

# S/N/O-Enriched Carbons from Polyacrylonitrile-Based Block Copolymers for Selective Separation of Gas Streams

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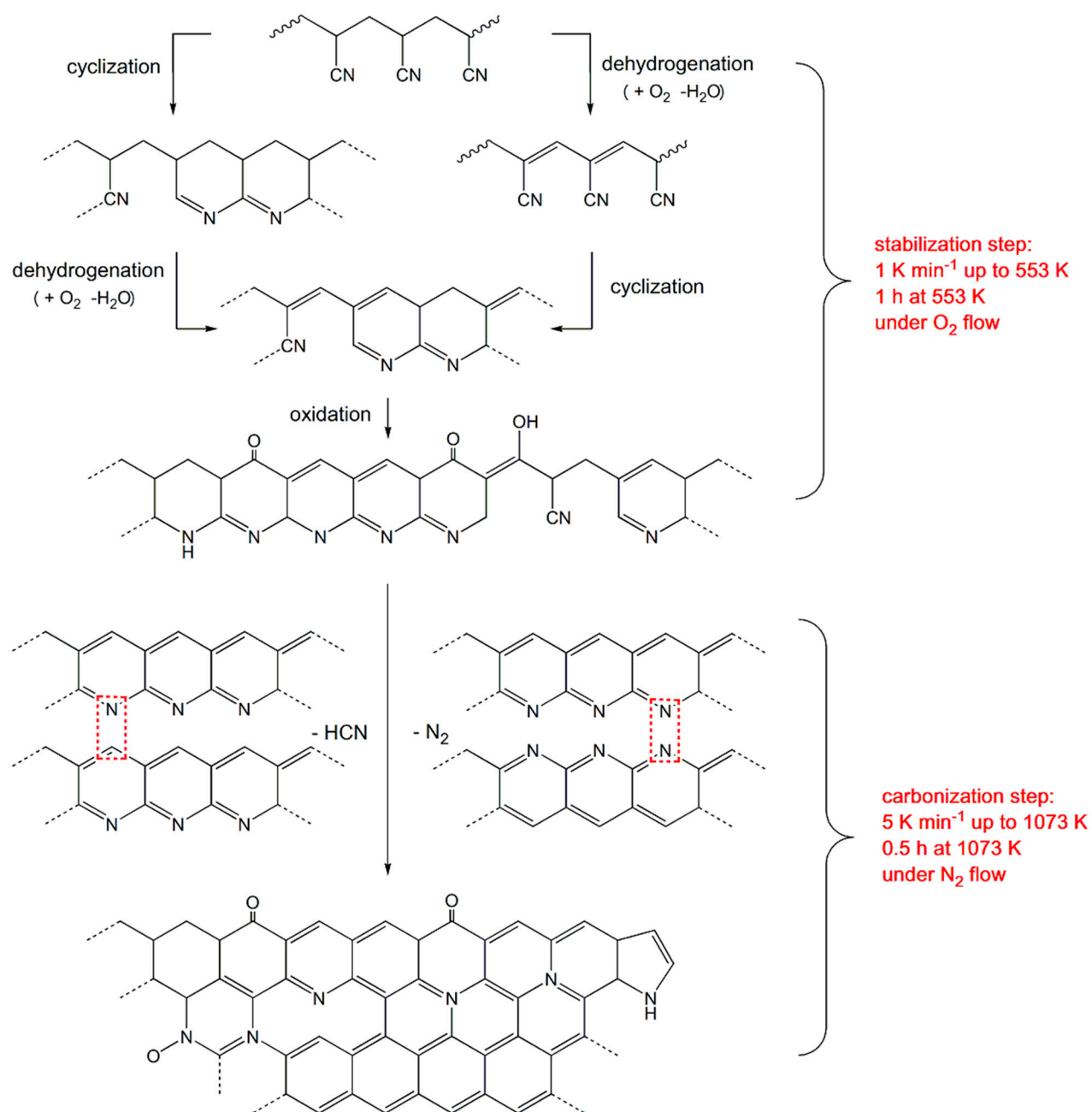
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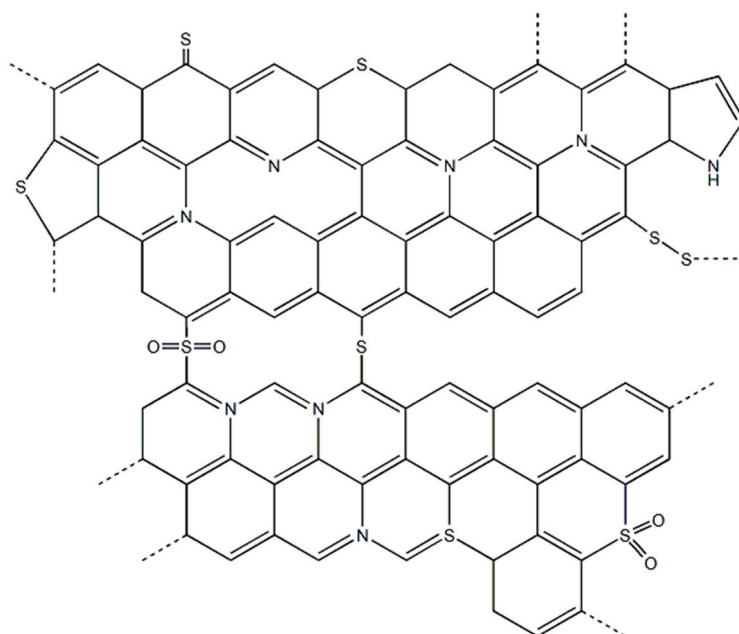
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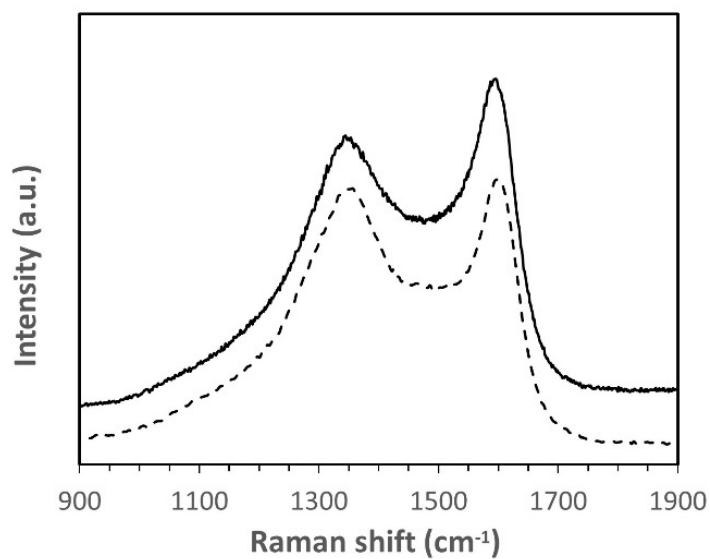
**Supplementary Materials:** Scheme S1. Schematic illustration of the formation of graphitic carbon from a PAN-based BC precursor; Scheme S2. Possible positions of sulfur incorporated into the graphitic carbon network; Figure S1. Raman spectra of BC10/90-O (solid line) and BC10/90-S (dashed line) in the 900–1900 cm<sup>-1</sup> range. Figure S2. Pore size distribution of BC10/90-O and BC10/90-S.



