

# Description of Additional Supplementary Files

**File name: Supplementary Data 1**

**Description:** The CIF file contains crystallographic data for R-(BN)<sub>2</sub>C.

**File name: Supplementary Data 2**

**Description:** The CIF file contains crystallographic data for S-(BN)<sub>2</sub>C.

**File name: Supplementary Data 3**

**Description:** All numerical source data underlying the graphs in the main manuscript.

**File name: Supplementary Data 4**

**Description:** Cartesian coordinates of all the geometry-optimized structures (in the ground electronic states)

**File name: Supplementary Data 5**

**Description:** <sup>1</sup>H and <sup>13</sup>C NMR spectra of the compounds.