



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-10 (/jspui/handle/123456789/447)

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/621>

Title:	Tyrosine-based Schiff Base Ligands and Their Zn(II) and Cd(II) Complexes as Fluorogenic Chemosensors for Anions
Authors:	Kumar, Nitish (/jspui/browse?type=author&value=Kumar%2C+Nitish)
Keywords:	Chemistry Chiral Ligands L-tyrosine
Issue Date:	13-Aug-2015
Publisher:	IISER-M
Abstract:	<p>In this work, three new chiral ligands based on L-tyrosine, namely L-N-(methyl-3-nitro)- Tyrosine [L-H2Tyr-3-nitro], L-N-(methyl-3-chloro)-Tyrosine [L-H2Tyr-3-chloro] and L-N- (methyl-3-methoxy)-Tyrosine [L-H2Tyr-3-methoxy], and their Zn(II) and Cd(II) complexes are prepared in excellent yields. The purity of the ligands is confirmed by ¹H NMR spectroscopy and melting point data. The ligands are characterized further by FT-IR, Fluorescence and UV-Vis spectroscopy, powder X-ray diffraction, and ESI-MS analysis. On the other hand, an extensive structural characterization of the metal complexes is done by elemental analysis, FT-IR and Fluorescence spectroscopy, powder X-ray diffraction. The chirality of ligands and metal complexes is established in the solution state by polarimetry. Utilizing the fluorescence property of both ligands and the metal complexes, these are examined for their sensing ability for various analytes, such as KF, KCl, KBr, KI and NaOAc, which play vital roles in many chemical, physiological and industrial processes. The differential behavior of the ligands based on the solvent polarity is also studied. These are found to be excellent fluorogenic chemosensors for fluoride and iodide ions.</p>
URI:	http://hdl.handle.net/123456789/621 (http://hdl.handle.net/123456789/621)
Appears in	MS-10 (/jspui/handle/123456789/447)
Collections:	

Files in This Item:

File	Description	Size	Format	
Thesis MS10088.pdf (/jspui/bitstream/123456789/621/3/Thesis%20MS10088.pdf)		3.79 MB	Adobe PDF	View/Open (/jspui/bitstream/123456789/621/3/T

[Show full item record \(/jspui/handle/123456789/621?mode=full\)](#)

[Statistics \(/jspui/handle/123456789/621/statistics\)](#)

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

