the committee constituted to consider revised proposal for house keeping , June, 2012.
12. Academic Programme Coordinator of the Department of Energy during 2006-07.
13. Laboratory and library in-charge/web master of the department of energy during 2004-2006.

Other Student related Administrative responsibilities

1. Chairman (ex-officio)-Students' Disciplinary Committee, Tezpur University since February, 2017 continuing.
2. Chairman (ex-officio)-Students' Disciplinary Committee, Tezpur University during October, 2011-September, 2013.
3. President (ex-officio), Students Council, Tezpur University during October, 2011-September, 2013.
4. Chairman, TechXetra-2014- a technical event of School of Engineering, Tezpur University, Tezpur, Assam, held annually since 2006.
5. Chairman/Members –various committee constituted by Tezpur University including enquiry committee on students related disciplinary matter.
6. Chairperson, Antiragging Squad, Tezpur University during October, 2011-September, 2013. And continuing from the session 2017-18 onward.
7. Member, Hostel rules review committee constituted by Academic Council held on 19.12.2013.
8. Chairman (Ex-Officio), Cultural Advisory Board during September 2012 to September 2013.
9. Member of the Committee constituted to work out a guideline for extending welfare measures to some needy students of the University during September, 2012.
10. Chairperson, committee constituted for Orientation of the newly admitted students of the University for the academic session 2012-13.
11. Convener of the Committee constituted to examine the suitable time and all related aspects for smooth organization of a National Integration Camp at Tezpur University for the year 2012-13.
12. Chairman, Reception Committee, Invitational Inter-University Cricket Tournament during January 22-26, 2012 at Tezpur University.
13. Joint Coordinator, Organizing Committee, East Zone Inter University Festival held at Tezpur University during 2011.

Other Corporate responsibilities

1. Member, Research Committee Tezpur University, Tezpur-continuing.
2. Member (Ex-Officio), Planning Board, Tezpur University during 2012-2013 and continuing.

3. Member, Centre Management Committee (CMC) of sophisticated Analytical Instrumentation Centre (SAIC), Tezpur University since June, 2016 and continuing
4. Member (ex-officio), School Board, School of Engineering, Tezpur University during 2013-September, 2016.
5. Member of the committee constituted for recommending new rates for procurement of stationery items for the office of the controller of Examination during September, 2016.
6. Member of the committee for preparing the proposal for establishment of KAUHAL (Knowledge upgradation of skilled Human abilities and livelihood) Kendra at Tezpur University, 2015.
7. Screening Committee convener as Head of the Department and one of the Screening Committee members of the School Board of School of Engineering, Tezpur University for screening the candidates applying for different faculty positions of the departments under School of Engineering against the advertisement no. 14.2015 dtd. 8.10.2015 and 18/2015 dtd. 18.12.2015.
8. Member of the Cash purchase Committee for procurement of items required for the MSME funded project under the Centre for Innovation, Incubation and Entrepreneurship Cell, Tezpur University constituted by the University during 1st January, 2015.
9. Member of the committee constituted for awarding Best performance award for the year 2014 for Group –C staff and Group C (MTS) staff of the University.
10. Member of the committee constituted for awarding Best performance award for the year 2013 for Group –C staff and Group C (MTS) staff of the University.

Selection Committee Member for Teaching and Non-Teaching position

1. One of the External Experts in the CSIR Assessment Committee constituted in the area of “Chemical Science and Chemical Engineering” held at CSIR-North East Institute of Science & Technology, Jorhat-785006(Assam) on 22-10-2019 at 11.00AM.
2. One of the members of the Local Selection Committee constituted for recruitment of the Guest faculty position under B.Voc. in Renewable Energy management and B. Voc.in Food processing held on 04.10.2016 in Tezpur University.
3. One of the members of the Local Selection Committee constituted for recruitment of the faculty position under B.Voc. in Renewable Energy management and B. Voc.in Food processing held on 23.02.2015 in Tezpur University.
4. One of the members of the Selection Committee constituted for recruitment of the faculty position of the Department of Energy, held on 18.08.2014 in Tezpur University.
5. Act as an Expert on the Selection Committee for appointment of Faculty in the Centre for Energy Engineering in Central University of Jharkhand, Ranchi held on 10.01.2014 in CUJ, Ranchi.
6. One of the members of the Local Selection Committee constituted for recruitment of the adhoc faculty position in the Department of Energy held On 13.09.2013 in Tezpur University.
7. One of the members of the Selection Committee for the post of Sports Officer of Tezpur University held on 04.03.2011 in Tezpur University.

