

FACULTY MEMBERS' ACADEMIC PROFILE

1. Name of the Faculty member: **Dr Ghanashyam Roy**

2. Designation: **Assistant Professor**

3. Qualification: **MSc, PhD**

4. Specialization: **Chemistry**

5. E-mail address: **ghanashyamroy96@gmail.com**

6. Date of Joining in W.B.E.S.: **28/02/2006**

7. Date of Joining in this College: **28/11/2022**

8. Total Teaching experience in College level: **18 year**

9. Research interests: **Computational Chemistry**

Title of thesis (Ph.D.) with year: "Theoretical Investigation of Dissociative Adsorption on Metallic Surfaces and Mechanistic Investigation of Some Small Molecules", 27/09/2019

10. **Research guidance:**

11. **Research Projects (Completed and ongoing):**

12. **List of publications:**

1. Ghanashyam Roy, Asoke Prasun Chattopadhyay "Dissociation of Methane on Ni₄ Cluster- A DFT study", *Theoretical and Computational Chemistry* 1106 (2017) 7-14.
2. Ghanashyam Roy, Asoke Prasun Chattopadhyay "Methane Dissociation on Bimetallic AuNi₃, Au₂Ni₂ and Au₃Ni Clusters- A DFT study", *Chemistry Select* 3 (2018) 3133-3140.
3. Ghanashyam Roy, Asoke Prasun Chattopadhyay "Reactivity of CO on Ni₄ Cluster-effect of spin multiplicity and H doping - A DFT investigation" *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 204 (2018) 362-369.,
4. Ghanashyam Roy, Asoke Prasun Chattopadhyay "Dissociation of Hydrazine on Ni₄ Cluster by Density Functional theory" *Springer Nature Applied Sciences*, 1, 4(2019)377.
5. Ghanashyam Roy, Asoke Prasun Chattopadhyay "Reactivity of CO on Bimetallic Ni₃M Clusters (M=Sc, Ti, V, Cr, Mn, Fe, Co, Cu, Rh, Ru, Ag, Pd and Pt) by Density Functional Theory", *New Journal of Chemistry*, 43, 28(2019)11363-11373.



A) Published papers in Journals:

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B) Conference Proceedings:

13. **Membership of Learned Societies/ Editorial Boards, etc.:**

14. **Patents:**

15. **Awards:**

16. **Other notable activities:**

17. **A) Participation in Seminars/Symposia/Conferences/Workshops:**

Speaker Invitation

1. The 9th Annual World Congress of Advanced Materials (WCAM-2023), 10-12 May, 2023 at **Tokyo**, Japan.
2. The 9th Annual Conference of AnalytiX-2023, 9-10 January, 2023, Sapporo, **Japan** on "Reactivity of CO on Ni₄ cluster- effect of spin multiplicity and H doping-A DFT investigation".
3. International Conference on Catalysis and Chemical Science, 28-30 April, 2022, **Dubai**, UAE.
4. 5th **Online** International Conference on Catalysis and Chemical Engineering, 4-5 2022 with theme "Exploring new Innovations and Challenges in Catalysis & Chemical Engineering"
5. 18th Alternative Energy Materials, 6-8 April 2022 at Imperial College of **London**.
6. The 10th Edition of Global Conference on Catalysis, Chemical Engineering and Technology, CCET-2022, 28-30 March 2022, **Singapore**.
7. The 11th Annual World Congress of Nano Science & Technology, 10-12 March, 2022, Barcelona, **Spain** .
8. The 8th Annual Conference of AnalytiX, 18-20 May, 2022, Osaka, **Japan**.
9. WCAM-2022, 11-13 May, Tokyo, **Japan**.
10. The 2nd Global Conference on Nanotechnology and Nanomaterials, 17-18 June, 2021, Berlin, **Germany**.
11. Inaugurate World Chemistry Congress, 19-21 October, 2022 Seoul, **South Korea**.
12. **Webinar** in the World Congress of Analysis Chemistry and Technology 20-22 October 2021.
13. The Global International Conference on Petroleum & Natural Gas Engineering 23-24 August, 2021, Prague, **Czech Republic**.
14. The 7th World Congress of Smart Material 16-19 June, 2021, **Singapore**.

