



Centre for Research in Nanotechnology & Science
Sophisticated Analytical Instrument Facility
IIT Bombay

Webinar on “Application of paramagnetic relaxation enhancement (PRE)-NMR based methods for probing structure and dynamics in biomolecules.”



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**16th December
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3:00 pm to 4.00 pm (IST)



Platform (Microsoft Teams)

Abstract : NMR spectroscopy has been instrumental in solving the structure and probing the dynamics of biomolecules over a wide range of timescales. In NMR, the through-space and through-bond interactions between nuclear spins are exploited to transfer magnetization, from which structural information like internuclear distances and dihedral angles can be derived. However, internuclear distances greater than 5-6 Å are not measurable using these traditional approaches. Introduction of an unpaired electron spin in the vicinity of nuclear spins results in paramagnetic shifts and relaxation enhancement (PRE) which are measurable by NMR. The observed effect depends on the properties of the unpaired electron. In this talk, we will focus exclusively on PRE effects induced by unpaired electrons, with an isotropic g-tensor, which result in small to negligible paramagnetic shifts. We will discuss PRE-derived NMR restraints and recent applications to structure determination/ refinement and dynamics of biomolecules in solution

Free Registration link

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Organizer: Prof .Anil Kottantharayil
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