CURRICULUM VITAE

Name: GAZI AMEEN AHMED

Designation: Professor

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Date of Birth: 28th April 1968

Academic Qualifications:

Degree	Subject/ Thesis Title	Year	Board/University
HSLC		1984	Secondary Board of Education Assam
HSSLC	Physics, Chem, Maths	1986	Higher Secondary Education Council, Assam
B.Sc	Physics (major), Chem, Maths	1989	Gauhati University, Guwahati
M.Sc	Physics. Specialization - Electronics	1992	Gauhati University, Guwahati
Ph.D	Design considerations of a laser-based air quality monitoring system coupled to a microprocessor linked data recording and processing unit	2002	Gauhati University, Guwahati

Projects:

(1) Principal Investigator of the completed Indo-Romania Joint Research Project entitled "*Lidar Development and Associated Scattering Studies for Monitoring Atmospheric constituents*" between University "Politehnica" of Bucharest, Romania and Tezpur University, India during 2007-2010 (DST Sanction No.: INT/Rom/R-5/03 dated 19/03/07).

(2) Principal Investigator of the completed UGC-UKERI Thematic Partnership-2013 project entitled "*Fabrication of p-i-n photovoltaic devices hybridized with core-shell CdSe/TiO_2 nanostructures for enhanced quantum efficiency*", 2014-2016 (UGC sanction letter No.F.184-27/2014 (IC) dated June 27, 2014.).

(3) Principal Investigator of the completed Indo–Japan Co-operative Science Programme (JSPS) project entitled "*Investigation of interstellar polycyclic aromatic hydrocarbons (PAHs): pure and substituted: A combined approach*", 2017-2019 (DST Sanction Letter No.DST/INT/JSPS/P-238/2017 dated 04-10-2017).

Research Supervision:
Under my supervision, 8 students have received Ph.D. degree. Under my co-supervision 3 students have received Ph.D. degree. 8 students are continuing their research work for Ph.D. degree under my supervision currently while 1 student has submitted her PhD thesis recently.

Sl.No.	List of Journal Publication
1	Shukla, N., Chetri, P., & Ahmed, G. A. (2021). Structural, optical and magnetic study of Eu2+ doped SnO2 nanosystems: an experimental and DFT based investigation. *Journal of Materials Science*, *56*(34), 18911-18925.
2	Boruah, M. J., Gogoi, A., & Ahmed, G. A. (2021). Scattering by interstellar graphite and fayalite composite dust analogues: computer simulation and laser-based laboratory measurements. *Journal of Astrophysics and Astronomy*, *42*(2), 1-28.
3	Deka, K., Shah, Z., Misra, R., & Ahmed, G. A. (2021). The long-term X-ray flux distribution of Cygnus X-1 using RXTE-ASM and MAXI observations. *Journal of High Energy Astrophysics*, *31*, 23-30.
4	Ojah, N., Thakur, S., Gogoi, D., Ahmed, G. A., Mandal, M., Doley, R., & Choudhury, A. J. (2022). Effects of Dielectric Barrier Discharge Plasma on Physicochemical Characteristics, Mechanical Properties and Biocompatibility of Silk/PVA Nanofibers. *Plasma Chemistry and Plasma Processing*, *42*(1), 147-162.
5	Chetia, L., Kalita, D., Gogoi, A., & Ahmed, G. A. (2021). Enhanced photoluminescence properties of arsenic-treated diatom frustules of Cosmioneis reimeri. *MRS Advances*, 1-5.
6	Shukla, N., & Ahmed, G. A. (2021). Sb2Te3 an optically potent topological insulator: A density functional study. *Materials Today: Proceedings*, *45*, 4819-4823.
7	Sharma, A., Tripathi, D., Erdélyi, R., Gupta, G. R., & Ahmed, G. A. (2020). Wave amplitude modulation in fan loops as observed by AIA/SDO. *Astronomy & Astrophysics*, *638*, A6.
8	Ojah, N., Saikia, D., Gogoi, D., Baishya, P., Ahmed, G. A., Ramteke, A., & Choudhury, A. J. (2019). Surface modification of core-shell silk/PVA nanofibers by oxygen dielectric barrier discharge plasma: Studies of physico-chemical properties and drug release behavior. *Applied Surface Science*, *475*, 219-229.
9	Ojah, N., Deka, J., Haloi, S., Kandimalla, R., Gogoi, D., Medhi, T., ... & Choudhury, A. J. (2019). Chitosan coated silk fibroin surface modified by atmospheric dielectric-barrier discharge (DBD) plasma: a mechanically robust drug release system. *Journal of Biomaterials Science, Polymer Edition*.
10	Kalita, D., Chetia, L., Chetri, P., & Ahmed, G. A. (2019). Investigation of structural and luminescence properties of nanocrystalline tungsten-incorporated molybdenum disulphide ternary compounds: an experimental and DFT study. *Bulletin of Materials Science*, *42*(3), 1-18.
11	Boruah, M. J., & Ahmed, G. A. (2017). Visible light scattering properties of irregularly shaped silica microparticles using laser based laboratory simulations for remote sensing and medical applications. *Laser Physics*, *28*(1), 015701.
12	Kalita, D., Chetia, L., & Ahmed, G. A. (2018). Harvesting Insolation Using Mo–W–Sulfide Compound Nanoparticle Semiconductor as Photocatalyst: A Pollution Controlling Material. In *Advances in Smart Grid and Renewable Energy* (pp. 505-514). Springer, Singapore.
13	Chetia, L., Kalita, D., & Ahmed, G. A. (2018). Visible Light Harvesting Titania-Coated Diatom Frustules with Superior Photocatalytic Activity. In *Advances in Smart Grid and*