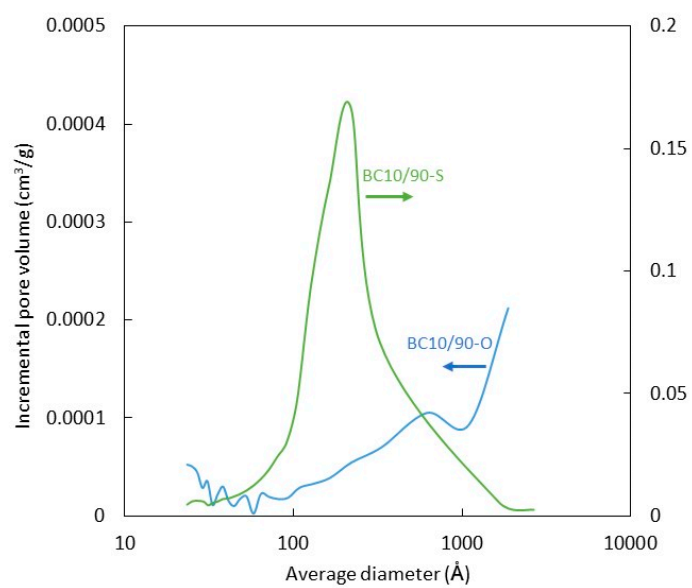
**Scheme S1.** Schematic illustration of the formation of graphitic carbon from a PAN-based BC precursor, also including the information resulting from XPS measurements (see examples in Figure 2 and corresponding discussion). PMMA decomposition is not reported, as it essentially consists of volatilization by unzipping. Adapted from: Fitzer, E. *Carbon* **1989**, 27, 621–645.



**Scheme S2.** Tentative positions of sulphur incorporated into the graphitic carbon network, taking into account the information resulting from XPS measurements (see examples in Figure 2 and corresponding discussion). Adapted from: Kiciński, W.; Szala, M.; Bystrzejewski, M. *Carbon N. Y.* **2014**, 68, 1–32.



**Figure S1.** Raman spectra of BC10/90-O (solid line) and BC10/90-S (dashed line) in the 900-1900  $\text{cm}^{-1}$  range.



**Figure S2.** Pore size distribution of BC10/90-O and BC10/90-S.