

Heteroatoms -doped Highly Porous Carbon from Wastes - Human Urine and Tea

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Heteroatoms -doped carbon materials are extensively studied for the energy and environmental applications. However, traditional synthesis routes use various inorganic and hazardous precursors for preparing such carbon. Therefore, recently, synthesis of porous doped-carbon materials from renewable sources is rapidly attracting the researcher as an alternative approach due to environmental, scientific and economic advantages. Progressing towards those directions, human urine, most abundant waste on planet was converted to carbon having various heteroatoms by simple technique for electrocatalytic applications. One simple step contains drying of the urine at low temperature followed by carbonization without any further activation. Furthermore, possibility of other waste materials such as Tea was also studied for Lithium Ion Batteries. This work was supported by the National Research Foundation of Korea (NRF) grant funded by the Ministry of Science, ICT & Future Planning (No. 2012R1A2A1A01009683) and the Ministry of Education (No. 2009-0093816).