

# BROMINATION OF SELECTED TRIORGANOTIN(IV) AND TETRAORGANOTIN (IV) COMPOUNDS

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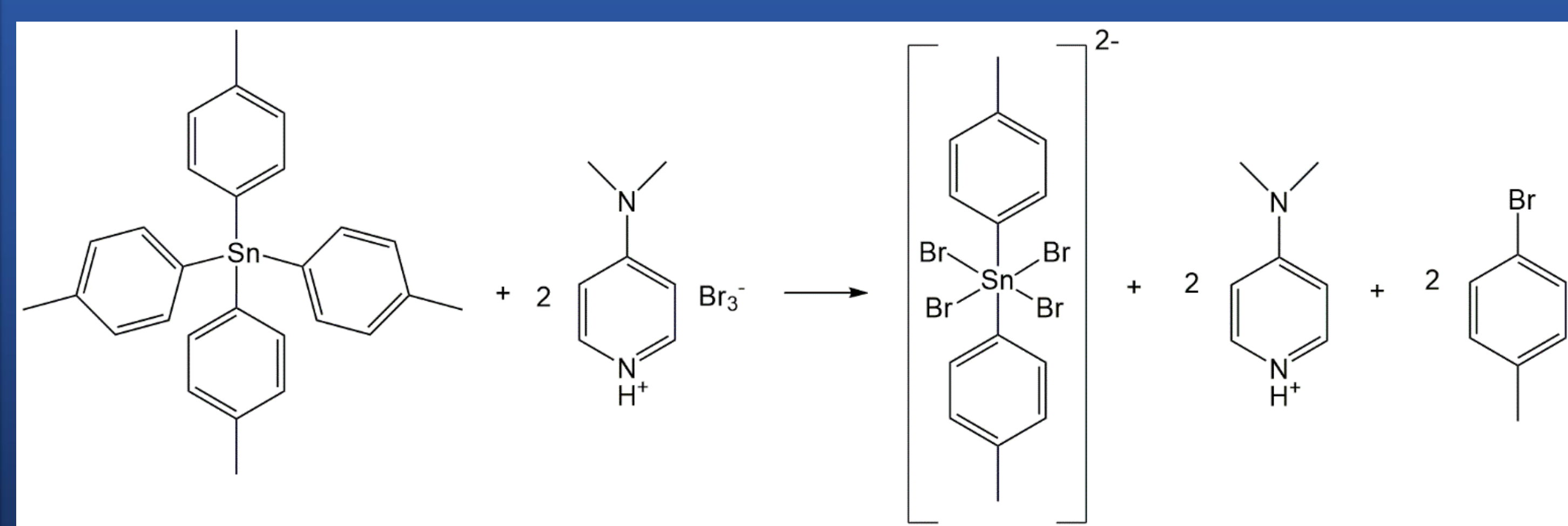
## INTRODUCTION

Bromination refers to the reaction which involves the addition of one or more bromines to a compound. It is more selective than chlorination as the reaction is less exothermic. Brominating agents eg. bromine, *N*-bromosuccinimide (NBS), 1,3-dibromo-5,5-dimethylhydantoin (DBMDH), 4-dimethylaminopyridine hydrobromide perbromide, pyridinium tribromide and trimethylphenylammonium bromide have been used in various bromination reactions. Bromine is not favourable as it is a strong brominating agent and the obtained products are not selective.

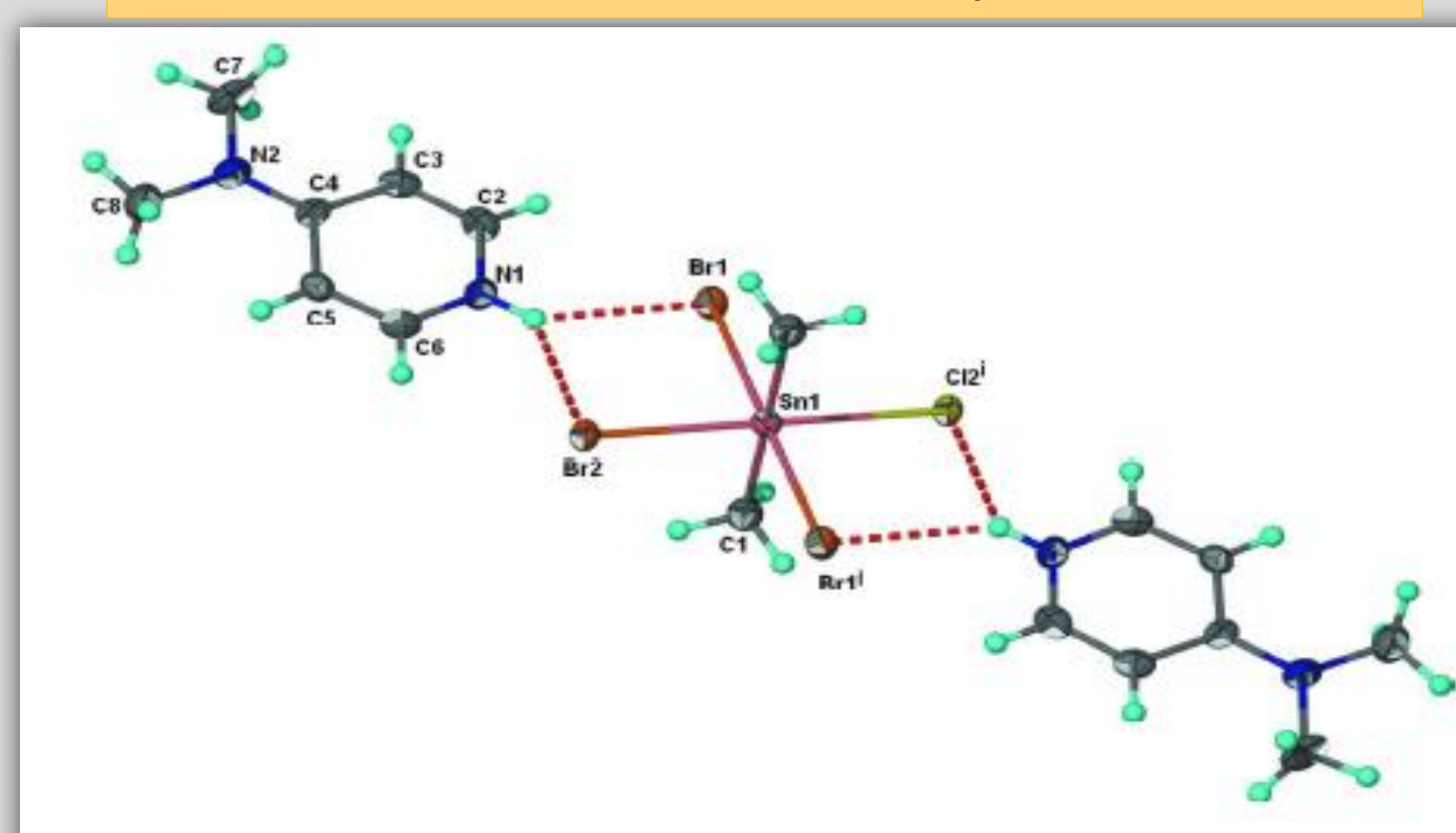
*N*-Bromosuccinimide (NBS) is an oxidizing agent that is often used as a source of bromine in various radical reactions and electrophilic additions. 1,3-Dibromo-5,5-dimethylhydantoin (DBMDH) is a convenient alternative to NBS for the bromination of electron-rich arenes. Mild brominating agents eg. trimethylphenylammonium bromide and 4-dimethylaminopyridine hydrobromide perbromide are used in the bromination of various organic compounds. Presently, the mild brominating agents will be used in the reaction with organotin(IV).