	Renewable Energy (pp. 515-524). Springer, Singapore.
14	Chetia, L., Kalita, D., & Ahmed, G. A. (2017). Synthesis of Ag nanoparticles using diatom cells for ammonia sensing. *Sensing and bio-sensing research*, *16*, 55-61.
15	Kalita, D., Chetia, L., & Ahmed, G. A. (2017). 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.
16	Boruah, M. J., Gogoi, A., Nath, B. C., & Ahmed, G. A. (2017). Light scattering studies of randomly oriented polycrystalline fayalite micro particles as interstellar dust analogues. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *196*, 213-221.
17	Chetia, L., Kalita, D., & Ahmed, G. A. (2017). Enhanced photocatalytic degradation by diatom templated mixed phase titania nanostructure. *Journal of Photochemistry and Photobiology A: Chemistry*, *338*, 134-145.
18	Boruah, R., Gogoi, A., Rajkhowa, P., Ahmed, G. A., & Choudhury, A. (2017). Development of an Internet Web Application for the Study of Surface Plasmon Resonance Spectroscopy. *Plasmonics*, *12*(2), 453-463.
19	Chamuah, N., Chetia, L., Zahan, N., Dutta, S., Ahmed, G. A., & Nath, P. (2017). A naturally occurring diatom frustule as a SERS substrate for the detection and quantification of chemicals. *Journal of Physics D: Applied Physics*, *50*(17), 175103.
20	Nath, B. C., Mohan, K. J., Barua, R., Ahmed, G. A., & Dolui, S. K. (2017). Dimensionally integrated α-MnO2/Carbon black binary complex as platinum free counter electrode for dye sensitized solar cell. *Journal of Photochemistry and Photobiology A: Chemistry*, *348*, 33-40.
21	Nath, B. C., Mohan, K. J., Barua, R., Ahmed, G. A., & Dolui, S. K. (2017). Dimensionally integrated α-MnO2/Carbon black binary complex as platinum free counter electrode for dye sensitized solar cell. *Journal of Photochemistry and Photobiology A: Chemistry*, *348*, 33-40.
22	Nath, B. C., Mohan, K. J., Saikia, B. J., Ahmed, G. A., & Dolui, S. K. (2017). Designing of platinum free NiS anchored graphene/polyaniline nanocomposites based counter electrode for dye sensitized solar cell. *Journal of Materials Science: Materials in Electronics*, *28*(1), 1042-1050.
23	Boruah, M. J., Gogoi, A., & Ahmed, G. A. (2016). Laboratory simulation and modeling of size, shape distributed interstellar graphite dust analogues: a comparative study. *Planetary and Space Science*, *125*, 27-36.
24	Nath, B. C., Das, D., Basumatary, J., Ahmed, G. A., & Dolui, S. K. (2016). Highly Efficient Platinum Free Multi-Walled Carbon Nanotubes/Silver Nanocomposites as Counter Electrode for Dye Sensitized Solar Cell. *ChemistrySelect*, *1*(9), 1863-1869.
25	Boruah, R., Mohanta, D., Choudhury, A., Nath, P., & Ahmed, G. A. (2015). Surface plasmon resonance-based protein bio-sensing using a Kretschmann configured double prism arrangement. *IEEE Sensors Journal*, *15*(12), 6791-6796.
26	Boruah, R., Mohanta, D., Choudhury, A., & Ahmed, G. A. (2015). Inverse surface plasmon resonance based effective hydrogen sensing using nanoscale palladium films. *Optical Materials*, *39*, 273-277.
27	Nath, B. C., Das, D., Kamrupi, I. R., Mohan, K. J., Ahmed, G. A., & Dolui, S. K. (2015). An efficient quasi solid state dye sensitized solar cell based on polyethylene glycol/graphene nanosheet gel electrolytes. *RSC advances*, *5*(115), 95385-95393.
28	Choudhury, B., Paul, S., Ahmed, G. A., & Choudhury, A. (2015). Adverse effect of Mn doping on the magnetic ordering in Mn doped TiO2 nanoparticles. *Materials Research*

