

CURRICULUM VITAE

Rupak Roy

Malbazar

Jalpaiguri

Pin: 735221

West Bengal

INDIA

Phone No.: +91-7699378272

Mail Id : rupak.roy95@gmail.com

Skype Id : live:rup14395

Career objective

To be a research oriented scientist and to pursue a challenging career in a leading organization with a dedicated working environment to boost my knowledge to a level of excellence with proper training and sincerity in the relevant field and to endeavor towards achieving vision of the organization.

Education profile

Examination Passed	Board/University	Subjects	Year of Passing	% of Marks
X	WBSE	Math, Physical Science, Life Science, History, Geography, English	2011	80.75
XII	WBCHSE	Math, Physics, Chemistry, Biological Science, English	2013	75.40
B.Sc	University of North Bengal	Chemistry	2017	51.12
M.Sc	Indian Institute of Technology Dhanbad	Chemistry	2019	67.10 (GPA-7.21)

Experimental skills

- Handling of UV-Visible Spectrophotometer
- Handling of Fourier Transformation Infra-red Spectrophotometer
- Handling BET-Surface Area Analyzer
- Handling Thermogravimetric Analyzer
- Handling Potentiostat

Technical skills

- Competent with all Microsoft Office applications and Internet applications.

Project Profile

1) National Institute of Technology Rourkela

Project	Silicomolybdic Acid Functionalized Graphene Oxide as a Novel Catalyst for the Greener Synthesis of Chromenes via Grind Stone Method
Duration	2 months
Supervisor	Prof. Priyabrat Dash

Description:

The aim and objective of the study was to develop a Silicomolybdic acid functionalized graphene oxide catalyst (GO-SMA) for the synthesis of Chromenes and their derivatives. GO has been synthesized by modified Hummers method and functionalization take place by the wet impregnation method. The catalysts have been characterized by XRD, FESEM. For synthesis of Chromenes unimolar mixture of Benzaldehyde, Malononitrile and Resorcinol was taken. Results reveal that GO-SMA catalyst shows remarkably higher catalytic activity for the synthesis of biologically active compounds such as Chromenes. The catalyst offers several advantages, including high yield, short reaction time, simple work up procedure, ease of separation and easy recyclability of the catalyst.

2) Indian Institute of Technology Dhanbad

Project	Anticorrosion Properties of Silane Based Sol-Gel Coating on Aluminium alloys
Duration	12 months
Supervisor:	Prof. G. Udayabhanu

Description:

This research project focuses on developing a sol-gel based silane film filled with graphene oxide nanosheets (GO) and nitrogen and phosphorus doped carbon dots (N,P-CDs) to enhance the epoxy coating resistance against corrosion over the aluminium alloy. Tetraethylorthosilicates (TEOS), 3-glycidoxypentyltrimethoxysilane (GPTMS), 3-methacryloxypropyltrimethoxysilane (MAPTS) and vinyltrimethoxysilane (VTMS) were used for the sol-gel formulation. For the enhancement of anticorrosion properties of sol-gel formulation graphene oxide and heteroatom doped carbon dots had been introduced into the sol-gel matrix. GO has been synthesized by modified Hummers method and N,P-CDs were

synthesized by hydrothermal method reported in the literature. Citric acid, ethylenediamine and phosphoric acid were used as the carbon, nitrogen and phosphorus source respectively. GO was characterized by FT-IR, UV, Raman Spectra, and X-ray diffraction analysis. The effect of silane treatment on the epoxy coating performance was studied by electrochemical impedance spectroscopy (EIS). Results reveal that incorporation of GO nanosheets and N,P-CDs into the silane film significantly enhances the corrosion protection performance of the sol-gel coating.

Working Experience

1) CSIR-Central Institute of mining and Fuel Research Dhanbad

Position	Project Assistant
Project	Catalytic Petroleum coke Gasification
Duration	9 months
Supervisor	Dr. Sujan Saha

Description:

The aim and objective of the study was to develop and evaluate efficient catalyst for petcoke gasification at lower temperature. Petcoke has very low reactivity. Alkali metal salts are used as catalyst. Catalyst doping has been done by impregnation method. Reactivity of the petcoke has been determined by the thermogravimetric analyzer. It showed that in presence of catalyst the reactivity of petcoke has been increased remarkably and gasification temperature was reduced significantly.

Publication

1) Kumari Neelam, Sujan Saha, Gajanan Sahu, Vishal Chauhan, **Rupak Roy**, Sudipta Datta, and Prakash D. Chavan. "Comparison of CO₂ gasification reactivity and kinetics: petcoke, biomass and high ash coal." Biomass Conversion and Biorefinery (2020): 1-14.

<https://doi.org/10.1007/s13399-020-00882-z>

Academic achievements

- Participated in workshop of India-Netherlands bi-lateral project on Functional material and catalysis organized by Department of Applied Chemistry, Indian Institute of Technology Dhanbad.
- Participated in workshop on Crystallography organized by North Bengal Science Centre, Siliguri.

Strengths

- Positive Attitude and Strong Perseverance
- Sense of Responsibility
- Sincere and Hard Working
- Efficient Communication skills

Personal Profile

Name	Rupak Roy
Date of Birth	7 th July 1995
Father's Name	Bikash Chandra Roy
Sex	Male
Marital Status	Unmarried
Nationality	Indian
Fluent in	English, Bengali, Hindi

Declaration

I do here by state and declare that the above information furnished is correct to the best of my knowledge and belief.

Place: Malbazar, India

(Rupak Roy)