## RESULTS AND DISCUSSIONS

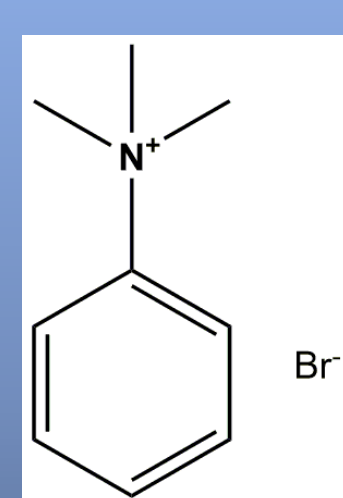
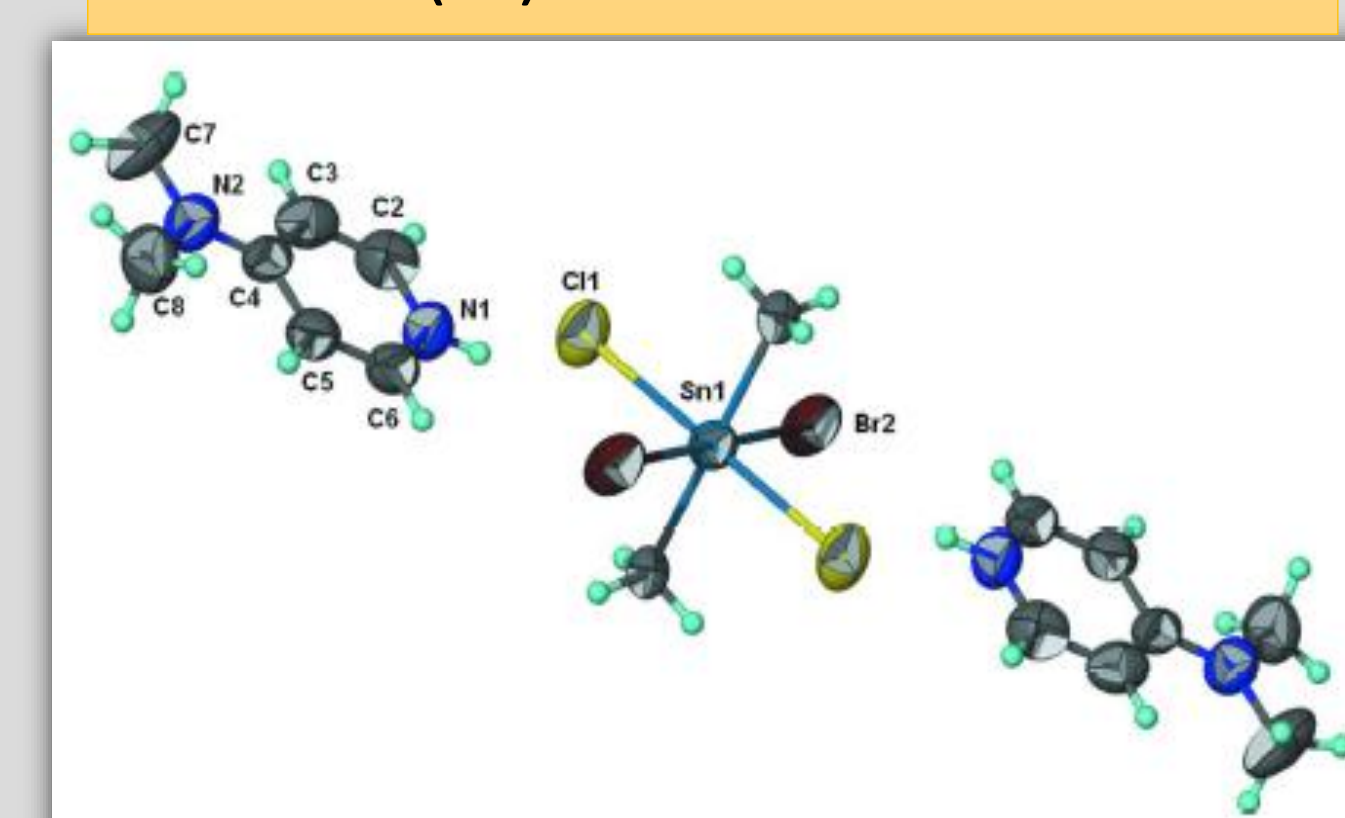
### Example of reaction:



