MOULAY H. YOUSSOUFI
Mohamed I University
Morocco

# Some new biologically active metal-based sulphonamide

**Abstract:**

A new series of sulfonamide derived Schiff bases has been synthesized by a condensation reaction of various sulfonamides with aromatic aldehydes. The so obtained sulfonamide were further investigated for their chelation and biological properties with first row d-transition metal ions [cobalt(II), copper(II), nickel(II) and zinc(II)]. The nature of bonding and structure of all the synthesized compounds have been inferred from magnetic susceptibility and conductivity measurements, IR,1Hand 13C NMR, electronicspectral, mass spectrometry and CHN analysis data. The structure of ligand, 4-{[(E)-(5-bromo 2hydroxyphenyl)methylidene]amino}-N-(4,6-dimethylpyrimidin-2-yl)benzenesulfonamide has also been determinedby X-ray diffraction method. An octahedral geometry has been suggested for all the complexes. Theligands and their metal complexes have been screened for in vitro antibacterial, antifungal and cytotoxic properties. The result of these studies have revealed that all compounds showed moderate to significant antibacterial activity against one or more bacterial strains and good antifungal activity against various fungal strains.