	Express, *2*(9), 096104.
29	Khanam, R., Paul, N., Kumar, P., Kanjilal, D., Ahmed, G. A., & Mohanta, D. (2014). Teflon impregnated anatase TiO2 nanoparticles irradiated by 80 keV Xe+ ions. *Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms*, *336*, 135-142.
30	Ahmed, G. A., & Gogoi, A. (2014). Scattering by interstellar graphite dust analog. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *146*, 106-112.
31	Gogoi, A., Rajkhowa, P., Saikia, G. P., Ahmed, G. A., & Choudhury, A. (2014). WEBSCAT: a web application for the analysis of electromagnetic scattering from small particles. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *146*, 270-279.
32	Mazumder, N., Gogoi, A., Buragohain, A. K., Ahmed, G. A., & Choudhury, A. (2014, February). Structural and optical characterization of fresh water diatoms (Cyclotella sp.): nature's nanoporous silica manufacturing plant. In *Quantum Dots and Nanostructures: Synthesis, Characterization, and Modeling XI* (Vol. 8996, p. 89960Y). International Society for Optics and Photonics.
33	Nath, B. C., Gogoi, B., Boruah, M., Khannam, M., Ahmed, G. A., & Dolui, S. K. (2014). High performance polyvinyl alcohol/multi walled carbon nanotube/polyaniline hydrogel (PVA/MWCNT/PAni) based dye sensitized solar cells. *Electrochimica Acta*, *146*, 106-111.
34	Gogoi, A., Ahmed, G. A., Das, G., Karak, N., Boruah, R., & Choudhury, A. (2013). Laboratory measurements of the light scattering properties of bentonite clay particles embedded in a cylindrical polymer matrix. *Journal of Modern Optics*, *60*(8), 603-610.
35	Roy, S., Barua, N., Buragohain, A. K., & Ahmed, G. A. (2013). Study of ZnO nanoparticles: Antibacterial property and light depolarization property using light scattering tool. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *118*, 8-13.
36	Boruah, R., Nath, P., Mohanta, D., Ahmed, G. A., & Choudhury, A. (2011). Photonic properties of butterfly wing infiltrated with Ag-nanoparticles. *Nanoscience and Nanotechnology Letters*, *3*(4), 458-462.
37	Gogoi, A., Rajkhowa, P., Choudhury, A., & Ahmed, G. A. (2011). Development of TUSCAT: A software for light scattering studies on spherical, spheroidal and cylindrical particles. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *112*(17), 2713-2721.
38	Roy, S., & Ahmed, G. A. (2011). Monte Carlo simulation of light scattering from size distributed sub-micron spherical CdS particles in a volume element. *Optik*, *122*(11), 1000-1004.
39	Gogoi, A., Das, G., Karak, N., Choudhury, A., & Ahmed, G. A. (2011). Measurement of angular scattering function and degree of linear polarization of bentonite clay particles embedded in cylindrical epoxy matrix. *Atti della Accademia Peloritana dei Pericolanti-Classe di Scienze Fisiche, Matematiche e Naturali*, *89*(S1).
40	Roy, S., Barua, N., Buragohain, A. K., & Ahmed, G. A. (2011). Light scattering study of zinc oxide nanoparticles for the application of its anti-bacterial property. *Atti della Accademia Peloritana dei Pericolanti-Classe di Scienze Fisiche, Matematiche e Naturali*, *89*(S1).
41	Roy, S., Boruah, M., Barua, N., Buragohain, A. K., & Ahmed, G. A. (2011, October). Investigations on anti-bacterial property of ZnO nanoparticles applying optical techniques. In *AIP Conference Proceedings* (Vol. 1391, No. 1, pp. 721-723). American Institute of Physics.
42	Roy, S., Mahatta, R., Barua, N., Buragohain, A. K., & Ahmed, G. A. (2011). Monitoring of pathogen carrying air-borne tea dust particles by light scattering. *Journal of Quantitative*