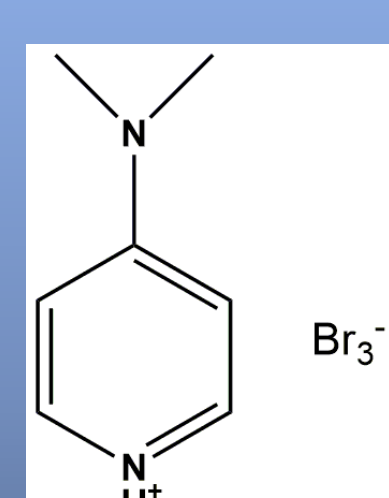
### Bis[4-(dimethylamino)pyridinium]tribromidochloridodimethylstannate(IV)



### Bis[4-(dimethylamino)pyridinium]-dibromidodichloridodimethylstannate(IV)

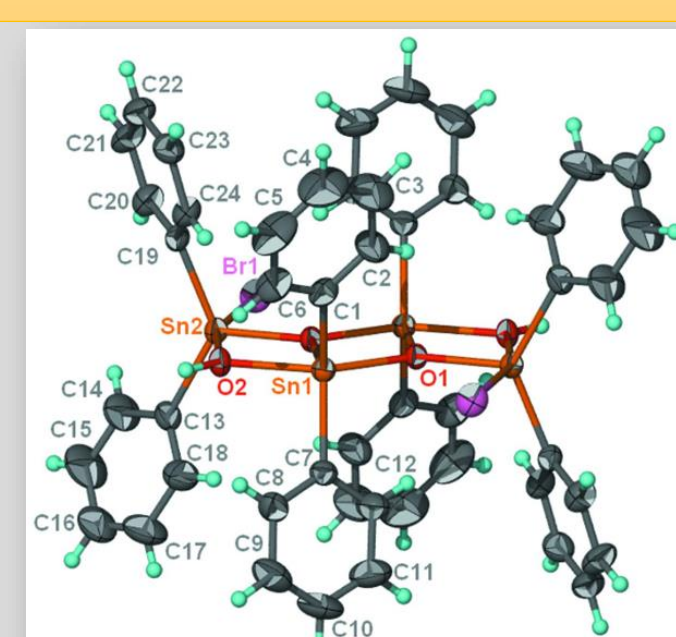


