

## SUPPLEMENTARY INFORMATION

### Concentric dual $\pi$ aromaticity in bowl-like $B_{30}$ cluster: an all-boron analogue of corannulene<sup>†</sup>

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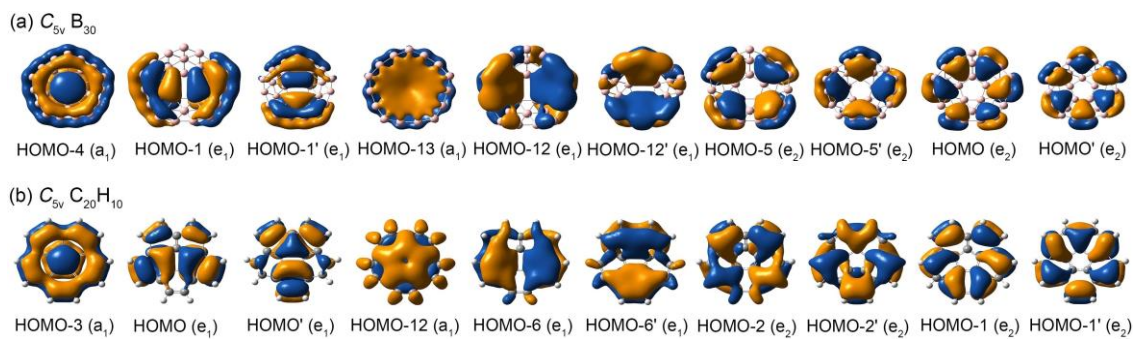
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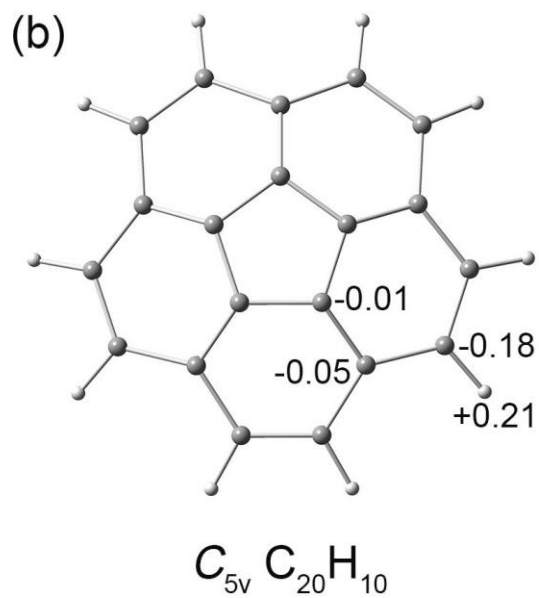
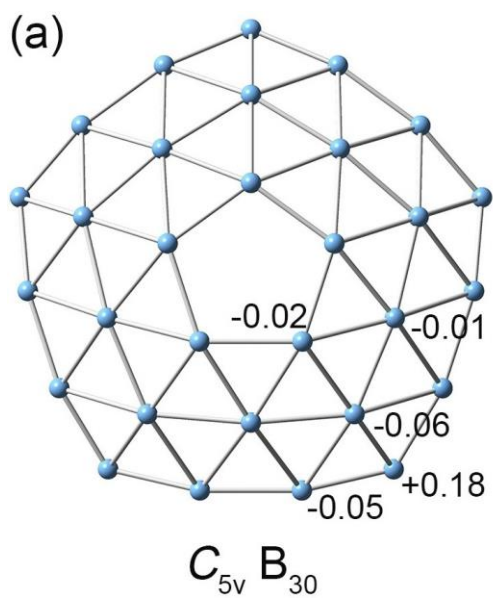
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- Figure S1.** Comparison of  $\pi$  canonical molecular orbitals (CMOs) of (a) the  $C_{5v}$  (**1**,  $^1A_1$ ) global minimum of  $B_{30}$  and (b)  $C_{5v}$  (**2**,  $^1A_1$ ) of  $C_{20}H_{10}$ .
- Figure S2.** Natural charge distributions of (a)  $C_{5v}$  (**1**,  $^1A_1$ ) of  $B_{30}$  and (b)  $C_{5v}$  (**2**,  $^1A_1$ ) of  $C_{20}H_{10}$ .
- Figure S3.** Comparison of  $\pi$  canonical molecular orbitals of two local-minimum structures of  $B_{30}$ : (a) isomer  $C_1$ . (b) isomer  $C_s$ .

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**Figure S2.** Natural charge distributions of (a)  $C_{5v}$  (**1**,  $^1A_1$ ) of  $B_{30}$  and (b)  $C_{5v}$  (**2**,  $^1A_1$ ) of  $C_{20}H_{10}$ .



**Figure S3.** Comparison of  $\pi$  canonical molecular orbitals of two local-minimum structures of  $B_{30}$ : (a) isomer  $C_1$ . (b) isomer  $C_s$ .

