

Anubhav Rajpoot

Curriculum Vitae

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Area of Interest

Supramolecular chemistry, Organic Chemistry, Macromolecular Chemistry, Photo Chemistry, Click Chemistry, Peptide Chemistry.

Education

2013–current **Graduate**, *Indian Institute of Science Education and Research (IISER)*, Kolkata, currently a 5th year student at Department of Chemical Sciences., **CGPA – 7.65/10 (upto 9th semester)**.

Currently enrolled in 10th semester of 5 year Integrated BS-MS Dual Degree program in Chemistry, IISER Kolkata.

2012 **Higher Secondary Education**, *K. S. I. college, Uttar Pradesh Board of High School and Intermediate Education*, Kanpur, **Percentage – 83.66% (PCM)**.

2010 **Secondary Education**, *K. S. I. college, Uttar Pradesh Board of High School and Intermediate Education*, Kanpur, **Percentage – 78.50 %**.

Publication

2018 Rajan Kumar, **Anubhav Rajpoot** and Raja Shunmugam, Engineering Biodegradable Polymeric Network as Efficient and Selective Toxicant Remover.(communicated)

2018 Rajan Kumar, **Anubhav Rajpoot**, Amritangshu Roy, Ajin Babu and Raja Shunmugam. "In situ" grown recyclable crosslinked bio-compatible framework showing efficiency to Physisorption and selective release towards Dyes.(manuscript under preparation)

2018 Rajan Kumar, **Anubhav Rajpoot** and Raja Shunmugam. Norbornene based material with their efficiency for removal of water contaminants. (manuscript under preparation)

Relevant Courses

Fundamentals of Spectroscopy, Reaction Mechanisms in Organic Chemistry, Synthesis and Characterization Laboratory, Chemistry of Main group Elements, Organic Synthesis, Quantum Chemistry II, Advanced Physical Chemistry Laboratory, Polymer Chemistry, Chemistry of Transition Elements, Physical Organic Chemistry, Advanced Spectroscopy, Organic Synthesis Laboratory, Polymer Chemistry laboratory, Organometallic Chemistry and Catalysis, Molecular Structure and Symmetry, Important Perspectives of Organic Chemistry, Fluorescence Spectroscopy-Principles and Applications, Chemical Perspectives of Biological Pathway, Bioinorganic Chemistry, Natural Products and Medicinal Chemistry, Physical Methods of Structural Elucidation, Symmetry in Chemistry, Chemistry of Materials

Membership

- The department of chemical sciences, accredited **by Royal Society of Chemistry**.

Academic Achievements and Scholarships

- Recipient of 'INSPIRE' fellowship awarded by Department of Science and Technology (DST) under Human Resource and Development (HRD) Ministry, Government of India for student pursuing Sciences at Indian Institute of Science Education and Research.
- Recipient of INSPIRE Summer Internship grant to do a Summer Research Project abroad.
- Belongs to top one percent of the state in uttar pradesh Higher Secondary Board Examinations, 2012
- Secured first position in school level in uttar pradesh Higher Secondary Board Examinations, 2012

Research Experience

MS Thesis

2017 - Present - "In-situ" derived tool for removal of organo-amphiphilic toxicants from polluted water bodies.

Supervisor Dr. Raja Shunmugam, *Indian Institute of Science Education and Research Kolkata, India*
Description Currently I am working on facile routes to synthesis of polymer organic framework(POF) which can be used for the removal of dyes and other toxicants with reusable property. Some of my synthesized POF showed remarkable property in removal of organic and inorganic industrial toxicants with material exhibiting reusable property.

Summer Internship

May - July, 2017 **Synthesis of Photo-clickable dendrimer for further use in water purification:**

Supervisor Dr. Raja shunmugam, *Indian Institute of Science Education and Research Kolkata, India*
Description The aim of the project was to synthesize dendrimer and its characterization. Further investigation on dendrimer towards removal of toxic anions from water is under progress.