Trimethylphenylammonium bromide

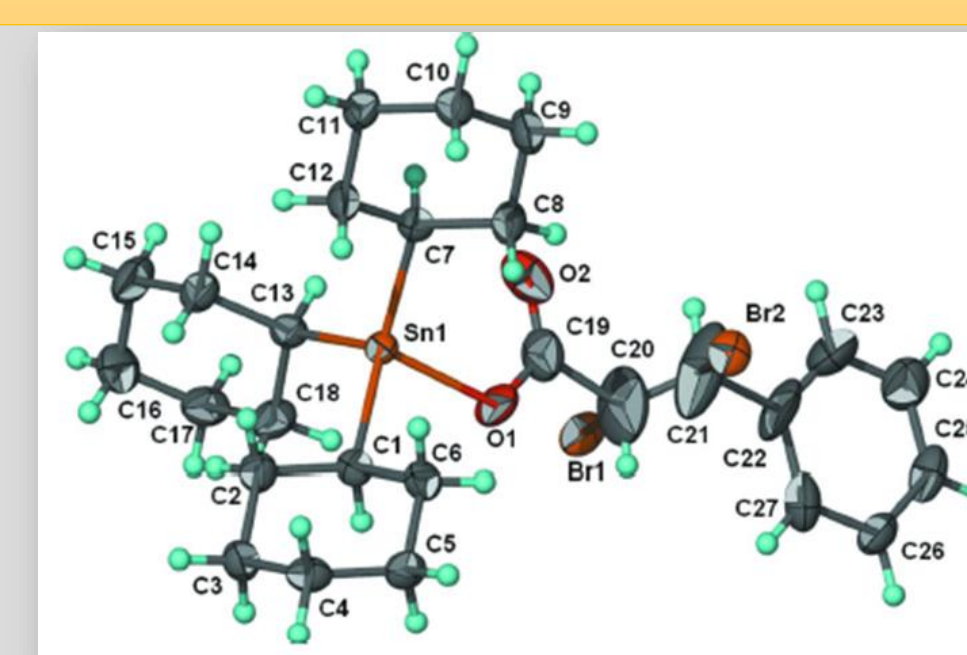


4-Dimethylaminopyridine hydrobromide tribromide

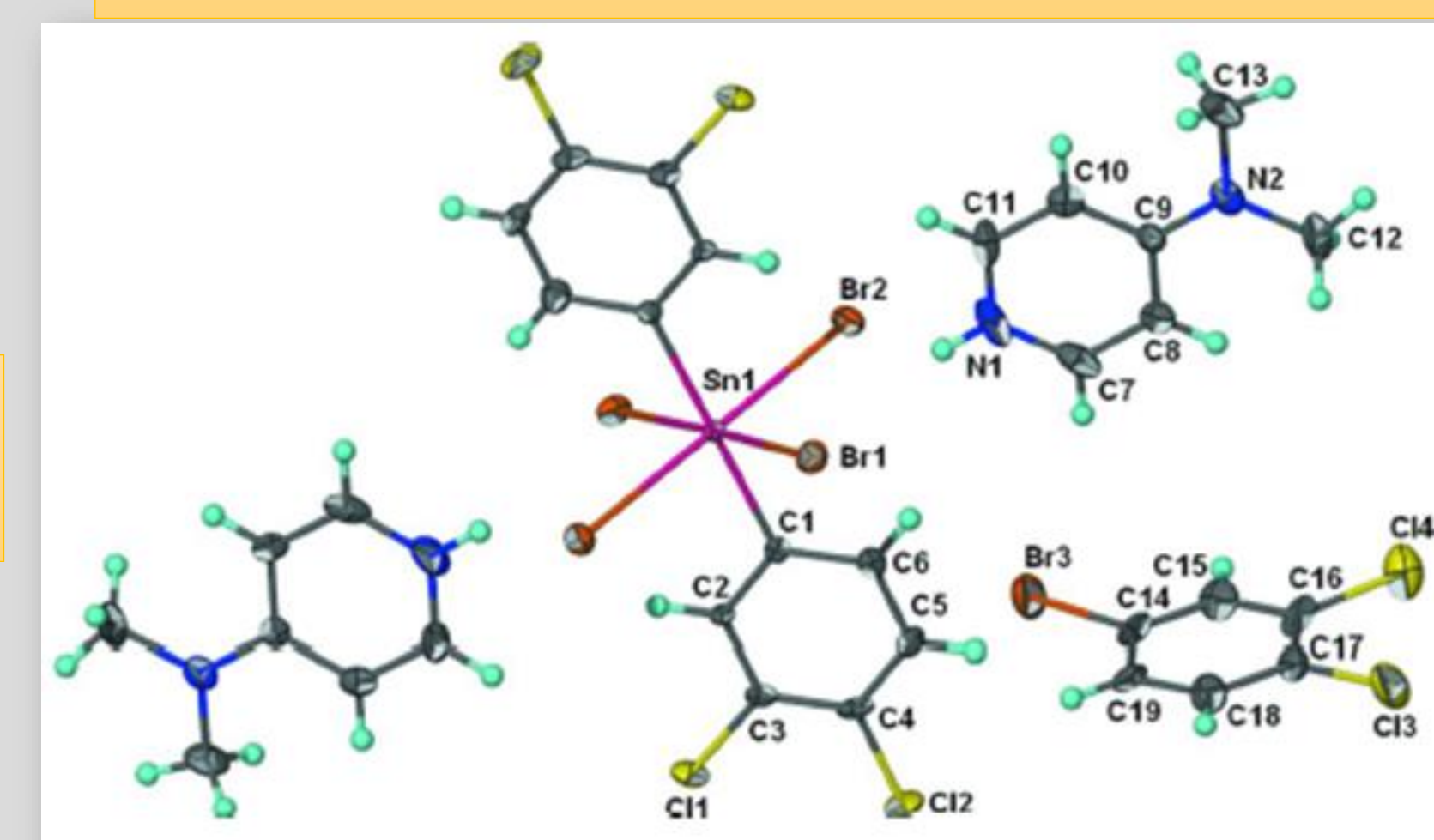
### Dibromidodi- $\mu$ -hydroxido-di- $\mu$ 3-oxidoctaphenyltetratin(IV)



