CV of Ajanta Deka

Name: Dr. Ajanta Deka

Designation: HoD (i/c), Department of Physics

Address for Communication: (office) ____Department of Physics

Girijananda Choudhury University

____Hatkhowapara, Azara, Guwahati – 781017, Assam

Mobile No.: 9101165297

WA No:

Email: hod_phy@gimt-guwahati.ac.in

Sex: Female

Date of Birth: 02.01.1975

Educational Qualifications:

Sl. No.	Examination Passed	Year of passing	Board / Council / University	Specialization
1	**HSLC**/10th Std.	1991	SEBA	
2	**HSSLC**/10+2 Std.	1993	AHSEC	Science
3	Degree (Please Specify) **B.Sc.**	1996	Gauhati University	Physics (Honours)
4	Master's Degree (Please Specify) **M.Sc.**	1999	IIT Delhi	Physics

5	M. Phil.(Please Specify)			
6	Ph. D. (Please Specify)	2011	Tezpur University	Nanomaterials (Theoretical)
7	Post-Doctoral (Please Specify)			
8	Others(Please Specify) State Eligibility Test (SET)	2019	SLET Commission, Assam	Physical Science

Languages known: Assamese, English, Hindi, Bengali, German

(Read, Write & Speak)

Academic/ Administrative Experience:

Academic – 14 years

Administrative – 6 years

List of Publications:

International Journals:

1) R. C. Deka, **A. Deka**, P. Deka, S. Saikia, J. Baruah and P. J. Sarma, Recent advances in nanoarchitectonics of SnO_2 clusters and their application in catalysis, *Journal of Nanoscience and Nanotechnology* 20, 5153-5161 (2020). ISSN: 1533-4880 (Print); EISSN:1533-4899(Online)

2) **A. Deka**, Preferential sites for adsorption of CO on Au_6 clusters using DFT based reactivity descriptors, *Journal of Nanoscience and Nanotechnology* 20, 5288-5293 (2020). ISSN: 1533-4880 (Print); EISSN:1533-4899(Online).

3) S. Paul. J. Deka, **A. Deka**, N. K. Gour, Degradation mechanism of propylene carbonate initiated by hydroxyl radical and fate of its product radicals: A hybrid density functional study, *Atmospheric Environment* 216, 116952, (2019). ISSN: 1352-2310. (Scopus Serial No. 4363)

4) N.K.Gour, N.P. Rajkumari, R.C. Deka, S. Paul and **A. Deka**, Atmospheric degradation pathways and kinetics of 2-diflouroethanol (CHF2CH2OH) with Cl atom: A theoretical investigation, *Chemical Physics Letters* 716, 35-41 (2019). ISSN: 0009-2614. (Scopus

5) **A. Deka**, Structure and reverse hydrogen spillover in mononuclear Au^0 and Au^I complexes bonded to faujasite zeolite: A density functional study, *Journal of Catalysts*, Vol. 2013, Article ID 467846 (2013). ISSN: 2314-5102 (Print), 2314-5110 (Online).

6) **A. Deka**, Influence of sodium loading on CO adsorption over faujasite zeolite supported gold monomers: A density functional study, *Review of Applied Physics*, Vol. 2, Issue 2 33-38 (2013). ISSN: 2327-1604.

7) **A. Deka** and R. C. Deka, A density functional study on equilibrium geometries, stabilities and electronic properties of Au_5Li binary clusters, *Applied Nanoscience* 2, 359-364 (2012). ISSN: 2190-5517.

8) **A. Deka**, R. C. Deka and A. Choudhury, Adsorption of CO on gas phase and zeolite supported gold monomers: a computational study, *Chem. Phys. Lett*. **490**, 184-188 (2010). ISSN No. 0009-2614.

9) R. C. Deka, **A. Deka** and A. Miyamoto, Density Functional Studies on the structure and reverse hydrogen spillover in Au_6 cluster supported on zeolite, *Catalysis Letters*, **131**, 155-159 (2009). ISSN: 1011-372X.

