

4 / 14: Structure and Bonding

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1 Classifying Chemical Species

1. Identify the bonding present in the following species. See Table 8 for values of χ .

[1] (a) Osmium ($Z = 76$)

(a) _____

[1] (b) BrCl

(b) _____

[1] (c) $O_3(g)$

(c) _____

[1] (d) Between P and O in HPO_3^{2-}

(d) _____

[1] (e) MgO

(e) _____

[1] (f) Ar

(f) _____

[1] (g) $(NH_4)_2O$

(g) _____

[1] 2. (a) State and explain the bonding expected between boron and fluorine in $BF_3(g)$.

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(b) If you have prior knowledge about this kind of bonding, you should find the result surprising. What is inconsistent with your prior knowledge?

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