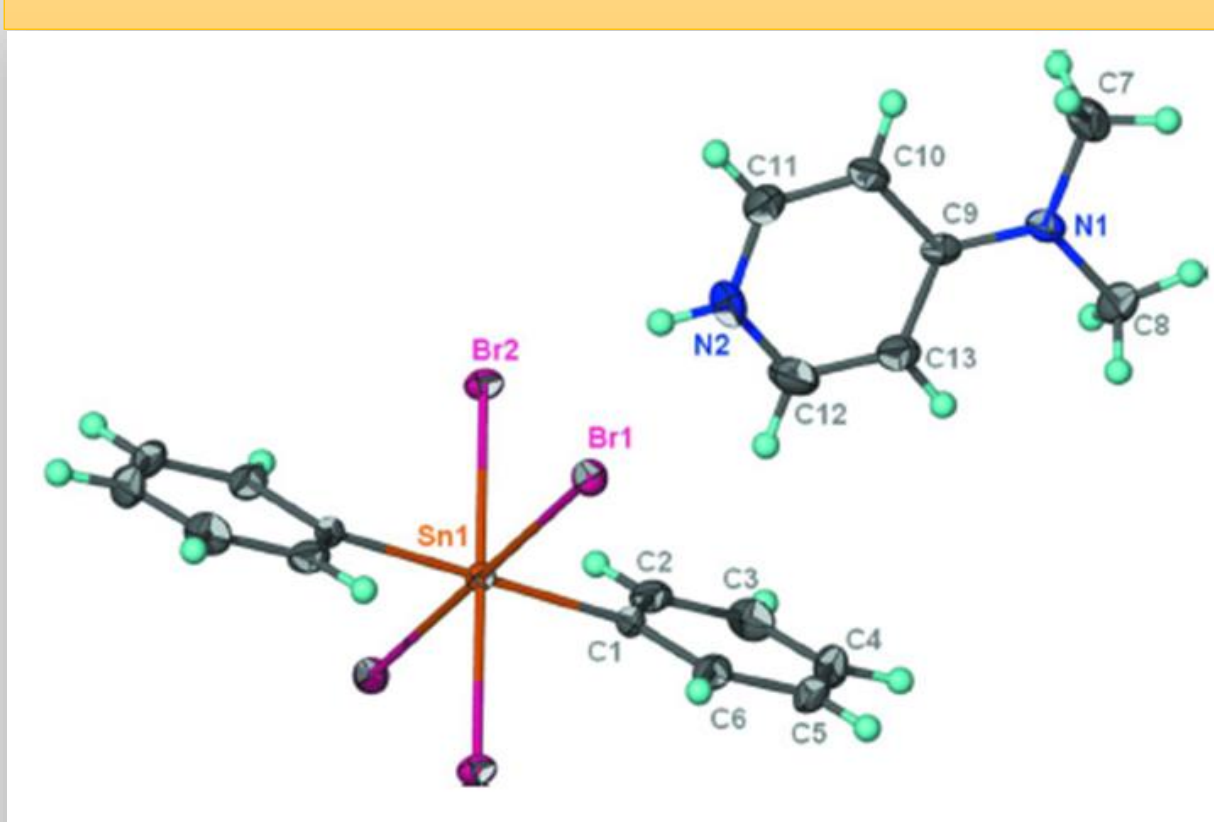
### Tricyclohexyl(2,3-dibromo-3-phenylpropionato- $\kappa$ O)tin(IV)



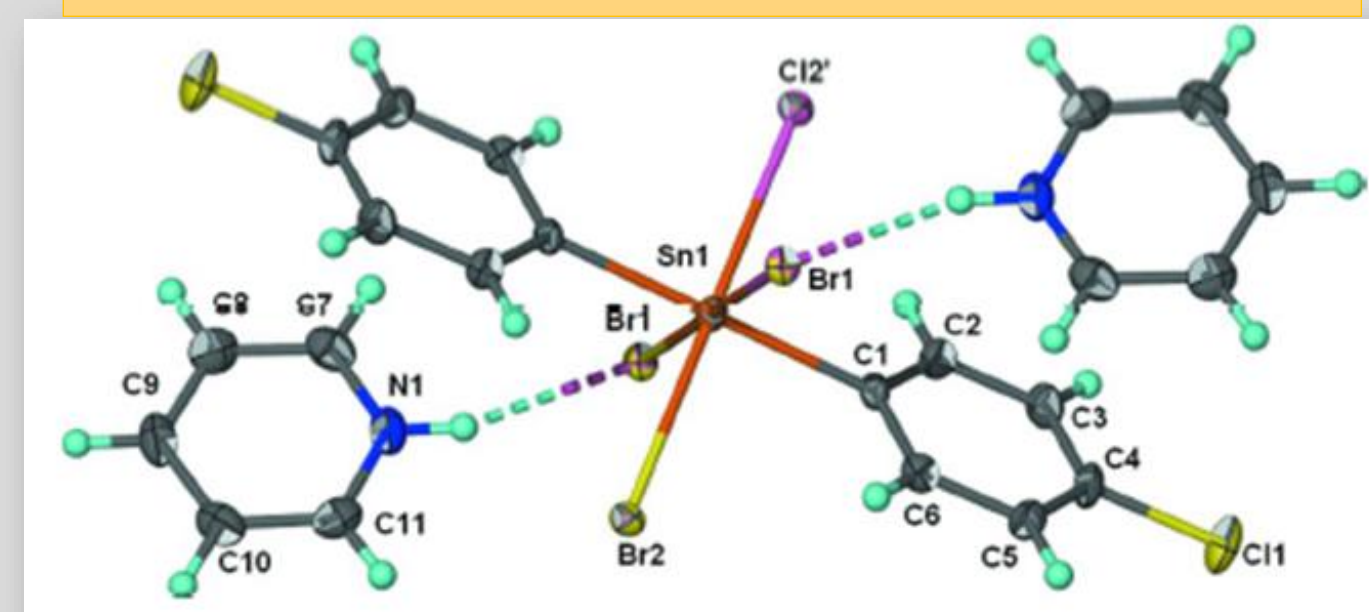
### Bis[4-(dimethylamino)pyridinium]tetrabromidobis(3,4-dichlorophenyl)stannate(IV)-1-bromo-3,4-dichlorobenzene (1/1)



