

Why is borazine called “inorganic benzene”? Explain

Borazine is an inorganic compound with the chemical formula $B_3H_6N_3$. In this cyclic compound, the three BH units and three NH units alternate. The compound is isoelectronic and isostructural with benzene. For this reason borazine is sometimes referred to as “inorganic benzene”. Like benzene, borazine is a colourless liquid with an aromatic smell.

Due to its similarities to benzene, there have been a number of computational and experimental analyses of borazine's aromaticity. The number of pi electrons in borazine obeys the $4n + 2$ rule, and the B-N bond lengths are equal, which suggests the compound may be aromatic. The electronegativity difference between boron and nitrogen, however, creates an unequal sharing of charge which results in bonds with greater ionic character, and thus it is expected to have poorer delocalization of electrons than the all-carbon analog.

More information on the web-site: <http://www.wikiwand.com/en/Borazine>

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