May - July, 2016 **Synthesis of photo-clickable monomer.**

Supervisor Dr. Raja shunmugam, *Indian Institute of Science Education and Research (IISER) Kolkata*
Description The aim of the project was to prepare different kind of photo clickable monomer and their characterization. These synthesized monomers are being used in synthesis of different types of cross-linked polymers. The study for removal of toxicants is under progress.

May - Jul, 2015 **Synthesis of chitosan based carbon dots and Nano-composite for biomedical application.**

Supervisor Prof. P.K. Dutta, *Motilal Nehru National Institute of Technology, Allahabad*

Description During the project, chitosan based nanoparticles were synthesized using different type of process. During the project I learned various instruments like Rotary evaporator, hydrothermal apparatus, laminar flow hood and Co2 incubator and performed the experiment successfully. After synthesis of nanoparticle antibacterial test was performed on gram (+) and gram (-) bacteria.

Semester Projects

2016 Synthesis and characterization of 3-Methylpyrazol-5-one.

Supervisor Dr. Debasish Halder, *IISER Kolkata*

Laboratory Skills

Techniques Known All basic techniques of Chemistry Laboratory(Plate TLC, Schelnk Line, Column Chromatography etc.)

Facilities Used pH-meter, Conductometer, UV-Vis spectrophotometer, Fluorimeter (PL), IR spectrophotometer, Cyclic Voltammeter (CV), High Performance Liquid Chromatography (HPLC), Advanced Polymer Chromatography (APC).

Conferences Attended

Academic Conferences

- 2017 One day conference for celebrating 70 years of India - Russia diplomatic relationships on the topic "Polymeric Hydrogels" IISER Kolkata.
- 2017 Asian Meeting on Metal Oxide Assemblies, IISER Kolkata.
- 2017 Smart Materials : Methods and Applications, SPIE, IISER Kolkata.
- 2015 Research on biopolymer challenge and opportunities -2015, MNNIT Allahabad.
- 2014 Winter school on photonics, SPIE, IISER Kolkata.

Presentations

- 2017 Poster entitled "Engineering Biodegradable Polymeric Network as Efficient Trapper for Toxicants" in a one day conference for celebrating seventy years of India-Russia diplomatic relationships.
- 2017 "Communications and Leadership" for Introduction to psychology course.
- 2016 "Design, synthesis, and carbon-heteroatom coupling reactions of organometallic nickel(IV) complexes" for Organometallics course.
- 2016 "Synthesis and characterization of 3-Methylpyrazol-5-one" as part of semester project for Organic synthesis course.

Cultural Conferences

- 2014 VIRASAT Convention of SPICMACAY Chapter of IISER Kolkata.

Scores

English Proficiency Examination

ToEFL 88

Computation Skills

Languages PYTHON, C, HTML 5, CSS3, L^AT_EX

Plotting Tools Origin, GnuPlot

Drawing Tools Chemdraw, Adobe Photoshop

Teaching Skill

Teaching Assistantship Physical Chemistry Laboratory CH1202, Course Instructor: Dr. Priyadarshi De.

Management Skills

- 2017 Volunteered Second Convocation Ceremony of IISER Kolkata.
- 2016 Fest coordinator of "INQUIVESTA 2016-the biggest science festival of India".
- 2016 Participated in National Science Camp (VIJYOSHI,2016) as a volunteer.
- 2015 Event Organizer of Botprix - a robotic event of Inquivesta, Science Festival of IISER Kolkata.
- 2014- 2015 Secretary of Science club of IISER Kolkata.

Extracurricular Activities

Selected Badminton player for "Inter IISER sports meet -2017", Archery, Basketball, Cricket, Chess, Volley ball, Photography.

References

- **Dr. Raja shunmugam**
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- **Dr. Priyadarshi De**
Associate Professor
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- **Prof. Pradeep K. Dutta**
Professor
Department of Chemical Sciences (DCS)
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