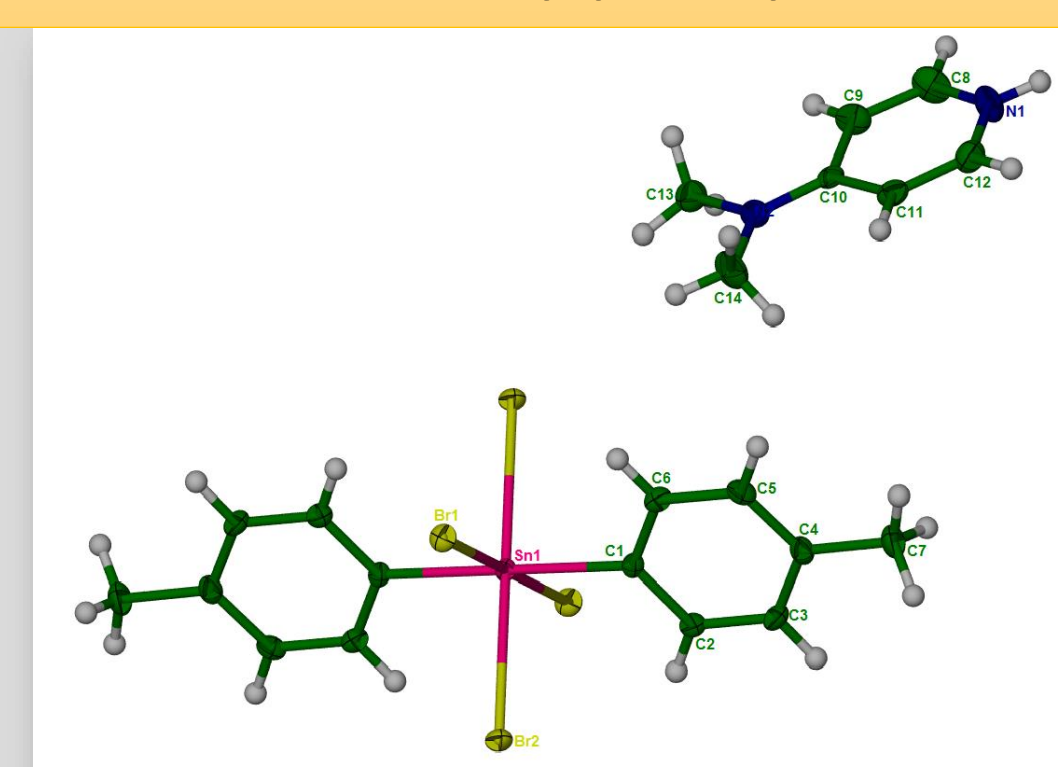
### Bis[4-(dimethylamino)pyridinium]tetrabromidodiphenylstannate(IV)



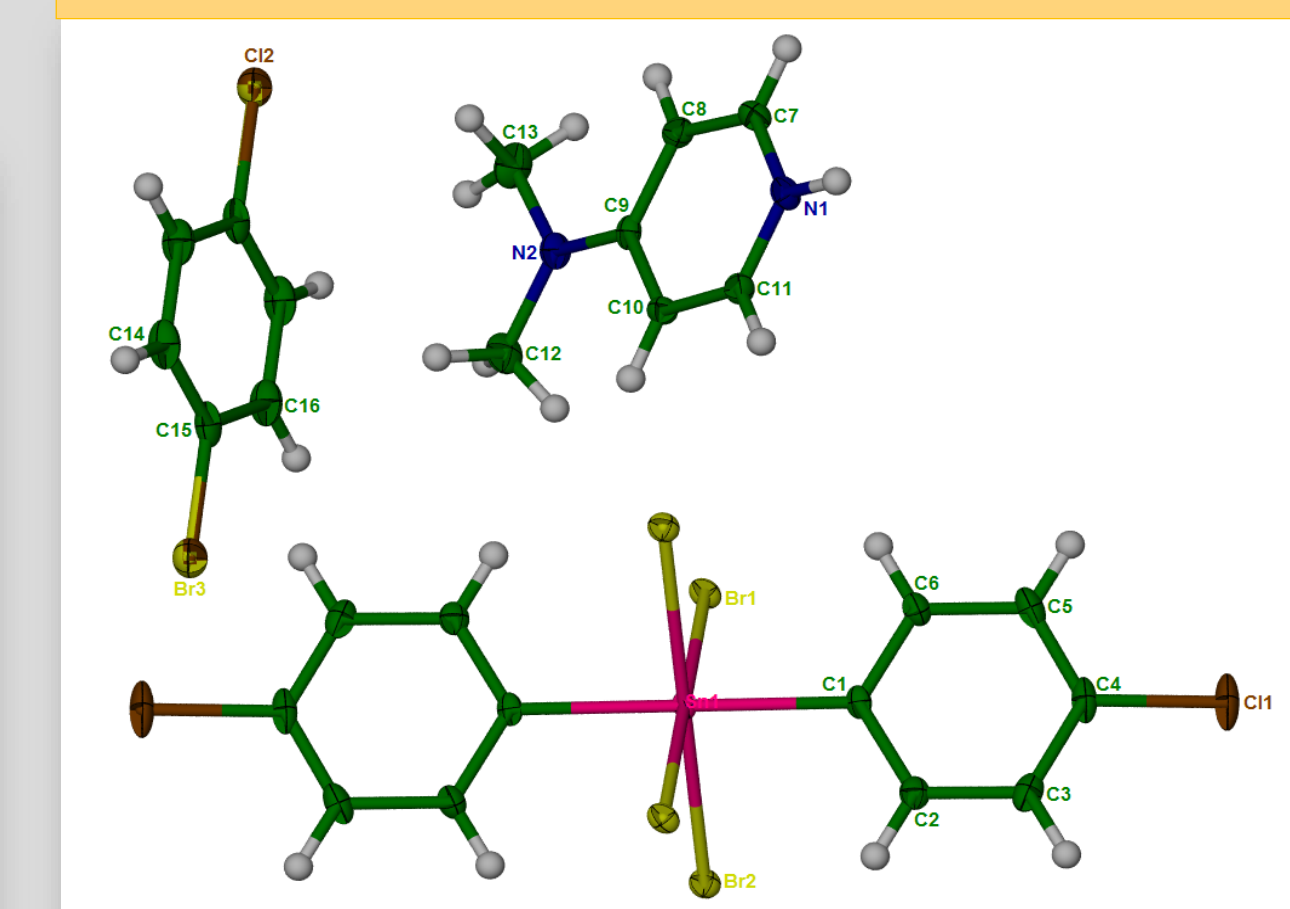
### Dipyridinium tribromidochloridobis(4-chlorophenyl)stannate(IV)



