Waste cigarette filters- Negligence to effective use

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An estimated 5.6 trillion filtered cigarettes were consumed worldwide in 2002 and nine trillion to be projected by 2025. With global cigarette consumption on the rise, the global environmental burden of cigarette litter could be significantly intensified in the coming years unless there is a change in the manner in which global population dispose of these cigarette buds. Due to the persistent nature and volume of cigarette buds discharged into the environment, it is high time an alternative use of this discharged waste to be found out. Utilization of waste cigarette in removal of industrial dye from waste water has already been reported. But the fate of these waste cigarette filters adsorbed by dyes are yet to be discovered. Desorption of these filters will not be the solution in this case as it will ultimately be back to ground zero. Production of paper from the filters might be a suitable solution as cigarette filters are composed of cellulose acetates and we all know paper is ultimately made from cellulose. Employing alkali treatment followed by bleaching and acid hydrolysis can be adopted for the extraction of cellulose from cigarette filters. But removal of alkaloids and tar from the fiber of cigarette filters will be a great challenge.

Speaker Biography

Md. Moniruzzaman has completed his B.Sc in Engineering in Chemical Engineering & Polymer Science from Shahjalal University of Science & Technology, Sylhet, Bangladesh. He has joined Bangladesh Council of Scientific & Industrial Research (BCSIR) as Scientific Officer in 2011. Before that he worked as Graduate Trainee Engineer at Karnaphuli Fertilizer Company (KAFCO), Bangladesh. He has been working on the removal of dyes and heavy metals from waste water using indigenous sources and published articles on various journals.

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