

“Supplementary Materials”

Synergic effects between boron and nitrogen atoms in BN-codoped C_{59-n}BN_n fullerenes (n=1-3) for metal-free reduction of greenhouse N₂O gas

Mehdi D. Esrafil^{*,a}, Adnan Ali Khan^{b,c}, Parisasadat Mousavian^{a,d}

^a *Department of Chemistry, Faculty of Basic Sciences, University of Maragheh, P.O. Box 55136-553, Maragheh, Iran*

^b *Centre for Computational Materials Science, University of Malakand, Chakdara, Pakistan*

^c *Department of Chemistry, University of Malakand, Chakdara, Pakistan*

^d *Department of Chemistry, Azarbaijan Shahid Madani University, Tabriz, Iran*

* Corresponding author. **E-mail:** esrafil@maragheh.ac.ir (M. D. Esrafil).

Figure S1. The relaxed structures of single-vacancy defective fullerenes (from top and side views)

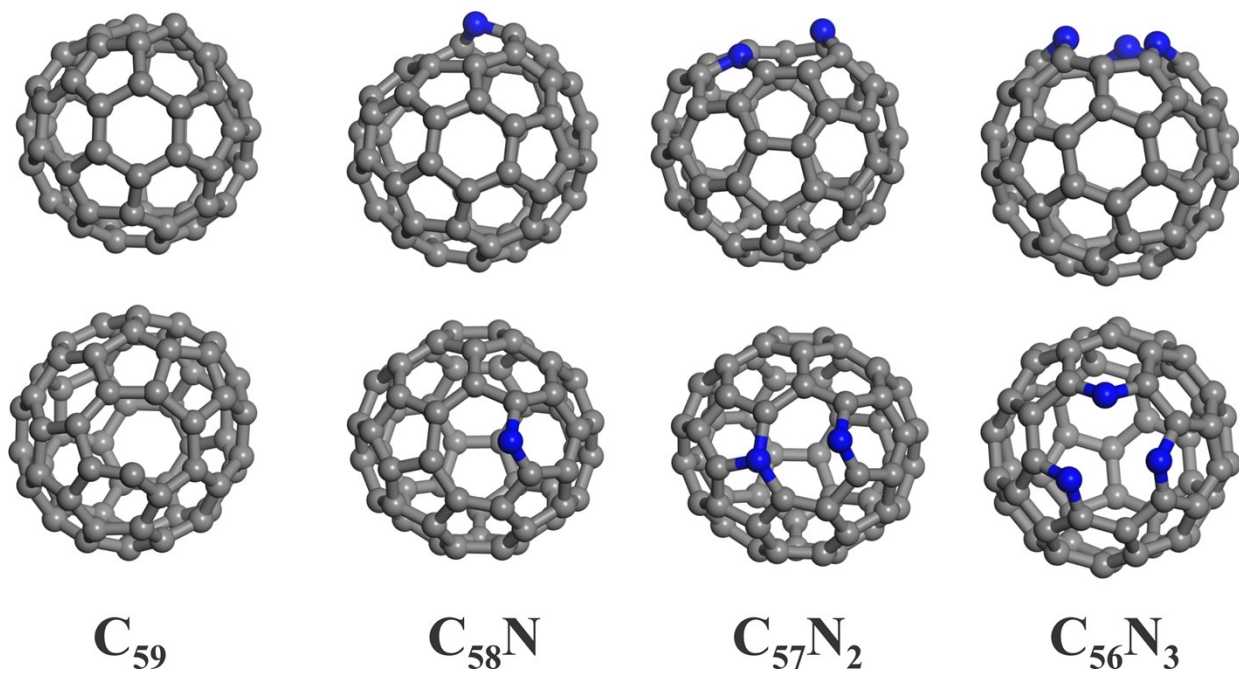


Figure S2. The geometries of BN-codoped fullerenes after the MD simulations (2000 fs, at 600 K) and the corresponding energy profile

