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(57) Abstract :

The present disclosure provides a method (100) for rapid decomposition of nitrile based waste products into reusable carbon materials. The method includes steps of transferring (102) the nitrile waste into a quartz container, followed by addition (104) of water, oxidant and Lewis acid into the quartz container. The prepared mixture is exposed (106) to ultraviolet-light of predetermined intensity for predetermined time duration. Upon filtering (108) of the ultraviolet-light treated mixture a concentrated solution of crude carbon material is prepared (110). The final step includes purifying (112) the carbon concentrate and collecting the purified carbon materials for reuse.

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