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Reusable carbon nanofibers for efficient removal of methylene blue from aqueous solution

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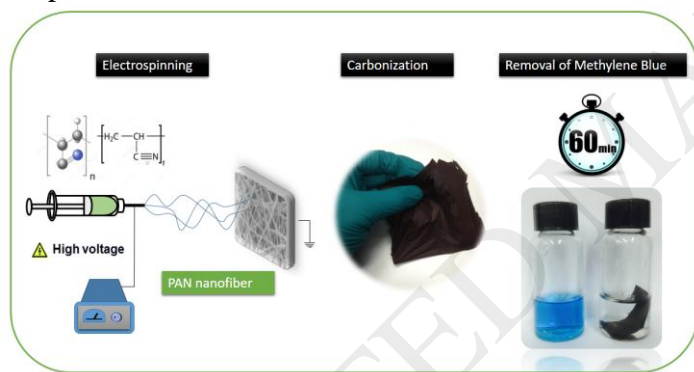
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Graphical abstract



Highlights

- Carbon nanofibers were prepared from polyacrylonitrile through thermal treatment
- Carbon nanofibers efficiently removed Methylene Blue dye
- Carbon nanofibers have good adsorption ability and reusability
- Carbon nanofibers were characterized through SEM, EDX and FTIR
- The developed carbon nanofibers had negligible fragility and good strength

Abstract:

This work demonstrates the preparation of polyacrylonitrile (PAN) based activated carbon nanofibers (ACNFs) through electrospinning followed by thermal treatment. Resulted activated carbon nanofibers having diameters in the range of 240-280 nm were then examined for the adsorption capability for methylene blue dye from aqueous solution. Batch mode experiments

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