Tetrathiafulvalene based electroactive ligands and complexes: Synthesis, crystal structures and antifungal activity

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Résumé en anglais	The synthesis of two tetrathiafulvalene-appended pyridinehydrazone pyrimidine ligands, namely (Z)-4-(2-((5-([2,2′-bi(1,3-dithiolylidene)]-4-yl)pyridin-2-yl)methylene) hydrazinyl)-6-chloropyrimidine L1 and (Z)-4-(2-((6-([2,2′-bi(1,3-dithiolylidene)]-4-yl)pyridin-2-yl)methylene) hydrazinyl)-6-chloropyrimidine L2 is described. Ligand L1 was reacted with cobalt(II) to yield a cationic metal complex [Co(L1)2] while ligand L2 was reacted with zinc(II) to afford a neutral metal complex [ZnL2Cl2]. The crystal structure analysis of [Co(L1)2] indicate that Co(II) ion is coordinated by six nitrogen atoms from two perpendicular ligands while in [ZnL2Cl2], Zn(II) is coordinated by two chlorine atoms and three nitrogen atoms. The electrochemical behavior indicate that ligands L1 and L2 and the zinc(II) complex are suitable fort the preparation of crystalline radical cation salts. Finally the determination of MIC80 values against C. albicans, C. glabrata, C. parapsilosis, C. krusei and E. dermatitidis revealed that the cobalt(II) metal complex [Co(L1)2] is active against all the studied fungi.
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