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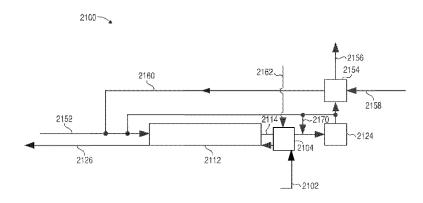


FIG. 21

(57) Abstract: Biogenic activated carbon compositions disclosed herein comprise at least 55 wt% carbon, some of which may be present as graphene, and have high surface areas, such as Iodine Numbers of greater than 2000. Some embodiments provide biogenic activated carbon that is responsive to a magnetic field. A continuous process for producing biogenic activated carbon comprises countercurrently contacting, by mechanical means, a feedstock with a vapor stream comprising an activation agent including water and/or carbon dioxide; removing vapor from the reaction zone; recycling at least some of the separated vapor stream, or a thermally treated form thereof, to an inlet of the reaction zone(s) and/or to the feedstock; and recovering solids from the reaction zone(s) as biogenic activated carbon. Methods of using the biogenic activated carbon are disclosed.





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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Orbit, Google Patents, Google Scholar,

DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No.			
Υ	US 2010/0178624 A1 (SRINIVASACHAR) 15 July 2010 (05.07.2010) entire document 1-46			
Υ	US 4,679,268 A (GURRIES et al) 14 July 1987 (14.07.1987) entire document	1-46		
Υ	US 4,632,731 A (BODLE et al) 30 December 1986 (30.12.1986) entire document 5			
Υ ,	US 2005/0095183 A1 (REHMAT et al) 05 May 2005 (05.05.2005) entire document 13, 16-18			
Υ	US 2011/0132737 A1 (JADHAV) 09 June 2011 (09.06.2011) entire document	16, 19, 20		
Υ	US 5,187,141 A (JHA et al) 16 February 1993 (16.02.1993) entire document	25, 30		
Y	WO 2011/053668 A1 (KYRLIDIS et al) 05 May 2011 (05.05.2011) entire document	26, 32, 34, 35, 38-46		
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Υ	WO 02/069351 A1 (MILLER et al) 06 September 2002 (06.09.2002) entire document	33, 43, 46		
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