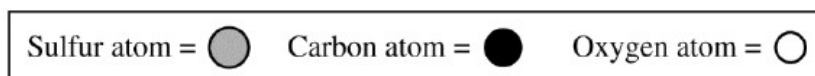




AP Chemistry Exam Review

Free Response Practice #11

2018 #4 (4 points)



Compound	Molecular Structure	Boiling Point at 1 atm (K)
CS <sub>2</sub>		319
COS		223

The table above gives the molecular structure and boiling points for the compounds CS<sub>2</sub> and COS.

- a. In terms of the types and relative strengths of all the intermolecular forces in each compound, explain why the boiling point of CS<sub>2</sub>(l) is higher than that of COS(l).
- b. A 10.0 g sample of CS<sub>2</sub>(l) is put in an evacuated 5.0 L rigid container. The container is sealed and heated to 325 K, at which temperature all of the CS<sub>2</sub>(l) has vaporized. What is the pressure in the container once all of the CS<sub>2</sub>(l) has vaporized?