	Spectroscopy and Radiative Transfer, *112*(11), 1784-1791.
43	Dutta, N., Mohanta, D., Ahmed, G. A., Choudhury, A., Hristu, R., Stanciu, S. G., & Stanciu, G. A. (2010). Two photon emission and nonlinear optical imaging of acetonitrile-treated quasi-spherical nanoscale PbS systems. *IEEE Photonics Journal*, *2*(6), 1060-1068.
44	Gogoi, D. P., Das, U., Mohanta, D., Ahmed, G. A., & Choudhury, A. (2010, October). ZnS: Cr Nanostructures Building Fractals and Their Properties. In *AIP Conference Proceedings* (Vol. 1276, No. 1, pp. 26-30). American Institute of Physics.
45	Gogoi, D. P., Ahmed, G. A., Mohanta, D., Choudhury, A., & Stanciu, G. A. (2010). Structural and optical properties of Mn doped ZnS semiconductor nanostructures. *Indian Journal of Physics*, *84*(10), 1361-1367.
46	Roy, S., Boro, M., Mohanta, D., Choudhury, A., & Ahmed, G. A. (2010). Size quantification of sub-micron ZnSe semiconductor particles by laboratory scattering methods. *Indian Journal of Physics*, *84*(6), 705-709.
47	Gogoi, A., Choudhury, A., & Ahmed, G. A. (2010). Mie scattering computation of spherical particles with very large size parameters using an improved program with variable speed and accuracy. *Journal of Modern Optics*, *57*(21), 2192-2202.
48	Roy, S., & Ahmed, G. A. (2010). Investigation of light scattering properties of laboratory synthesized sub-micron CdS semiconductor particles. *Journal of Optics*, *39*(4), 181-184.
49	Roy, S., Gogoi, A., & Ahmed, G. A. (2010). Size dependent optical characterization of semiconductor particle: CdS embedded in polymer matrix. *Indian Journal of Physics*, *84*(10), 1405-1411.
50	Chowdhury, S., Hussain, A. M. P., Ahmed, G. A., Singh, F., Avasthi, D. K., & Choudhury, A. (2010). Luminescence study of SHI irradiated nano semiconductor: Conducting polymer composite. *Journal of luminescence*, *130*(2), 326-330.
51	Roy, S., & Ahmed, G. A. (2010). Computation of scattering by spherical particles with a gamma size distribution. *Journal of Optics*, *39*(2), 76-81.
52	Mazumder, N., Gogoi, A., Kalita, R. D., Ahmed, G. A., Buragohain, A. K., & Choudhury, A. (2010). Luminescence studies of fresh water diatom frustules. *Indian journal of Physics*, *84*(6), 665-669.
53	Gogoi, A., Borthakur, L. J., Choudhury, A., Stanciu, G. A., & Ahmed, G. A. (2009). Detector array incorporated optical scattering instrument for nephelometric measurements on small particles. *Measurement Science and Technology*, *20*(9), 095901.
54	Gogoi, A., Choudhury, A., Stanciu, G. A., & Ahmed, G. A. (2009). Construction of a multidetector array incorporated laser-based scattering system for ultrafine TiO2 characterization. *Journal of Optics*, *38*(2), 67-74.
55	Gogoi, A., Ahmed, G. A., & Choudhury, A. (2009). Nanoparticle size characterization by laser light scattering. *Indian Journal of Physics*, *83*(4), 473-477.
56	Gogoi, A., Buragohain, A. K., Choudhury, A., & Ahmed, G. A. (2009). Laboratory measurements of light scattering by tropical fresh water diatoms. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *110*(14-16), 1566-1578.
57	Chowdhury, S., Hussain, A. M. P., Ahmed, G. A., Singh, F., Avasthi, D. K., & Choudhury, A. (2008). Effect of swift heavy ion irradiation on bare and coated ZnS quantum dots. *Materials Research Bulletin*, *43*(12), 3495-3505.
58	Das, D., Ahmed, G. A., & Choudhury, A. (2008). Studies on water vapour droplets using a

