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Development of Value Added Products from Different Waste Materials

Pawan Kumar Bharti

Shriram Institute for Industrial Research, India

Waste generation and human civilization is the two faces of the same coin. Nowadays, waste generation is one of the biggest problems in big cities of India. Only in urban areas of our country, 62 MT ton annual MSW is generated and dumped at dumping site, which creates numerous problems to environment & human health. Waste recycling is a very effective strategy in managing waste among all 4Rs. Generally, waste materials are originating from households, industries, Agriculture, commercial hubs, etc. in which significant quantity of agriculture and municipality solid waste is reported as well as its recycling is also in general practices.

Industrial waste is still a challenge to recycle and reuse it properly. E-waste and plastic waste is also one of the dangerous categories of waste of the modern era, which has a great potential and scope in recycling. A number of value added products can be developed by using different types of waste materials originating from agriculture, industries, residential colonies, commercial buildings, etc.

In this context, cellulose, cellophane, activated charcoal, pavement blocks, artificial base for plants, compost fertilizers, biogas, wood substitute, panels, composites, baby diapers, automobile perfume gel, wood primer, peelable coatings, furniture, plastic panels, plastic roads, adhesives, car mats, shoe sole, bio-ethanol, fuel briquettes, and many more value added products were developed by our institution during last 2 decades.

Key words: Waste recycling, product development, plastic waste, primer & paints from plastic.