



**Arya Vidyapeeth College (Autonomous)**  
আর্য্য বিদ্যাপীঠ মহাবিদ্যালয়(স্বায়ত্তশাসিত)



### Personal profile

**Name of the Faculty: Dr. Sandhya Rani Gogoi**  
**Designation: Assistant Professor**

#### Personal Information

**Date of Birth:** 01-10-1987

**Gender:** Female

**Nationality:** Indian



#### Address for correspondence:

Department of Chemistry,  
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#### Academic Qualification

M.Sc. (Chemistry), Ph.D

#### Teaching Experience

**In UG level:** 3 Years and 6 months

#### Academic Distinction

- i. **T & I Best Postgraduate Award (Gold Medal)**, 2011, Tezpur University, Assam, India
- ii. **Qualified SLET, 2014**
- iii. **Qualified GATE, 2012 and 2013**

#### Research Experience

- i. **Year of Ph. D Award:** 2017
- ii. **Name of University:** Tezpur University

- iii. **Topic of Ph.D:** Synthesis and characterization of heteroleptic peroxo compounds of niobium(V). Their applications as oxidation catalysts and enzyme inhibitors
- iv. **Name of guide:** Prof. Nashreen S. Islam
- v. **Specialization (Area of interest):** Bioinorganic Chemistry, Homogeneous Catalysis.

## Publications

### Research paper published (Peer reviewed/UGC listed journals only):

1. Gogoi, S. R., Boruah, J. J., Sengupta, G., Saikia, G., Ahmed, K., Bania, K. K. and Islam, N. S. 2015. Peroxonio niobium(V)-catalyzed selective oxidation of sulfides with hydrogen peroxide in water: a sustainable approach. *Catalysis Science & Technology*, 5: 595-610.
2. Gogoi, S. R., Saikia, G., Ahmed, K., Duarah, R. and Islam, N. S. 2017. Niobium(V) peroxo  $\alpha$ -amino acid complexes: synthesis, stability and kinetics of inhibition of acid phosphatase activity. *Polyhedron*, 121: 142-154.
3. Saikia<sup>1</sup>, G., Gogoi<sup>1</sup>, S. R., Baruah, J. J., Ram, B. M., Begum, P., Ahmed, K., Sharma, M., Ramakrishna, G., Ramasarma, T. and Islam, N. S. 2017. Peroxo compounds of vanadium(V) and niobium(V) as potent inhibitors of calcineurin activity towards RII-phosphopeptide. *ChemistrySelect*, 2(21): 5838-5848.  
(<sup>1</sup>These authors contributed equally to this work).
4. Gogoi, S. R., Ahmed, K., Saikia, G. and Islam, N. S. 2018. Macromolecular metal complexes of Nb<sup>V</sup> as recoverable catalysts for selective and eco-compatible oxidation of organic sulfides in water, *Journal of the Indian Chemical Society*, 95: 801-812.
5. Gogoi, S. R., Talukdar, H. and Islam, N. S. 2019. Peroxo complexes of niobium(V) as potent inhibitors of acid phosphatase and calcineurin enzyme activities. *Journal of Indian Chemical Society (Convention Special Issue)*, 96: 1-13.
6. Talukdar, H., Gogoi, S. R., Saikia, G., Sultana, S. Y., Ahmed, K. and Islam, N. S. 2021. A sustainable approach towards solventless organic oxidations catalyzed by polymer immobilized Nb(V)- peroxido compounds with H<sub>2</sub>O<sub>2</sub> as oxidant. *Molecular Catalysis*, 516: 111988.
7. Boruah, J. J., Das, S. P., Ankireddy, S. R., Gogoi, S. R. and Islam, N. S. 2013. Merrifield resin supported peroxomolybdenum(VI) compounds: recoverable heterogeneous catalysts for the efficient, selective and mild oxidation of organic sulfides with H<sub>2</sub>O<sub>2</sub>. *Green Chemistry*, 15: 2944-2959.
8. Boruah, J. J., Das, S. P., Borah, R., Gogoi, S. R. and Islam, N. S. 2013. Polymer-anchored peroxo compounds of molybdenum and tungsten as efficient and versatile catalysts for mild oxidative bromination. *Polyhedron (Werner special issue)*, 52: 246-254.

