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# BOOK OF ABSTRACTS

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## A novel benzamide derivative *cis*-Pt(II) metal complex: Synthesis, crystal structure and antimicrobial activity

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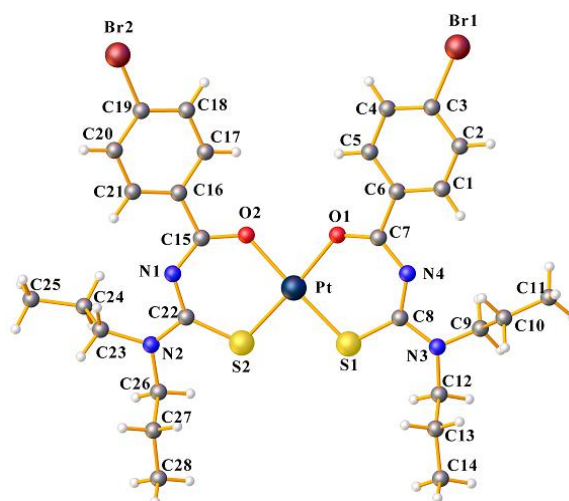
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A new platinum(II) complex with benzamide derivative ligand [4-bromo-*N*-(dipropylcarbamothioyl)benzamide], was synthesized and structurally characterized by NMR, FT-IR and X-ray diffraction techniques. Crystal data for the synthesized complex, C<sub>28</sub>H<sub>36</sub>Br<sub>2</sub>N<sub>4</sub>O<sub>2</sub>PtS<sub>2</sub>: triclinic, space group P-1,  $a = 8.7900(1) \text{ \AA}$ ,  $b = 12.8300(1) \text{ \AA}$ ,  $c = 14.6431(2) \text{ \AA}$ ,  $\alpha = 88.576(1)^\circ$ ,  $\beta = 82.696(1)^\circ$ ,  $\gamma = 80.722(1)^\circ$ . Single-crystal analysis revealed that a square-planar coordination geometry is formed around the platinum atom by two sulphur and two oxygen atoms of the ligands, which are in a *cis* configuration. In addition, synthesized *cis*-Pt(II) metal complex was evaluated for both their *in-vitro* antibacterial and antifungal activity, the findings have been reported, explained and compared with fluconazole and ampicillin used as reference drugs.



**Figure 1.** Molecular structure of title compound.

**Keywords:** Benzamide derivative, Synthesis, Platinum complex, Antimicrobial activity, X-ray single crystal diffraction.

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