Tata Institute of Fundamental Research
Survey No. 36/P, Gopanpally Village, Serilingampally, Ranga Reddy Dist., Hyderabad - 500107

Internal Webinar

Synthesis of α, α′-Diamino-p-Quinodimethanes with Stable Oxidation States: A Partially Hydrogen Substituted Thiele's Hydrocarbon

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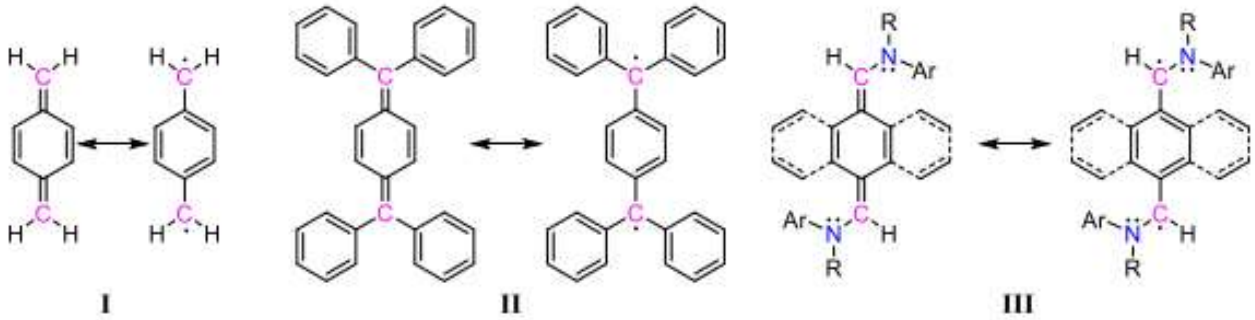
p-Quinodimethane aka p-xylylene **I** is a very important intermediate in poly-xylene formation reaction.[1] But because of it's diradical character it shows very high reactivity, unlike its tetra-substituted derivatives i.e. Thiele's Hydrocarbon **II** families which are quite stable.[2]

In this seminar, I will present our recent findings on the synthesis, characterization and reactivities of various derivatives of α, α′-disubstituted-p-quinodimethanes [3] **III** and it's higher analogues. These compounds show amphoteric redox behaviour and we are able to investigate all possible oxidation states. So that this study will make a bridge between p-xylylene and its tetra-substituted derivatives.



References

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3. Mahata, A.; Chandra, S.; Maiti, A.; Rao, D. K.; Yildiz, C. B.; Sarkar, B.; Jana, A. α, α'-diamino-p-quinodimethanes with three stable oxidation states. Org. Lett. 2020, 22,8332–8336.

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