



Library Indian Institute of Science Education and Research Mohali



DSpace@IISERMohali (/jspui/)
/ Thesis & Dissertation (/jspui/handle/123456789/1)
/ Master of Science (/jspui/handle/123456789/2)
/ MS-14 (/jspui/handle/123456789/1078)

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/1242>

Title: Probing Excited State Dynamics of Copper Complexes and Investigating Catalysis via Single Electron Transfer

Authors: S., Vidhyalakshmi (/jspui/browse?type=author&value=S.%2C+Vidhyalakshmi)

Issue Date: 9-Oct-2019

Abstract: The major theme of the work presented in this dissertation is to develop an understanding of the basic processes that govern the excited state of transition metal complexes and to shed an insight into the mechanism of single electron transfer as a means of driving catalysis. Charge transfer states and unique photophysical characteristics exhibited by transition metal complexes have been probed to develop a strong foothold on the driving processes of photosensitization. The excited state dynamics coupled with the lifetime of homoleptic and heteroleptic base metal systems has been thoroughly investigated with substantial experimental and computational aids to arrive at appropriate strategies with the intent of developing an effective and cost efficient photosensitizer to replace the conventional noble metal photosensitizers. In the other part of the thesis, base metal assisted catalysis of two industrially significant reactions have been established. The role of redox active ligands to serve as an electron reservoir facilitating single electron transfer catalysis has been investigated.

URI: <http://hdl.handle.net/123456789/1242> (<http://hdl.handle.net/123456789/1242>)

Appears in MS-14 (/jspui/handle/123456789/1078)

Collections:

Files in This Item:

File	Description	Size	Format	
MS14153.pdf (/jspui/bitstream/123456789/1242/3/MS14153.pdf)	Full Text.pdf	3.04 MB	Adobe PDF	View/Open (/jspui/bitstream/123456789/1242/3/MS14153.pdf)

Show full item record (/jspui/handle/123456789/1242?mode=full)

[Statistics \(/jspui/handle/123456789/1242/statistics\)](#)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.