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15. The 7th Edition of International Conference on Catalysis, Chemical Engineering and Technology, 17-18 May, 2021, **Tokyo**.
16. International **WEBINAR** on Diamond, Carbon and Advanced Energy Material, Carbon Material 2021, 8-9 November, 2021.
17. The **E-Meeting** on Advanced Catalysis, February 11-12, 2021.
18. The 5th EMN Meeting on Carbon Nanostructures, 17-21 March, 2020, Hawaii, **USA**.
19. **E-Meeting** on Advanced Catalysis, 11-12 February, 2021.
20. "Innovative Idea and Approaches for Striving the Future of Material Science and Engineering", from World Congress on Materials Science and Engineering, 17-19 June, 2020, **London**, UK.
21. 2nd World Congress on Functional Materials and Nanotechnology, 14-15 May, 2020, **Rome**, Italy.
22. Fourth International Conference on Catalysis and Chemical Engineering, 24-26 February, 2020, Sheraton, Los Angeles, CA, **USA**.
23. 2nd International Conference on Material Science & Engineering, 27-19 April, 2020, San Francisco, **USA**.
24. "Contemporary Advances and Innovation in Chemistry & Catalysis Research", 23-24 March 2020, Rome, **Italy**.
25. Paper presentation of "Methane Dissociation on Bimetallic AuNi₃, Au₂Ni₂, Au₃Ni Clusters-A DFT Study", at Nano S & T-2020, 20-22 April, 2020, Osaka, **Japan**.
26. 1st International Conference Catalysis Science and Chemical Engineering, 02-03 December, 2019, Mantra bell City, Melbourne, **Australia**.
27. 2nd International Conference on Analytical Chemistry and Chromatography Methods, 18-19 November, 2019, Berlin, **Germany**.
28. "Progressions in Green Processing and Synthesis with spotlight on Sustainability & Environmental Safety" Green Chemistry, 02-03 December, 2019, Amsterdam, **Netherlands**.
29. EMN Meeting on Nanowires, 26-30 November, 2019, **Mauritius**.
30. EMN Meeting on Metal-Organic Framework, 10-14 September 2018, Barcelona, **Spain**.

Poster presented in Conference and Symposia

1. Presented Poster in "An international Conference on Electronic Structure and Dynamics of Molecules and Clusters" 17-23th February, 2013, Department of Physical Chemistry, Indian Association for the Cultivation of Science, Kolkata.

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2. Poster presented in "UGC Sponsored State Level Seminar on Quantum Mechanics: Theoretical Concepts and Applications" 22-23th November 2013, Department of Physics, Dumkal College, Murshidabad, West Bengal.

3. Poster presented in "India-Bangladesh Structural Chemistry Conference" 8-19th September 2015, Indian Institute of Science Education and Research, Kolkata.

Project participated

“Dissociative Adsorption of Methane on Ni(111) Surface- A DFT Study” in the Laboratory of Prof Susanta Mahapatra, School of Chemistry, University of Hyderabad, supported by UGC Networking Resource Center, 1 st January-2nd February 2016.

Patent Intimation

Three emails for Patent from US, Germany and India.

Invited Reviewer

1. Molecular Simulation
2. Journal of Cluster Science
3. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy

B) Participation in OP/RC:

1. Refresher Course in Chemistry, UGC Academic Staff College, University of Hyderabad, Hyderabad, from 22.07.2010 to 11.08. 2010.
2. UGC Sponsored Orientation Programme, UGC-Academic Staff College, Jadavpur University, from 29.08.2011 to 26.09.2011.