

ANOMALIES IN OXY-HALOFLUORIDE SERIES

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The boiling points of bromofluorides in the series OCYZ, OPYZF, and O₂SYZ are lower than the corresponding dichlorides of lower molecular mass. This anomaly is more apparent than real if the compounds are considered as insertions of oxy-moieties into binary interhalogens YZ. The modified interhalogens, boiling close to the mean of the modified dihalogens, are no longer anomalous whereas the interhalogens of non-adjacent halogens are. The relationships are presented graphically.

It can be predicted that the much reduced polarity of BrF, contained within SO₂BrF, will not show appreciable self ionization but will react as a mild electrophilic brominator or nucleophilic fluorinator in suitable polar solvents.