Ravneet Kaur

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Nationality: Indian

Education

Class X (Central Board of Secondary Education) D.A.V. Public School CGPA: 10 (out of 10)	April 2010 - March 2011
Class XII (Central board of Secondary Education) D.A.V. Public School Marks percentage: 89.6	April 2012 - March 2013
B.Tech. (Chemical Science and Technology) Indian Institute of Technology, Patna SPI(on a scale of 10): Semester I: 7.18 Semester II: 7.32 Semester III: 6.65 Semester IV: 8.71	July 2013 - Present Expected graduation: 2017

Topics of Interest

Nanochemistry and Nanoelectronics, Fluid dynamics, Process control and design, Industrial Applications of Chemistry

Projects

- **User Interface Design** — **May 2014 – July 2014**
  - Training in Core JAVA from IIAE institute, Ludhiana
  - Designed a simple user login Interface
- **Manual ball picking Robot** — **August 2014 - September 2014**
  - Designed a robot that picks up and collects tennis balls
  - Potential use in transporting items in an industry from one place to another
- **Effect of temperature on viscosity of fluids** — **October 2014-November 2014**
  - Studied the effect of temperature on viscosity of liquids and gases. Also discussed the causes of the resulting increase or decrease. Studied some real life examples.

- **Water Quality Measurement Device** **December 2014 – March 2015**

  - Project under **Rural Technology Development Club** of IIT Patna
  - Development of a low cost solution for detection of various harmful ions in water eg. As(II).
  - Learning Outcomes:
    - Chemodosimeters(Biological sensors, turn-on fuoroscent chemodosimeters, Arsenic detecting biosensors)
    - Ion detection in water
    - Measurement using Electrode setup

- **Synthesis and optimization of $Au_{25}Ag_2(PET)_{18}$ cluster** **May 2015 – July 2015**

  - Synthesis of $Au_{25}(PET)_{18}$ nanoparticle cluster which catalyse chemoselective hydrogenation (100%) of α,β-unsaturated ketones and aldehydes.
  - Study of crystal structure of $Au_{25}(PET)_{18}$ nanoparticle clusters.
  - Synthesis of $Au_{25}Ag_2(PET)_{18}$ nanoparticle cluster which can remarkably accelerate the hydrolysis of 1,3-diphenylprop-2-ynyl acetate.
  - Optimisation of the formation of $Au_{25}Ag_2(PET)_{18}$ from $Au_{25}(PET)_{18}$ nanoparticle cluster.

  Project Supervisor: Prof. T. Pradeep, IIT Madras

Technical Expertise

- Synthesis of organic compounds and Nanoparticles and their characterization, Protein estimation, UV-Vis, IR and NMR spectroscopy, Dynamic light scattering, MALDI-TOF, various chemical engineering analytical tools
- Programming Languages: JAVA, C
- Computer Skills: MATLAB, Origin, AUTOCAD, Arduino
- Operating Systems: Windows, LINUX

Position of Responsibility

- **Project Manager**, Rural Technology Development Club, IIT Patna
- **Coordinator**, Media and PR Department, ANWESHA(Techno-cultural fest of IIT Patna) 2016
- **Technical Secretary**, Girls Hostel, IIT Patna (2015-2016)
- **Event Organizer** in ANWESHA 2015
- **Sub-Coordinator**, Hospitality, ANWESHA 2015, IIT Patna

Extra Curricular Activities

- Managing and organizing events at college fest
- Basketball player (team participated in Inter IIT sports meet and first runner-up in

	ICBL) • Active member of Dance and cultural club of IIT Patna • Winner of many State-level Writing Competitions