	laser based air quality monitoring system. *Indian Journal of Physics*, *82*, 539-544.
59	Gogoi, A., & Ahmed, G. A. (2008). A T-matrix approach for morphological characterization of spherical nanoparticles using laser. *Indian Journal of Physics*, *82*, 567-570.
60	Chowdhury, S., Hussain, A. M. P., Ahmed, G. A., & Choudhury, A. (2008). Frequency dependent electrical characteristics of PbS quantum dots. *The European Physical Journal-Applied Physics*, *42*(2), 113-119.
61	Stanciu, S. G., Hristu, R., Savu, B., Stanciu, G. A., Mohanta, D., Ahmed, G. A., & Choudhury, A. (2007, December). Investigation on CdS: Mn quantum dots using scanning laser microscopy. In *2007 ICTON Mediterranean Winter Conference* (pp. 1-4). IEEE.
62	Mohanta, D., Ahmed, G. A., Choudhury, A., Singh, F., & Avasthi, D. K. (2006). Properties of 80-MeV oxygen ion irradiated ZnS: Mn nanoparticles and exploitation in nanophotonics. *Journal of Nanoparticle Research*, *8*(5), 645-652.
63	Mohanta, D., Ahmed, G. A., Choudhury, A., Singh, F., Avasthi, D. K., Boyer, G., & Stanciu, G. A. (2006). Scanning probe microscopy, luminescence and third harmonic generation studies of elongated CdS: Mn nanostructures developed by energetic oxygen-ion-impact. *The European Physical Journal-Applied Physics*, *35*(1), 29-36.
64	Mohanta, D., Ahmed, G. A., Choudhury, A., Singh, F., Avasthi, D. K., Boyer, G., & Stanciu, G. A. (2006). Scanning probe microscopy, luminescence and third harmonic generation studies of elongated CdS: Mn nanostructures developed by energetic oxygen-ion-impact. *The European Physical Journal-Applied Physics*, *35*(1), 29-36.
65	Chowdhury, S., Ahmed, G. A., Mohanta, D., Dolui, S. K., Avasthi, D. K., & Choudhury, A. (2005). Luminescence study of bare and coated CdS quantum dots: Effect of SHI irradiation and ageing. *Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms*, *240*(3), 690-696.
66	Measurement of second order nonlinear susceptibility of matter with the help of Goswam, A. S., Ahmed, G. A., & Choudhury, A. (2005). Measurement of second order nonlinear susceptibility of matter with the help of SHSOM. *Indian Journal of Physics*.
67	Mohanta, D., Ahmed, G. A., & Choudhury, A. (2004). Spectroscopic investigations of carrier confinement and surface phonon detection in polymer embedded CdS quantum dot systems. *Chinese journal of Physics*, *42*(6), 740-750.Article Chinese Journal of Physics, Volume 42, Year 2004, Pages 740-750
68	Goswami, A. S., Ahmed, G. A., & Choudhury, A. (2004). Super Resolution and Better Contrast in Second Harmonic Scanning Optical Microscope with Low Power Laser Beam. *Journal of Optics*, *33*(1), 29-35.
69	Sarma, J. K., & Ahmed, G. A. (2000). Gluon distribution at moderately low-x from NMC deuteron structure function data. *arXiv preprint hep-ph/0012111*.

BOOKS:

1. Photonics and Quantum Structures by D.Mohanta & **G.A. Ahmed**, ISBN 9788184870985, *Narosa Publications, New Delhi*, 2012.

PATENTS:

1. Developed an internet-based web application for the study of Surface Plasmon Resonance spectroscopy (Copyright no. SW-8010/2015) Ratan Baruah, **Gazi. A. Ahmed**, Amarjyoti Choudhury, Ankur Gogoi, Pritom Rajkhowa

Job Experience:

Sl No.	Position	Place	From	To
1.	Project fellow	Department of Instrumentation, Gauhati University, Guwahati-781014	May 1993	Sept 1996
2.	Assistant Professor	Tezpur University, Tezpur-784028	Sep 1998	Sep 2007
3.	Associate Professor	Tezpur University, Tezpur-784028	Sep 2007	Sep 2013
4.	Professor	Tezpur University, Tezpur-784028	Sep 2013	Till today the 28th March 2022 and continuing

(Gazi Ameen Ahmed)
Dated: 28th Mach 2022
Place: Tezpur University,
Tezpur-784028, Assam, India.