

## MS32-P04 | TOWARDS THE LINEAR [S2X]<sup>+</sup> SYSTEMS: METAL COMPLEXES AND HALOGEN BONDING

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Halogen bonding (XB) has been defined as a noncovalent interaction between electropositive halogen region and electronegative atom. This rather well established interaction has shown recent importance in many fields of chemistry, like in supramolecular chemistry and molecular recognition. Halonium ions ( $X^+$ ) as donors of that interaction have provided a novel linear functionality, in which two acceptor molecules are bound by two parallel halogen bonds on opposite sides of the central halogen donor ( $X^+$ ). Recently, one of our interests and aim has been the preparation such systems with Sulphur acceptor ligands. These  $S \cdots X \cdots S$  XB systems are much harder to prepare and control than better known  $N \cdots X \cdots N$  systems due to several reasons, like instability of organic Sulphur compounds, two separate acceptor sites of S atom and multivalent behavior of S and X (also Ag) atoms. Although,  $N \cdots X \cdots N$  systems can be obtained via  $N \cdots Ag^+ \cdots N$  complexes, the corresponding route to obtain  $S \cdots X \cdots S$  systems has not been shown, so far, to be possible. To research the preparation of  $S \cdots X \cdots S$  systems and potential utilization of  $Ag^+$  intermediates we have prepared a series of  $S \cdots Y \cdots S$  ( $Y = Ag, Au, I, \dots$ ) complexes for structural characterization. The current presentation sums up the results of these investigations.