



Srimukh Prasad V K
Chemistry
Indian Institute of Technology, Bombay
Specialization: 5 year Integrated MSc. in Chemistry

101030027
UG Third Year(Dual Degree)
Male
DOB: 21-01-1992

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2012	8.50
Intermediate/+2	Karnataka State Pre-university Board	S.K.C.H. composite PU college	2010	92.83
Matriculation	Karnataka State Education and Examination Board	Sri Kumaran Childrens Home	2008	98.08

PROJECTS AND WORK VISITS

Synthesis of novel crystal forms of drugs, Guide: Prof. T.N. Guru Row May '12 - July '12
Institution: Indian Institute of Science

- Conducted a extensive polymorph screening and concluded that sulfamethizole (a sulfonamide antibiotic) is monomorphic
- Synthesized new salts and cocrystal forms of sulfamethizole using synthon based approach with significantly higher solubility and bioavailability expectancy
- Identified the role of chalcogen bonding in controlling molecular conformation
- Analysed the Cambridge Structural Database and proved the robustness of the chalcogen interaction so as to propose it as a synthon

Chemical reactivity indicators, Guide: Prof. Raghavan B. Sunoj May '11 - Present
Institution: Indian Institute of Technology Bombay

- Working on quantification of LUMO energy activation in chemical catalysis
- Analysing its correlation with Fukui function and local electrophilicity/nucleophilicity indices
- Learnt and implemented Gaussian package for the computational work

Industrial Work Visit Feb '12
Industry: Rashtriya Chemicals and Fertilizers Ltd.

- Visited this multi-complex plant to study the design and operation of sulfuric acid plant
- Analysed its working and made material and energy balance calculations for real-time data

Shape detection using C++, Guide: Prof. R.K. Joshi Mar '11 - Apr '11
Institution: Indian Institute of Technology Bombay

- Implemented an algorithm to detect basic 2-Dimensional shapes as a part of the project work of Computer Programming course
- Awarded AA (=10/10) grade in the course which is given to the top 10% of the batch

Project Citizen Aug '06 - Jan '07
Mentor institution: Center for Civic Education, Calabasas, California

- Presented the ill effects of smoking and explored possible ways to curb the menace
- Submitted a referendum to the government based on our studies which was declared the best amongst 50 participating schools

ACADEMIC ACHIEVEMENTS

- Ranked 1st in the Department of Chemistry [Current]
- Placed in the top 1% of the 450,000 Joint Entrance Exam applicants [2010]
- Attained the top 1% of the state of Karnataka in Physics Olympiad [2009]
- Ranked 19th the state level aptitude test taken by about 30,000 students conducted by Department of State Education Research and Training [2008]

AWARDS AND HONOURS

- Summer fellowship** awarded by the Indian Academy of Sciences to work as a research student in Solid state and Structural Chemistry Unit, Indian Institute of Science [2012]
- Institute Academic Prize** given by IIT Bombay for excellence in academics [2012]
- INSPIRE scholarship** given by the Department of Science and Technology, Govt. of India to attract youth to pursue science [Current]
- International Award for Young People** (Bronze standard) for active participation in social service, adventurous expeditions, sports and other skill development activities [2009]
- National Talent Search Scholarship** given by National Council for Education, Research and Training to the top 0.7% of the 150,000 applicants who clear the two-tier screening process consisting of a national level written test followed by interview [2008]

SKILLS

- Experimental:** UV/Visible spectrometer, TLC, Colorimeter, Crystal mounting for Single crystal X-Ray diffraction studies, Powder X-ray diffraction, Separation techniques using chromatography, Elementary organic synthesis, Crystallization techniques
- Software and Programming:** C, C++, \LaTeX , MATLAB, Chem Office, GAUSSIAN, ConQuest
- Languages:** English, Hindi, Kannada, Telugu

RELEVANT COURSE WORK

- Chemistry:** Basic Spectroscopy, Inorganic Chemistry of Transition Metals, Carbonyl Chemistry, Thermodynamics, Chemical and Statistical Thermodynamics, Advanced Organic Chemistry, Introduction to Chemical Engineering, Molecular Biology
- Physics:** Modern Physics, Electricity and Magnetism, Optics
- Mathematics:** Vector Calculus, Basic Linear Algebra, Differential Equations I
- Electrical Engineering:** *Currently pursuing minor degree in Electrical Engineering*
Introduction to Electrical Engineering, Digital Electronics, Analog Electronics, Signals and Systems
- Others:** Computer Programming and Utilization, Data Analysis and Interpretation
- Laboratory:**
- Inorganic: Qualitative and quantitative analysis of inorganic compounds
 - Physical: Conductometry, potentiometry, surface chemistry and kinetics related experiments
 - Organic: Separation and purification techniques in organic chemistry, Basic organic reactions

POSITIONS OF RESPONSIBILITY

- Internship Coordinator**, Placement cell *July 2012 - Present*
- Responsible for providing summer and winter internships to the 2nd and 3rd year undergraduates by contacting universities and companies for internship openings
 - Actively involved in scheduling, coordinating and acting as an interface between student and universities in order to streamline the process of internship application
- Mentor**, Department Academic Mentorship Programme *July 2012 - Present*
- Responsible for providing academic support to underperforming sophomores in the form of tutorials and doubt clearing sessions
 - Collaborating with faculty to improve teacher-student interaction in the department