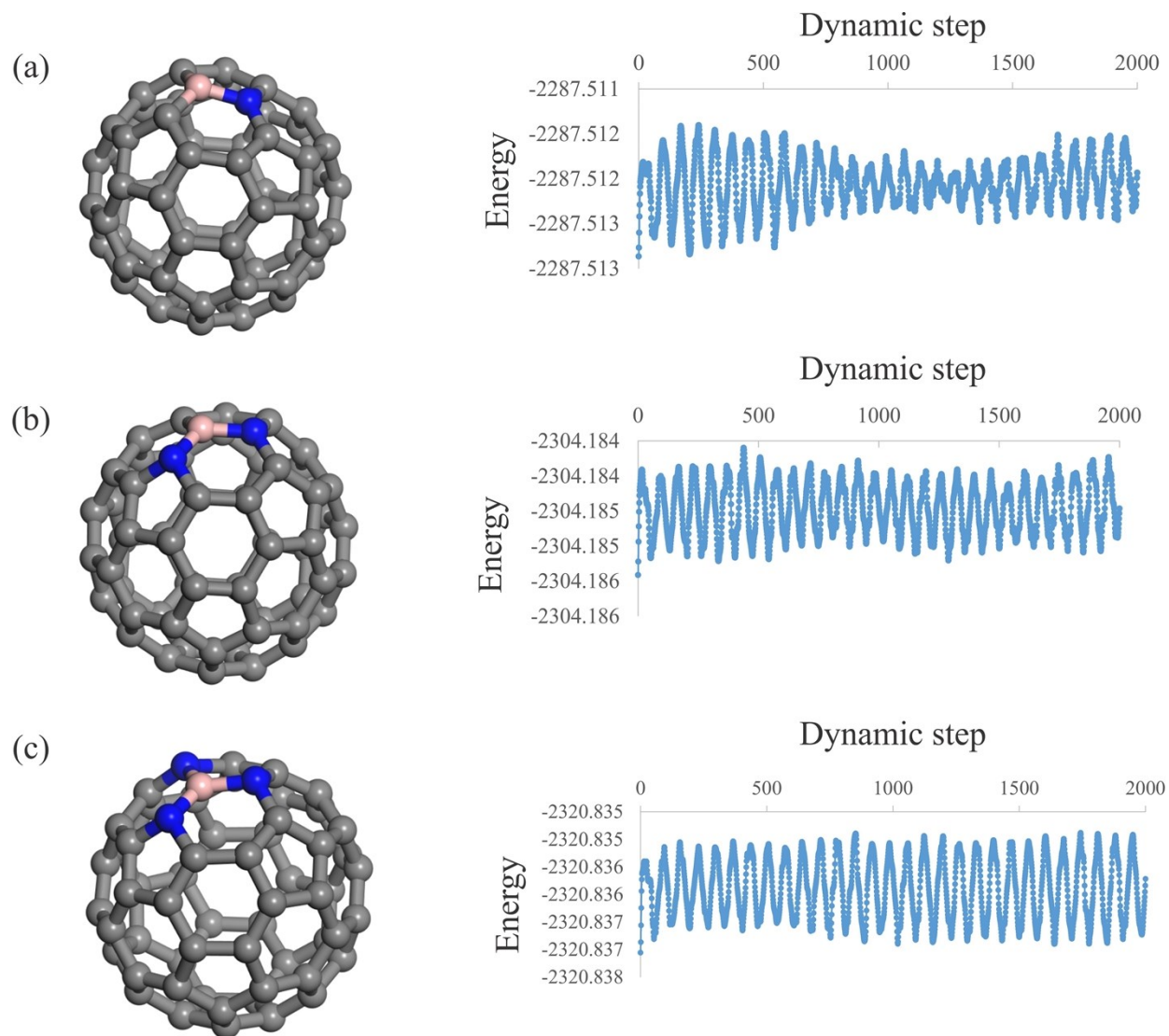


Figure S3. The relaxed structures of N₂O (left) and CO adsorbed (right) configurations onto Kr endohedral fullerenes (a) C₅₉B, (b) C₅₈BN, (c) C₅₇BN₂ and (d) C₅₆BN₃

