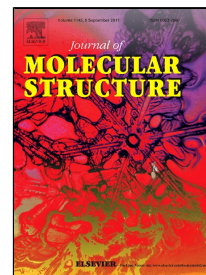


Accepted Manuscript

Synthesis and characterization of zinc(II) complex with tetradentate azo-thioether ligand: X-ray structure, DNA binding study and DFT calculation

Apurba Sau Mondal, Ajoy Kumar Pramanik, Lakshman Patra, Chandan Kumar Manna, Tapan Kumar Mondal



PII: S0022-2860(17)30751-2
DOI: 10.1016/j.molstruc.2017.05.131
Reference: MOLSTR 23872
To appear in: *Journal of Molecular Structure*
Received Date: 25 February 2017
Revised Date: 27 May 2017
Accepted Date: 29 May 2017

Please cite this article as: Apurba Sau Mondal, Ajoy Kumar Pramanik, Lakshman Patra, Chandan Kumar Manna, Tapan Kumar Mondal, Synthesis and characterization of zinc(II) complex with tetradentate azo-thioether ligand: X-ray structure, DNA binding study and DFT calculation, *Journal of Molecular Structure* (2017), doi: 10.1016/j.molstruc.2017.05.131

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

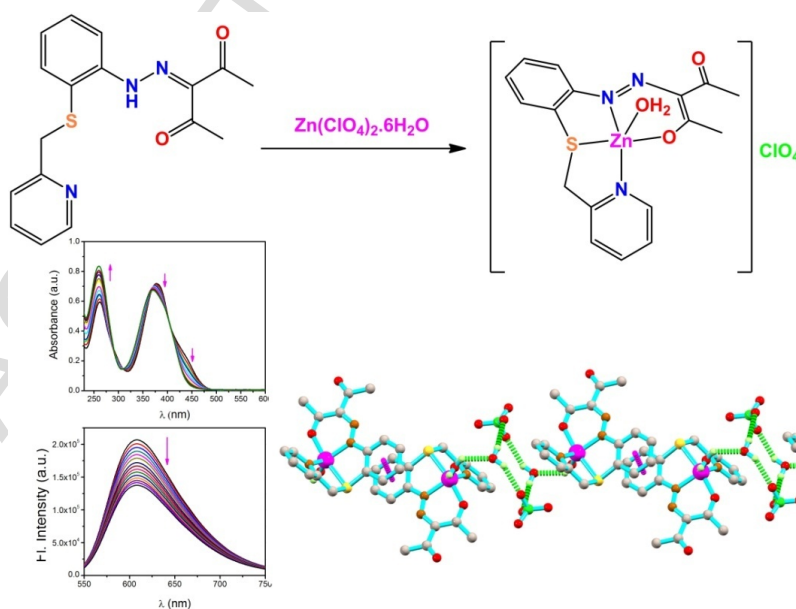
GRAPHICAL ABSTRACT

Synthesis and characterization of zinc(II) complex with tetradentate azo-thioether ligand: X-ray structure, DNA binding study and DFT calculation

Apurba Sau Mondal, Ajoy Kumar Pramanik, Lakshman Patra, Chandan Kumar Manna and Tapan Kumar Mondal*

Inorganic Chemistry Section, Department of Chemistry, Jadavpur University, Kolkata-700032, India.

A new zinc(II) complex, $[\text{Zn}(\text{L})(\text{H}_2\text{O})](\text{ClO}_4)$ (**1**) with azo-thioether containing NSNO donor ligand (HL) was synthesized. The ability of the complex to bind with CT DNA was investigated by UV-vis method and binding constant is found to be $4.16 \times 10^4 \text{ M}^{-1}$. Competitive binding titration with the intercalator ethidium bromide (EB) by fluorescence method was carried to assess the ability of the complex to displace EB from EB-DNA and the Stern-Volmer dynamic quenching constant, K_{SV} found to be $1.2 \times 10^4 \text{ M}^{-1}$.



Download English Version:

<https://daneshyari.com/en/article/5160246>

Download Persian Version:

<https://daneshyari.com/article/5160246>

[Daneshyari.com](https://daneshyari.com)