

Curriculum Vitae

Sumit Kumar Patra

Senior Research Scholar, Department of Chemistry
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Career Objective: To join an organization, where I could develop myself as a professional person to attain my best in that area through consistent planning and persistent hard work.

Academic Qualifications:

Degree	Board/University	Percentage	Passing year
PhD (Chemistry)	North Eastern Hill University, Shillong, Meghalaya	NA	Ongoing
M.Sc. (Chemistry)	Vidyasagar University, Midnapore, west Bengal, India	82.33%	2014
B.Sc. Chemistry (Hons.)	Garhbeta College, Vidyasagar University, West Bengal, India,	69.75%	2012
10+2	West Bengal Council of Higher Secondary Education	81.40%	2009
10 th	West Bengal Board of Secondary Education	86%	2007

Research Experience:

Has a Research Experience of 5.3 years as a project JRF/SRF and CSIR –SRF, on Design and synthesis of new organic and Ruthenium compound for detection and quantification of environmentally hazardous and Biologically important ion or molecule, analytical analysis and

computational study, under supervision of Dr. Snehadrinarayan Khatua, Department of Chemistry, NEHU, Shillong, Meghalaya.

Projects undertaken and Work Experience:

1. **Project Title:** “*A Lab-on-a-molecule for cation and anion sensing.*”

Description: DST-SERB project (November 2014- June 2017)

Supervisor: Dr. Senhadrinarayan Khatua, Department of Chemistry, NEHU, Shillong.

Project work: Design and synthesis of multifunctional organic and Ruthenium compound for detection and quantification of environmentally hazardous and biologically important ion or molecule, analytical analysis and computational study.

2. **Project Title:** “*Study of Antioxidant Property of Pseudo bulb Extract of Crepidium acuminatum (Jeevak) and its use in the synthesis of Gold nanoparticles.*”

Description: M.Sc. project (July 2013–June 2014)

Supervisor: Prof. Braja Gopal Bag, Department of chemistry and chemical technology, Vidyasagar University, Midnapore- 721102, West Bengal, India.

Project work: Green synthesis of colloidal gold nano particles & antioxidant properties study of the pseudo bulb extract of *Crepidium acuminatum* (Jeevak) containing several polyphenolic compounds like Quercetin, Pinocembrine, Gingerol etc

Key skill:

- Conversant with the syntheses, purification, characterization of various organic and inorganic, compounds in milligram and multigram scale.
- Skilled in isolation and purification of organic and inorganic compounds by column chromatography and crystallisation.
- Interpretation of ^1H and ^{13}C NMR signals (by 2D NMR), MS, IR, UV-VIS, Fluorescence.
- Microscopic techniques SEM, TEM, AFM, DLS.
- Hands on experience in UV-Vis, Fluorescence, IR, and DLS Chromatography.
- Hand on experience in live cell imaging by fluorescence microscope (Leica DMI4000B).
- Running DMol3, Gaussian 09 program package, and HyperChem software for theoretical calculation.
- Experience in working with Basic Chemistry Software (ChemOffice, Microcal Origin, Endnote etc) and Photographic software like Adobe Photoshop CS3.

Awards/Scholarship:

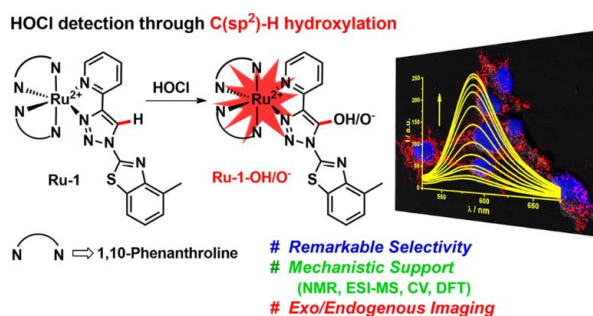
- ❖ Qualified All INDIA-GATE in chemistry (Graduate Aptitude Test in Engineering),
 - GATE Rank- **631**, with a GATE score 433, 2014
 - GATE Rank- **1212**, with a GATE score 417, 2015
- ❖ Qualified **CSIR-SRF** (Direct) for Research Fellowship under CSIR Fellowship Scheme] in the year 2018.

List of Publications:

1. Highly Selective Detection of Hypochlorous Acid by a Bisheteroleptic Ru(II) Complex of Pyridyl-1,2,3-triazole Ligand via C(sp²)-H Hydroxylation.

Bhaskar Sen, Sanjoy Kumar Sheet, **Sumit Kumar Patra**, Debaprasad Koner, Nirmalendu Saha, Snehadrinarayan Khatua.

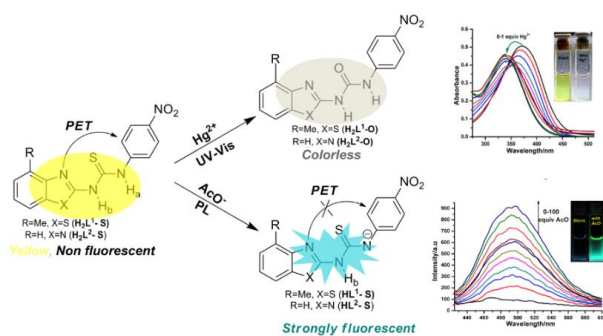
Inorg. Chem., **2019**, 58, 9982-9991.



