

# Supramolecular Halogen(I) Chemistry

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An exciting research challenge in supramolecular chemistry is to design, synthesize, and characterize novel architectures with applications in biology, chemistry, and materials science.[1] Predicting and designing non-covalently bound supramolecular complexes and assemblies is difficult because of the weakness of the interactions involved, thus the resulting superstructure is often a compromise between the geometrical constraints of the building blocks and the competing weak intermolecular interactions.[2]

Our research interest has been focused on the studies of weak non-covalent intermolecular, *viz.* supramolecular interactions as the driving force in complex formation, self-assembly and molecular recognition, especially in the solid state by single crystal X-ray diffraction. The lecture will highlight some of our recent studies on supramolecular complexes based on halogen-bonded systems, especially focusing on those based on halogen(I) cations.[3]

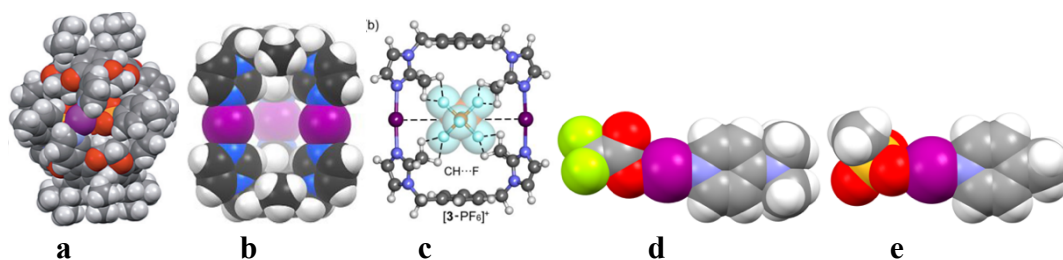


Figure 1. The X-ray or modelled structures of iodine(I) cation containing dimeric cages (**a**<sup>3a</sup> and **b**<sup>3b</sup>), a macrocycle (**c**<sup>3h</sup>), DMAP iodine(I) trifluoroacetate (**d**<sup>3g</sup>) and 4-methylpyridine iodine(I) methylsulfonate (**e**<sup>3k</sup>)

## References

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