Selection Committee Member for JRF/SRF position

1. Chairperson of the Selection Committee for selection of one JRF in the DBT Twinning sponsored project held on 07.09.2016 as per office order no. DoRD/MBBT/NDN/20-217/7022-A dtd. 10.08.2016.
2. Member Secretary of the Selection Committee for selection of one SRF in the DBT sponsored Indo-Brazil project of the Department of Energy held on 17.08.2016 as per office order no. DoRD/Energy/DD/20-284/7021-A dtd. 10.08.2016.
3. One of the members of Selection Committee for selection of one JRF in the SERB-DST sponsored project of the Department of Energy as per office order no. DoRD/Energy/BKK/20-284/7019-A dtd. 10.08.2016.
4. One of the members of the committee for assessment of research works RGNF-JRF , Department of Energy for upgradation to SRF as per office order no. F.40-23/2011 (GA-1)/6709-A dtd. 22.06.2016.

5. Chairperson of the Selection Committee for selection of one JRF in the DRDO sponsored project, Department of Food Engineering and Technology, Tezpur University as per office order no. DoRD/FET/SCD/20-201/6700-A dtd. 21.06.2016.
6. Chairperson of the Evaluation Committee constituted to evaluate the progress of JRF in the DBT sponsored research project of the Department of Molecular Biology and Biotechnology, Tezpur University as per office order no. DoRD/MBBT/RM/20-192/6679-A dtd. 13.04.2016.
7. Chairperson of the Selection Committee for selection of one SRF in the ICAR sponsored project of the Department of Food Engineering and Technology, Tezpur University as per office order no. DoRD/FET/LSB/20-265/6635-A dtd. 31.03.2016.
8. One of the members of Selection Committee for selection of one JRF in the DST sponsored project of the Department of Energy as per office order no. DoRD/Energy/DCB/20-133/6051-A dtd. 01.10.2015.
9. One of the members of Selection Committee for selection of one Research Associate and two Senior Research Fellows in the DST-SEED sponsored project of the Department of Energy as per office order no. DoRD/Energy/DCB/20-169/5043-A dtd. 10.11.2014.
10. Act as External member of the Selection Committee for selection of one Project Assistant in the DST sponsored project of the Department of Chemical Sciences as per office order no. DoRD/Chem.Sc./NG/20-173/4767-A dtd. 13.08.2014.
11. Chairperson of the Committee for assessment of research work of one RGNFJRF in the Department of Energy, Tezpur university as per office order no. F.14-11/2/2007 (Acad)/4861-A dtd.05.09.2014.
12. Act as External member of the Selection Committee for selection of one JRF in the DRDO sponsored project, Department of Food Engineering and Technology, Tezpur University as per office order no. DoRD/FET/SCD/20-201/4642-A dtd. 03.07.2014.
13. One of the members of Selection Committee for selection of one JRF in the DST sponsored project (ISHAG) of the Department of Energy as per office order no. DoRD/Energy/DCB/20-133/4332-A dtd. 19.03.2014.
14. Act as External member of the Selection Committee for selection of one JRF in the DRL sponsored project, Department of Food Engineering and Technology, Tezpur University as per office order no. DoRD/FET/CLM/20-187/4217-A dtd. 11.02.2014.
15. Act as External member of the Selection Committee for selection of one JRF in the DRL sponsored project, Department of Food Engineering and Technology, Tezpur University as per office order no. DoRD/FET/CLM/20-132/3691-A dtd. 18.09.2013.
16. One of the members of Selection Committee for selection of one JRF in the DST sponsored project (ISHAG) of the Department of Energy as per office order no. DoRD/Energy/DCB/20-133/3620-A dtd. 02.09.2013.
17. One of the members of Selection Committee for selection of one JRF in the DST sponsored project (ISHAG) of the Department of Energy as per office order no. DoRD/Energy/DCB/20-133/3401-A dtd. 01.07.2013.
18. Chairperson of the Evaluation Committee constituted to evaluate the progress of one Project Fellow in the UGC sponsored project of the Department of Environmental Science, Tezpur University as per office order no. F.43-176/2010(GA-I)/3361-A dtd. 25.06.2013.
19. One of the members of Selection Committee for selection of one JRF in the DST sponsored project, Department of Mechanical Engineering, Tezpur University as per office order no. DoRD/ME/TKG/20-125/2717-A dtd. 01.02.2013.
20. Act as External member of the Selection Committee for selection of one JRF in the DST sponsored project, Department of Food Engineering and Technology, Tezpur University as per office order no. DoRD/FET/CLM/20-137/2662-A dtd. 18.01.2013.
21. Act as External member of the Selection Committee for selection of one JRF in the DST sponsored project, Department of Food Engineering and Technology, Tezpur University as per office order no. DoRD/FET/CLM/20-132/2377-A dtd. 29.10.2012.