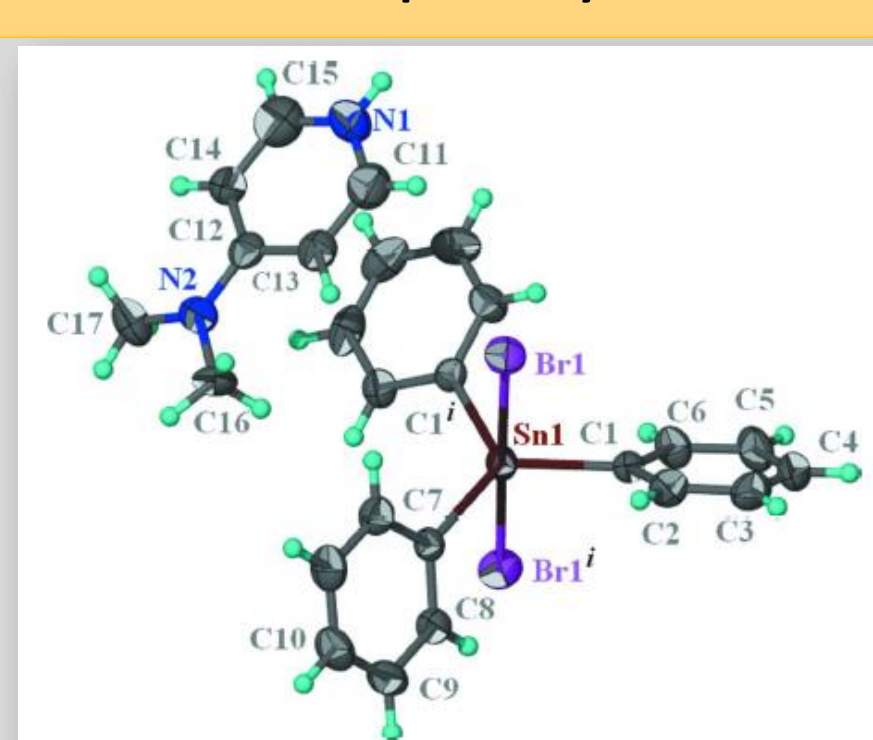
### Bis[4-(dimethylamino)pyridinium]tetrabromidobis(4-methylphenyl)stannate(IV)



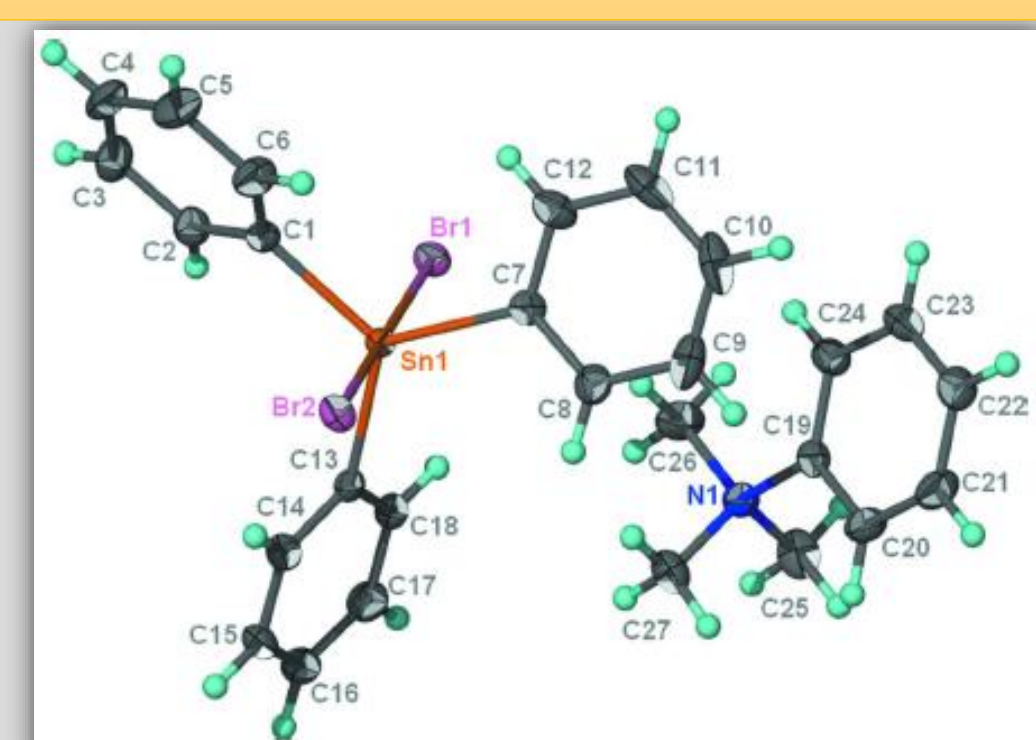
### Bis[4-(dimethylamino)pyridinium]tetrabromidobis(4-chlorophenyl)stannate(IV)-4-bromochlorobenzene (1/1)



