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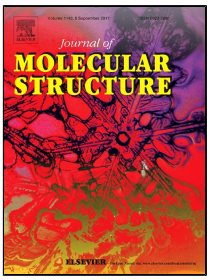

Synthesis and characterization of zinc(II) complex with tetradentate azo-thioether ligand: X-ray structure, DNA binding study and DFT calculation

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GRAPHICAL ABSTRACT

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

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A new zinc(II) complex, $[Zn(L)(H_2O)](ClO_4)$ (**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 4.16×10^4 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 1.2×10^4 M^{-1}.