22. Act as External member of the Selection Committee for selection of one JRF in the DBT sponsored project, Department of Food Engineering and Technology, Tezpur University as per office order no. DoRD/FET/SCD/20-28/1104-A dtd. 10.04.2012.
23. Act as External member of the Selection Committee for selection of one JRF in the DBT sponsored project, Department of Molecular Biology and Biotechnology, Tezpur University as per office order no. DoRD/MBBT/MM/1/1060-A dtd. 16.03.2012.

Other Academic Assignment

1. **Member** of the Expert Visiting Committee (EVC) of AICTE-CR, Bhopal for evaluating two Engineering College in Surat, Gujarat during 05.03.2018 to 07.03.2018.
2. **Member** of the Expert Visiting Committee (EVC) of AICTE-CR, Bhopal for evaluating two Engineering College in Indore during 9.10.2017 to 10.10.2017.
3. **Member** of the Expert Visiting Committee (EVC) of AICTE-NW for evaluating two Government Polytechnic College in Rajasthan during April 18-19, 2016.
4. Represented Tezpur University in the UGC Regional Workshop on Curricular Aspects and Credit Framework for Skill Based Vocational Course coordinated at Don Bosco University, Azara, Guwahati on 27.03.2015.
5. External Examiner to conduct Ph.D. Viva-Voce Examination at Department of Biotechnology, Gauhati University on 25.10.2014.
6. Attended as one of the Team members in the Meeting for finalizing the areas of Research Collaboration in between Tezpur University and NRL, Numaligarh held at NRL, Numaligarh on 27.05. 2014.
7. Delivered a popular lecture in the Regional level Science Exhibition and Seminar held on 27.09. 2011 at Kendriya Vidyalay no. 2 AFS, Tezpur, Assam.
8. Conducted viva-voce examination as External Examiner for M.Tech. Students of the Department of Mechanical Engineering, Assam Engineering College held on 08.03.2008.
9. Coordinated a Workshop for Preparation of VISION NER 2020 held at Tezpur University during December 22-23,2005.
10. One of the Committee members to participate interaction among senior level officers of institution/organizations located at Tezpur for working together to serve North Eastern Region held at NERIWALM, Tezpur on 10 January, 2005.
11. Conducted practical Examination in Biswanath College of Agriculture, AAU, for the 1st year B.Sc. (Agri) students of BAC-124 course on 12.09.2001.

Inter Departmental Research Collaboration in Tezpur University

Department	Research Collaboration
Department of Electronics and Communication Engineering (ECE).	Dr. Nayan Moni Kakoty, Associate Professor of the Department of ECE is the Co-PI of the ongoing Indo-Brazil project.
Department of Molecular Biology and Biotechnology (MBBT).	Dr. Manab Mandal, Associate Professor of the Department of MBBT is the Co-PI of the ongoing Indo-Brazil project.
Department of Chemical Sciences (Chem. Sci.)	(i) Dr. Ashim Jyoti Thakur , Professor and Dr. Utpal Bora, Assitant Professor of the Department of Chem. Sci. are the Co-PIs of the ongoing Indo-Hungary project. (ii) Doctoral Committee (DC) member of one Ph.D. student under the supervision of Professor S.K.

	Doloi, Dept. of Chem. Sci.
Department of Mechanical Engineering (ME)	Doctoral Committee (DC) member of one Ph.D. student under the supervision of Professor T.K. Gogoi , Department of ME.
Department of Food Engineering and Technology (FET)	Doctoral Committee (DC) member of three Ph.D. students under the supervision of Professor C.L. Mahanta , Department of FET.
Department of Environmental Science (EVSc.)	(i) Member of the Departmental Research Committee (DRC), Department of Environmental Science, Tezpur University since 01.12.2016 for two years. (ii) Doctoral Committee (DC) member of two Ph.D. students under the supervision of Professor K. K. Baruah and Dr. A. Das , Department of EVSc.
