

Publications

Papers published/communicated in *peer reviewed* journals

- [1] Kalita, D., Chetia, L. and Ahmed, G. A. Synthesis of MoW-Sulfide compound nanoparticles as a photocatalyst and comparison of its performance with MoS₂ and WS₂ nanoparticles. *Journal of Environmental Chemical Engineering*, 5 (4):3161-3171, 2017, DOI: 10.1016/j.jece.2017.06.020, ISSN: ISSN 2213-3437.
- [2] Kalita, D., Chetia, L. Chetri, P., and Ahmed, G. A. Investigation of structural and luminescence properties of nanocrystalline Tungsten incorporated Molybdenum disulfide ternary compounds: An Experimental and DFT Study. *Bull. Mater. Sci.*, 42:134, 2019. DOI: 10.1007/s12034-019-1796-2
- [3] Kalita, D., Chetia, L. and Ahmed, G. A. Photocatalytic Degradation of Methyl Orange using MoS₂ nanoparticles as catalyst. *AJET*, 7(2):007021203(4), 2018. ISSN:2348-7305

Paper presented in International/National Conference

- [1] Participated and presented orally in National conference on Hard and Soft Condensed matter physics organized by department of physics during 2-4th March, 2017, Tezpur, Assam, India.
- [2] Participated and presented a poster in International conference on Advances in Nanotechnology (ICAN) organized by Assam Don Bosco University, Azara campus, Guwahati during 9-13th January, 2017, Guwahati, India.
- [3] Participated and presented a poster in International Conference on Emerging trends in nanomaterials science and technology (ICETNMST-2017) organized by department of science and humanities, National Institute of Technology Nagaland, 4-6th January, 2017.
- [4] Participated and presented orally in 1st Springer International conference on Emerging Trends and Advances in Electrical Engineering and Renewable Energy (ETAEEERE) organized by department of electrical and electronics engineering, Sikkim Manipal Institute of Technology (SMIT), 17-18th Dec, 2016, Sikkim, India.
- [5] Participated and presented orally in XL Conference of the Optical Society of India, International Conference on Light and Light based Technologies (ICLLT 2016) during 26-28th Nov, 2016 at Tezpur University, Napaam, Tezpur, Assam, India.

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- [6] Participated and presented orally in Xth biennial national conference of physics academy of North East (PANE) on the theme “Recent Advances in Physics Research and its Relevance”, organized by Physics Department, St. Anthony’s College, Shillong, on 10th – 12th November, 2016.
- [7] Participated and presented a poster in International Conference on Electronic Devices, Circuits, Applied Electronics and Communication Technology (EDCAECT 2015) Organized by Department of Electronics & Communication Technology Gauhati University, Gauhati, Assam, India and Krishi Sanskriti, New Delhi, India on 8th, 9th and 10th October, 2015, Gauhati University, Gauhati, Assam, India.
- [8] Participated and presented a poster in IInd In-house symposium “Contemporary Physics & The Role off IPR” held at the Physics Department, Tezpur University, Tezpur organized by Department of Physics, Tezpur University under the sponsorship of UGC-SAP and TU-IPR Cell, Tezpur, Assam, India, February 7, 2014.

List of Book Chapters

- [1] Kalita, D., Chetia, L. and Ahmed, G. A. Harvesting insolation using Mo-W-Sulfide compound nanoparticle semiconductor as photocatalyst: a pollution controlling material. In S. SenGupta, A. F. Zobaa, K. S. Sherpa and A. K. Bhoi, editors, *Advances in Smart Grid and Renewable Energy, Series title: Lect. Notes Electrical Eng.*, vol. 435, Ch. 50, pages 505-514. ISBN No. 978-981-10-4285-0, Springer, part of Springer Nature, Singapore, 2017. DOI:10.1007/978-981-10-4286-7_50
- [2] Kalita, D. Insolation to Electricity. In Arup Sarmah and Chandan J. Kumar, editors, *DEVELOPMENT AND ADAPTATION IN SCIENCE, ENGINEERING AND TECHNOLOGY*, pages 43-49. ISBN No. 978-93-81691-26-7, Pub Kamrup College Press, 2014.
- [3] Kalita, D., Chetia, L. and Ahmed, G. A. Efficient degradation of polluting dyes by Mo-W-Sulfide compound nanoparticles photocatalyst for waste water treatment. In Dr. Simanta Chutia and Shantu Saikia, editors, *Recent advances in physics research*

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and its relevance. ISBN No. 978-93-86256-85-0, pages 106-110, Excel India Publishers, New Delhi, 2017.

Conference / Workshop/ School Attended

- [1] Attended SERB School on Optical Metrology sponsored by SERB, Department of Science and Technology, Govt. Of India, held during June 01 to June 21, 2016 at the Department of Physics, Tezpur University, Tezpur, Assam.
- [2] 2- Day Familiarization Workshop on Nanofabrication Technologies, A project of DeitY, MCIT, Govt. of India at IIT Bombay and IISc, held at Tezpur University, Assam during April 25-26, 2015.
- [3] International workshop on HYBRIDPHOTONICS 2015, held from 24-26th February 2015 at Department of Physics, Tezpur University, Tezpur, Assam, India.
- [4] Workshop on Computational Aspects of Research in Physics, 31st October- 1st November 2014 held at the Department of Physics, Tezpur University organized by the Department of Physics, Tezpur University and supported by UGC-SAP.
- [5] National seminar on photonics and quantum structures (NSPQS) (November 4- 6, 2009) at Department of Physics, Tezpur University.

Papers published/communicated in conference proceedings

- [1] Kalita, D., Chetia, L. and Ahmed, G. A. Investigation of Optical Properties of MoS₂ Derivative with Tungsten. *Journal of Basic and Applied Engineering Research (JBAER)*, 2(19):1669-1672, 2015, p-ISSN: 2350-0077, e-ISSN: 2350-0255.
- [2] Kalita, D., Chetia, L. and Ahmed, G. A. Efficient and stable compound Mo-W-S visible light photocatalyst for degradation of methyl orange dye. (*communicated*)