10) **A. Deka** and R. C. Deka, Structural and Electronic Properties of Stable Au_n (n=2-13) Clusters: A Density Functional Study, *J. Molecular Structure*: THEOCHEM **870**, 83-93 (2008). ISSN: 0166-1280.

11) M. Huix-Rotllant, **A. Deka**, S. I. Bosko, A. V. Matveev, L. V. Moskaleva and N. Rösch, Characterization of Optical Spectra of Interacting Systems: Application to Oxide-Supported Metal Clusters, *International Journal of Quantum Chemistry* **108**, 2978-2990 (2008). ISSN: 0020-7608 (Print) 1097-461X (Online)

12) P. Mondal, K. K. Hazarika, **A. Deka** and R. C. Deka, Density Functional Studies on Lewis Acidity of Alkaline Earth Metal Exchanged Faujasite Zeolite, *Molecular Simulation,* **34**, 1121-1128 (2008). ISSN: 0892-7022.

In National Journals:

1) R. C. Deka, S. Baruah, **A. Deka** and N. K. Gour, Theoretical insight of OH-initiated mechanistic pathways and kinetics of n-butyl nitrate(CH3CH2CH2CH2ONO2) at 298 K and 1 atm, *Journal of the Indian Chemical Society*, **95**, 1-12 (2018). ISSN: 0019-4522.
2) R. C. Deka, P. Mondal, **A. Deka** and A. Miyamoto, DFT based reactivity descriptors to predict the influence of alkali cations on the Brönsted acidity of zeolites, *Bulletin of the Cataysis Society of India*, **8**, 140-155 (2009). ISSN: 2347-5382 (Online).

Book Chapters:

1) Ramesh Ch. Deka and **Ajanta Deka**, Chapter 11, pg. 95-98 : "Sooner or Later Ethical Violations Get Exposed" in ACADEMIC INTEGRITY AND RESEARCH QUALITY, University Grants Commission, December, 2021
2) Ramesh Ch. Deka, Sudakshina Saikia, Nishant Biswakarma, Nand Kishor Gour and **Ajanta Deka**, Chapter 25, pg 511-528 : "Nanocatalysts for Exhaust Emissions Reduction" in NANOTECHNOLOGY IN THE AUTOMOTIVE INDUSTRY, Elsevier, April, 2022; Paperback ISBN: 9780323905244, eBook ISBN: 9780323905268
3) Ramesh Ch. Deka, Plaban J. Sarma, **Ajanta Deka**, Nishant Biswakarma, Dikshita Dowerah, Satyajit Dey Baruah, , "Mechanistic Details of Catalytic Hydrogenation of CO_2 to useful chemicals using SnO_2 clusters" in HETEROGENEOUS NANOCATALYSIS FOR ENERGY AND ENVIRONMENTAL SUSTAINIBILITY : VOLUME 2 – ENVIRONMENTAL APPLICATIONS, John Wiley & Sons, Inc, August, 2022, Chapter 25, pg 303-335, ISBN: 978-1-119-77202-6

- Doctoral thesis guided :
- Research & Consultancy Projects: 2 sponsored research projects completed as Principal Investigator.

Sl. N	Title of the Project	Sponsoring Agency	Duration	Status
1	Geometries, stabilities and electron propertiesofAgdopedgo nanoclusters: a density function study.	AICTE, New Delhi	2 years (March, 2012 March, 2014)	Completed

2	Theoretical Insight on Graphene sensor for small molecules	MHRD, New Delhi	1.5 years (July, 2019 Jan, 2021)	Completed

Membership of Professional bodies: Life member of Asssam Science Society

Award, Fellowship & Recognition: Fellowship by German National Science Foundation for carrying out doctoral research in Germany. (Duration – 6 months)

Date: 04/01/2023

Scanned Signature

(Ajanta Deka)

(Name)