9. Boruah<sup>1</sup>, J. J., Ahmed<sup>1</sup>, K., Das, S., Gogoi, S. R., Saikia, G., Sharma, M. and Islam, N. S. 2016. Peroxomolybdate supported on water soluble polymers as efficient catalysts for green and selective sulfoxidation in aqueous medium. *Journal of Molecular Catalysis A: Chemical*, 425: 21-30 (<sup>1</sup>These authors contributed equally to this work).
10. Sharma, M., Saikia, G., Ahmed, K., Gogoi, S. R., Puranik, V. G. and Islam, N. S. 2018. Vanadium-based polyoxometalate complex as a new and efficient catalyst for phenol hydroxylation under mild conditions. *New Journal of Chemistry*, 42: 5142.
11. Ahmed, K., Saikia, G., Begum, P., Gogoi, S. R., Sharma, M., Talukdar, H. and Islam, N. S. 2018. Selective and green sulfoxidation in water using a new chitosan supported Mo(VI) complex as heterogeneous catalyst. *ChemistrySelect*, 3(44): 12563-12575.
12. Saikia, G., Ahmed, K., Gogoi, S. R., Sharma, M., Talukdar, H. and Islam, N. S. 2019. A chitosan supported peroxidovanadium(V) complex: Synthesis, characterization and application as an eco-compatible heterogeneous catalyst for selective sulfoxidation in water. *Polyhedron*, 159: 192-205.

**Book published with ISBN (Subject related):**

1. A QUICK GUIDE TO CO-ORDINATION CHEMISTRY, ISBN:978-93-89196-29-0.
2. B.Sc Practical Book of Inorganic Chemistry, ISBN:978-93-89196-28-3.

**Chapter/article published in books with ISBN:**

1. Nanotechnology in Medicine, Rengani, Vol.-V, 2017, 195-200, ISBN:978-93-87287-02-0.
2. Applications of Oxidoreductases, Oxidoreductases (Open Intech), ISBN:978-1-83880-901-0.

**Award received from Govt./Reputed national society**

1. Royal Society of Chemistry Poster Award in the 7<sup>th</sup> CRSI-RSC (2013) Joint Symposium in Chemistry held at Banaras Hindu University (BHU), Varanasi, India.
2. Basic Scientific Research-University Grants Commission (UGC-BSR), 2014-2015.
3. Senior Research Fellow (SRF) Awarded by Council of Scientific & Industrial Research (CSIR), 2015-2017.

**Extracurricular activities**

- ❖ National player in volleyball game (2004), Regional player in 100 m race (2002), at School level.
- ❖ BEST ATHLETE (Women) of the year 2009-2010 and 2010-2011 of Tezpur University, Assam, India.
- ❖ BEST PLAYER- (VOLLEYBALL, Women) of the year 2009-2010, 2012-2013, 2013-2014, 2014-2015 and 2016-2017 of Tezpur University, Assam, India.

**National seminar:**

1. 15<sup>th</sup> CRSI National Symposium in Chemistry, Banaras Hindu University, Varanasi, 1-3 Feb, 2013 (Presented a Poster and selected for RSC poster award)
2. 20<sup>th</sup> National Magnetic Resonance Society Symposium cum Annual Meeting, 2-5 Feb, 2014, Tezpur University, Assam (Presented a Poster)
3. 8<sup>th</sup> Mid-Year CRSI National Symposium in Chemistry, 10-12 July, 2014, organized jointly by CSIR- North East Institute of Science and Technology, Jorhat and Tezpur University, Assam (Presented a Poster)
4. National Conference on Contemporary Developments in Chemical Sciences- 2015, 23<sup>rd</sup>-24<sup>th</sup> November, 2015, Department of Chemical Sciences, Tezpur University, Assam, India (Oral presentation)

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