

Curriculum Vitae

Name: SENJUTI BANIK

Designation: SACT-II

Department: CHEMISTRY

Email Id/Contact Number: Mob No: 9933347082



Email Id: senjuti.banik@gmail.com

Educational Qualification (In chronological order):

1. Secondary Education: 2005, W.B.B.S.E (1st division: **85.75 %**).

2. Higher Secondary Education in Science (10+2): 2007, W.B.C.H.S.E (1st division: **79.57%**).

3. B. Sc. (Chemistry): 2010, University of North Bengal, India (2nd class: **53.87%**).

4. M.Sc. (Chemistry): 2012, University of North Bengal, India (1st class: **71.31 %**)
(Physical Chemistry Specialization).

5. B.Ed.: 2014, University of North Bengal, India (1st class: **65.8 %**)

6. Ph. D (Thesis submitted on 14.11.2019): Department of Chemistry, Jadavpur University, Kolkata, West Bengal. India

Field: Electrochemistry

Synopsis title: SYNTHESIS OF PLATINUM, NICKEL AND SOME PLATINUM BASED NANOPARTICLES AND THEIR EFFICACY IN ANODE CATALYSIS

Area of Interest: Electrochemistry

Teaching Experience:

- 2018 September – Present, Guest Lecturer, Department of Chemistry, Sammilani Mahavidyalaya, Kolkata.

Research Experience:

Synthesis of platinum, nickel and some platinum based nanoparticles and their efficacy in anode catalysis

- Investigation on size-controlled synthesis and characterization of unsupported and supported Pt, Ni metal and Pt_xNi_y alloy nanoparticles with special emphasis

on their anode catalytic activity in reference to oxidation of small alcohols in alkali and acid medium.

- The influence of supporting materials like graphene, on the anode catalytic activities of synthesized nanoparticles has also been illustrated

Publications:

1. Improved and Synergistic Catalysis of Single-pot synthesized Pt-Ni Alloy Nanoparticles for Anodic Oxidation of Methanol in Alkali, **Senjuti Banik**, Ankita Mahajan, Sreya Roy Chowdhury and Swapan Kumar Bhattacharya, *RSC Advances*, 6, (2016) 92490-92501.
2. Kinetic Parameters of Anodic Oxidation of Methanol in alkali: Effect of diameter of Pd nano-catalyst, composition of electrode and solution and mechanism of the reaction, Ankita Mahajan, **Senjuti Banik**, Partha Sarathi Roy, Sreya Roy Chowdhury and Swapan Kumar Bhattacharya, *International Journal of Hydrogen Energy*, 42 (33), (2017) 21263-21278.
3. Size control synthesis and amperometric sensing activity of Palladium nanoparticles for Glucose detection, Ankita Mahajan, **Senjuti Banik**, Sreya Roy Chowdhury, Partha.Sarathi Roy, and Swapan Kumar Bhattacharya , *Materials Today Proceedings*, 5 (1), (2018) 2049-2055.
4. Anodic Oxidation of Butan-1-ol on Reduced Graphene Oxide-Supported Pd-Ag Nanoalloy for Fuel Cell Application. Ankita Mahajan, **Senjuti Banik**, Dipanwita Majumdar, Swapan Kumar Bhattacharya, *ACS Omega*, 4 (3), (2019) 4658-4670.
5. Temperature Control Synthesis of Platinum Nanoparticle-Decorated Reduced Graphene Oxide of different functionalities for anode-catalytic Oxidation of Methanol. **Senjuti Banik**, Ankita Mahajana, Apurba Ray, Dipanwita Majumdar, Sachindranath Das, Swapan Kumar Bhattacharya, *FlatChem*, 16 (2019) 100111.
6. Size Control Synthesis of Pure Ni nanoparticles and Anodic-Oxidation of Butan-1-ol in Alkali. **Senjuti Banik**, Ankita Mahajan, Swapan Kumar Bhattacharya, *Materials Chemistry and Physics*, 235 (2019) 121747.
7. Synthesis of a novel pyrene derived perimidine and exploration of its aggregation induced emission, aqueous copper ion sensing, effective antioxidant and BSA interaction properties. Nilanjan Chakraborty, **Senjuti Banik**, Arijit Chakraborty, Swapan Kumar Bhattacharya, Suman Das, *Journal of Photochemistry and Photobiology A: Chemistry*, 377, (2019) 236-246.

Seminar or Conference attended:

1. Presented a paper in a National seminar on Current Developments in Chemical Sciences (CDCS-2018) held on March 7, 2018 at Department of Chemistry, Jadavpur University, Kolkata-700032.
2. Presented a paper in "Second International Conference on Electrochemical Science and Technology" ICONEST-2017 organized by ECSI at Indian Institute of Science, India during 10-12th August, 2017.

3. Participated in the International symposium on “Facts of Chemistry in Biology” (FOCB-II) held in the department of Chemistry, St. Xavier’s College, Kolkata on 12th January, 2017.
4. Participated in the National seminar on “Chemistry of Functional Materials of Current Interest” (CFMCI-2016) on 16th March, 2016 at Department of Chemistry, Jadavpur University, Kolkata-700032.
5. Participated in the National seminar on “A Journey Through Recent Developments in Chemistry” on March 1-2, 2012 at Acharya Brojendra Nath Seal College, Cooch Behar.

Others: Nil