



## Prof. Shyamalava Mazumdar

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Prof S Mazumdar is a Senior Professor at the Department of Chemical Sciences, Tata Institute of Fundamental Research (TIFR), Mumbai, India. He completed his Ph.D on NMR of model hemes in 1990, and subsequently worked as a Post doctoral fellow with Prof. HAO Hill, FRS at University of Oxford. He joined TIFR as a graduate student in 1985 and later became an academic faculty leading the Bioinorganic Chemistry programme at the Institute.

Research of Prof. Mazumdar deals with the study of structural and functional aspects of the active site formed by the metal ion and the surrounding amino acids in iron and copper containing metalloenzymes and metalloproteins. He also has been working on developing Bio-nano conjugation and investigating *in vitro* catalysis by modified metalloenzymes.

Prof. Mazumdar has made significant contributions to unraveling the role of the active site environment on the stability and function of cytochrome P450 enzymes. He has received several recognision including Bronze medal from the Chemical Research Society, India, and Fellowship of the National Academy of Sciences, India.

His work has been well recognized internationally, published more than 100 peer reviewed papers, and he has given invited lectures at various International conferences. He was a visting Professor at the Nagoya University, Japan and at the Princeton university, USA. He also visited the Frankfurt University, Germany as a Humboldt Research fellow. He is the Indian representative in the Steering Committee of the Asian Biological Inorganic Chemistry Conferences (AsBIC), and was the convenor of the AsBIC-II held at Goa in 2004. He also organized the Symposia on Advances in Biological Inorganic Chemistry series which is the only major conference in the area in India.

#### RECENT PUBLICATIONS OF PROF S MAZUMDAR

- 1) Conformational properties of the bis- $\mu$ -(thiolato) dicopper center in cytochrome c oxidase  
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- 2) Electrospray Ionization Mass Spectrometry: A Technique to access the information beyond the molecular weight of the analyte. Shibdas Banerjee and Shyamalava Mazumdar  
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- 3) Sequence Specific Association of Tryptic Peptides with Multiwalled Carbon Nanotubes: Effect of Localization of Hydrophobic Residues. Megha S. Deshpande and Shyamalava Mazumdar.  
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- 4) Role of the Surface-Exposed Leucine 155 in the Metal Ion Binding Loop of the CuA Domain of Cytochrome c Oxidase from *Thermus thermophilus* on the Function and Stability of the Protein. Manas Kumar Ghosh, Jitumani Rajbongshi, Debajani Basumatary, and Shyamalava Mazumdar.  
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- 5) Selective Deletion of the Internal Lysine Residue from the Peptide Sequence by Collisional Activation. Shibdas Banerjee, Shyamalava Mazumdar. **J. Am. Soc. Mass Spectrom.** (2012) 23, 1967-1980
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- 9) Mechanism of copper incorporation in the subunit II of cytochrome c oxidase from *Thermus thermophilus*: Identification of intermediate species. Manas Kumar Ghosh, Priyanka Basak, and Shyamalava Mazumdar. **Biochemistry** (2013), 52 , 4620–4635
- 10) Role of Substituents on the Reactivity and Product Selectivity in the Reactions of Naphthalene Derivatives Catalyzed by the Orphan Thermostable Cytochrome P450, CYP175A1. Shibdas Banerjee, Sandeep Goyal, and Shyamalava Mazumdar  
**Bioorganic Chemistry** (2015) 62, 94–105
- 11) Regioselective Oxygenation of Polyunsaturated Fatty Acids by the Thermostable P450 from *Thermus thermophilus* HB27. Shibdas Banerjee, Dwaipayan Datta Gupta, and Shyamalava Mazumdar. **Current Biotechnology**, (2015), 4(3): 345 – 356
- 12) A molecular Fe-complex as a catalyst probe for in-gel visual detection of proteins via signal amplification. Sushma Kumari, Chakadola Panda, Shyamalava Mazumdar and Sayam Sen Gupta. **Chem. Commun** (2015), 51, 15257-15260, DOI: 10.1039/C5CC04399A
- 13) The protein inhibitor of nNOS (PIN/DLC1/LC8) binding does not inhibit the NADPH-dependent heme reduction in nNOS, a key step in NO synthesis. Swapnil S. Parhad, Deepa Jaiswal, Krishanu Ray, Shyamalava Mazumdar  
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