2. Single Molecular Dual Analyte Thio-Urea based Probes for Colorimetric Hg²⁺ and Fluorometric AcO⁻ Detection and Its' Application in Bioimaging.

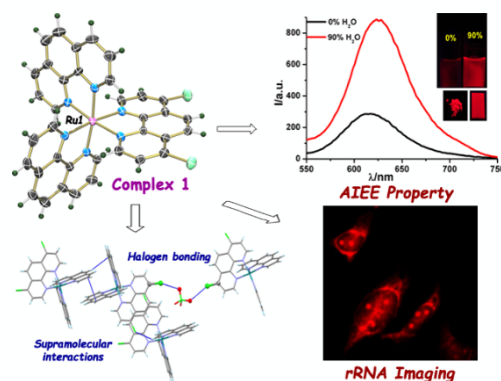
Sumit Kumar Patra, Bhaskar Sen, Sanjoy Kumar Sheet, Bodhisattwa Banerjee, Nirmalendu Saha, Snehadrinarayan Khatua.

Inorganica Chimica Acta, **2019**, 492, 119- 130



3. Aggregation-Induced Emission-Active Ruthenium(II) Complex of 4,7-Dichloro Phenanthroline for Selective Luminescent Detection and Ribosomal RNA Imaging.

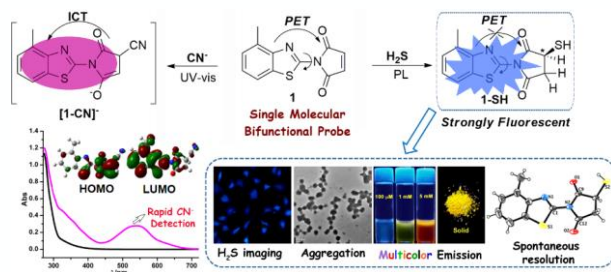
Sanjoy Kumar Sheet, Bhaskar Sen, **Sumit Kumar Patra**, Monosh Rabha, Kripamoy Aguan, Snehadrinarayan Khatua, *ACS Appl. Mater. Interfaces*, **2018**, *10*, 14356–14366.



4. Highly Sensitive Bifunctional Probe for Colorimetric Cyanide and Fluorometric H₂S Detection and Bioimaging: Spontaneous Resolution, Aggregation, and Multicolor Fluorescence of Bisulfide Adduct.

Sumit Kumar Patra, Sanjoy Kumar Sheet, Bhaskar Sen, Kripamoy Aguan, Debesh Ranjan Roy, Snehadrinarayan Khatua

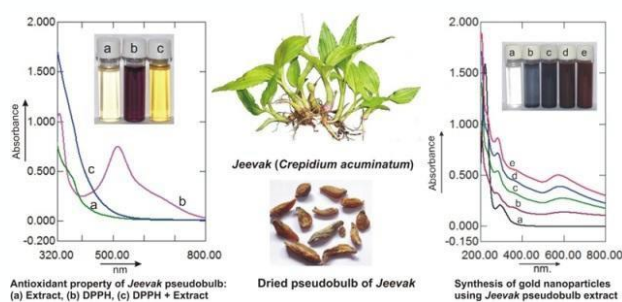
J. Org. Chem., **2017**, *82*, 10234–10246.



5. Study of Antioxidant Property of the Pseudo Bulb Extract of Crepidium Acuminatum (Jeevak) and its Use in the Synthesis of Gold Nanoparticles.

Braja Gopal Bag, Shib Shankar Dash, **Sumit Kumar Patra**.

Int. J. Res. Chem. Environ, **2014**, *4* 133-138



List of conference presentations:

1. **Sumit Kr. Patra** and Snehadrinarayan Khatua, **Poster presentation.** National Seminar on Contemporary Challenges in Chemistry (**NSC3-2018**), NEHU, Shillong, 20th-21st November, 2018.
2. **Sumit Kr. Patra** and Snehadrinarayan Khatua, **Poster presentation.** International Conference on Chemistry for Human Development (**ICCHD-2018**), Heritage Institute of Technology, Kolkata, 8th to 10th January, 2018.
3. **Sumit Kr. Patra** and Snehadrinarayan Khatua, **Poster presentation.** Recent Trends in Chemical Science (**RTCS-2017**), National Institute of Technology Meghalaya, Shillong, 12th -13th October, 2017.

Personal Information

Mr. Sumit kumar patra

Present address: Department of Chemistry, NEHU, Shillong-793022

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Mobile: +91-9800350206, +91-9089511384

Date of Birth: 09-12-1990

Nationality: Indian

Sex: Male

Marital Status: Single

Spoken Languages: English, Bengali (mother tongue), Hindi

Declaration:

I, hereby declare that the above-furnished particulars are true to the best of my knowledge and belief .If given a chance, I will prove my efficiency, my loyalty and willingness to work.

Sumit Kr. Patra