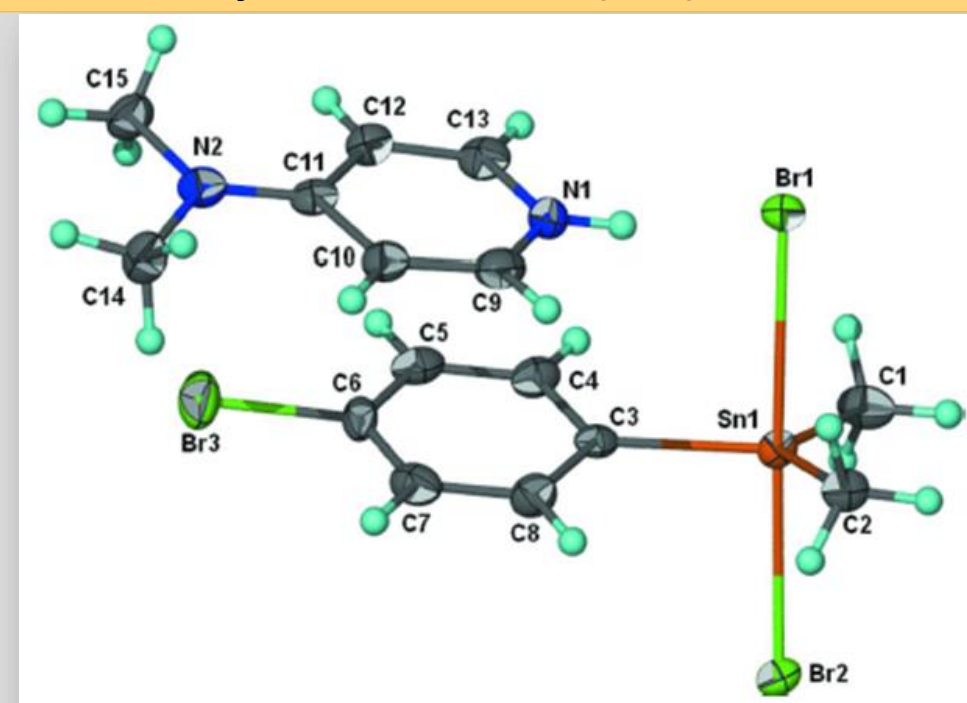
### 4-(Dimethylamino)pyridinium dibromidotriphenylstannate(IV)



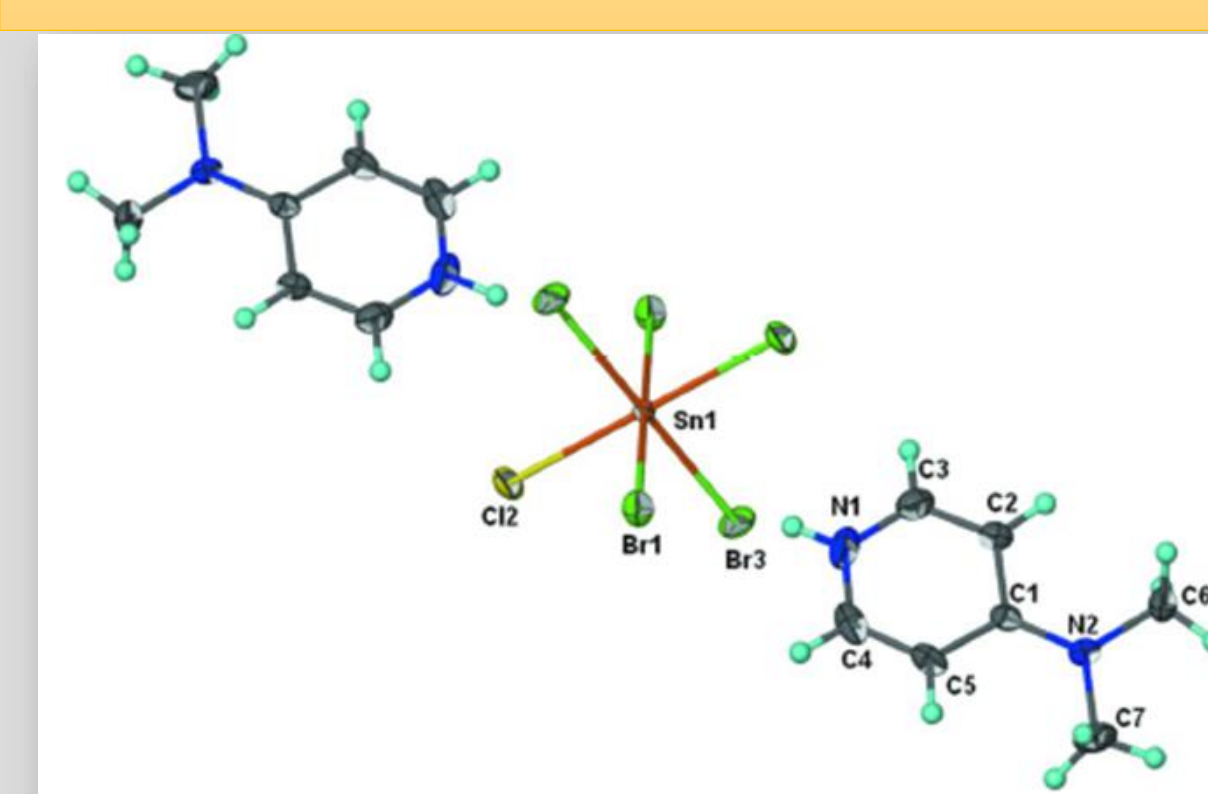
### Trimethylphenylammonium dibromidotriphenylstannate(IV)



### 4-(Dimethylamino)pyridinium dibromide(4-bromophenyl)-dimethylstannate(IV)



### Bis[4-(dimethylamino)pyridinium]pentabromidochloridostannate(IV)



## REFERENCES

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